



# SCIENTIFIC FRAMEWORK OF HOMOEOPATHY

# SCIENTIFIC FRAMEWORK OF HOMOEOPATHY



**How to cite this book:**

Manchanda RK, Khurana A, Wassenhoven M V, Sharma B, Kaushik S, Nayak D et al. Editors. Scientific Framework of Homoeopathy. Central Council for Research in Homoeopathy, Liga Medicorum Homoeopathica Internationalis, European Committee of Homoeopathy. New Delhi. April 2021.

©All rights reserved with Central Council for Research in Homoeopathy

No part of this book should be reproduced, stored in retrieval system or transmitted in any form or by any means: electronic, mechanical, photocopying, recording or otherwise, without the prior written permission.

Request for permission to reproduce or translate this book - whether for sale or for noncommercial distribution - should be addressed to The Editorial Board at [ccrpublications@gmail.com](mailto:ccrpublications@gmail.com)

**ISBN: 978-93-81458-66-2**

Disclaimer: The content of this publication is dynamic, and is updated frequently. By no means, the content is intended to be the last and final word in the respective fields as described in the inside chapters.

# CONTENTS

Executive summary	vii
Chapter 1 : Homoeopathy in Health Care	1
Chapter 2 : Users of Homoeopathy	29
Chapter 3 : Educational Scenario	36
Chapter 4 : Safety issues in Homoeopathy	49
Chapter 5 : Ethics in Practice and Research	53
Chapter 6 : Meta-analyses – Systematic Reviews	56
Chapter 7 : Clinical Research	66
Chapter 8 : Homoeopathic Pathogenetic Trials (Drug Proving)	135
Chapter 9 : Clinical Verification/Validation	142
Chapter 10 : Basic Science	167
Chapter 11 : Homoeopathy in Veterinary Practice	173
Chapter 12 : Homoeopathy for Agriculture	182
Chapter 13 : Homoeopathy and Epidemic diseases	184
Medicine Word Index	196

## Editors

### **Dr. Raj K. Manchanda**

Secretary for Information and Communication, LMHI, Former Director General, Central Council for Research in Homoeopathy & Director (AYUSH), Govt. of Delhi

### **Dr. Anil Khurana**

Director General, Central Council for Research in Homoeopathy (CCRH)

### **Dr Michel Van Wassenhoven**

Former Secretary for Research, LMHI

### **Dr. Bindu Sharma**

Assistant Director (H)

### **Dr. Subhash Kaushik**

Scientist-IV, CCRH

### **Dr. Debadatta Nayak**

Scientist-III, CCRH

### **Dr. Harleen Kaur**

Scientist-I, CCRH

### **Dr. Deepti Singh**

Scientist-I, CCRH

### **Dr. Swati Pandey**

Senior Research Fellow (Homoeopathy), CCRH

### **Dr. Daisy Katarmal**

Senior Research Fellow (Homoeopathy), CCRH

## Technical Assistance

### **Ms. Meenakshi Bhatia**

Librarian, CCRH

### **Mrs. Kanchan Sharma**

Office Assistant, CCRH

## List of Reviewers

Alessandra Perra, Italy, [alessandra.a.perra@guna.it](mailto:alessandra.a.perra@guna.it)  
Alok Pareek, India, [alokpsr@gmail.com](mailto:alokpsr@gmail.com)  
Altunay Agaoglu, Turkey, [altunaysoylemez@gmail.co](mailto:altunaysoylemez@gmail.co)  
Ashley Ross, South Africa, [docaross@gmail.com](mailto:docaross@gmail.com)  
Bernardo Merizalde, USA, [general-secretary@ligamedicorum.org](mailto:general-secretary@ligamedicorum.org),  
Claudia Garn, Austria, [claudia.garn@yahoo.com](mailto:claudia.garn@yahoo.com)  
Dora Patchova, Bulgaria, [dora\\_patchova@yahoo.com](mailto:dora_patchova@yahoo.com)  
Gloria André Feighelstein, Brazil, [carine.mastin@telenet.be](mailto:carine.mastin@telenet.be)  
Gustavo Cataldi, Argentina, [lmhi.gustavocataldi@gmail.com](mailto:lmhi.gustavocataldi@gmail.com)  
Heike Gypser, Germany, [genius.loci@web.de](mailto:genius.loci@web.de)  
Isaac Golden, Australia, [homstudy@bigpond.com](mailto:homstudy@bigpond.com)  
Katharina Gaertner, Switzerland, [mail@katharinagaertner.com](mailto:mail@katharinagaertner.com)  
Lex Rutten, Netherland, [lexrutten@gmail.com](mailto:lexrutten@gmail.com)  
Monika Kölsch, Germany, [treasurer@ligamedicorum.org](mailto:treasurer@ligamedicorum.org)  
Michael Teut, Germany, [michael.teut@charite.de](mailto:michael.teut@charite.de)  
Michel Van Wassenhoven, Belgium, [michelvw@Homoeopathy.be](mailto:michelvw@Homoeopathy.be)  
Paolo Bellavite, Italy, [paolo.bellavite@univr.it](mailto:paolo.bellavite@univr.it)  
Pedro Boff, Brazil, [boff.pedro@yahoo.com.br](mailto:boff.pedro@yahoo.com.br)  
Phil. Marion Baschin, Germany, [marion.baschin@igm-bosch.de](mailto:marion.baschin@igm-bosch.de)  
Renzo Galassi, Italy, [renzagalassi3@gmail.com](mailto:renzagalassi3@gmail.com)  
Robbert Van Haselen, UK, [vanhaselen@wimforum.org](mailto:vanhaselen@wimforum.org)  
S. Evin Türkay, Turkey, [secretary@ligamedicorum.org](mailto:secretary@ligamedicorum.org)



# Executive Summary

Homoeopathy is an integral part of treatment in many countries, especially those that use Complementary and Alternative Medicine (CAM). Worldwide, it is popular in about 100 countries, with patients frequently combining it with orthodox health care. In the current CAM workforce of EU, Homoeopathy is the second most provided method, only after acupuncture. In many parts of south-east Asia, Homoeopathy is among the widely used modalities, apart from the traditional systems of those countries. In other continents, Australia, North America, South America and Africa, use of Homoeopathy in many countries is well documented.

Homoeopathy is thus gaining popularity with increasing numbers of users worldwide, despite the negative propaganda and criticism. There have been several surveys and reviews that report of its popularity and prevalence. Homoeopathy is reported to be used more frequently in upper respiratory tract infections, infant colic, teething troubles in children, sleep disturbances, recurrent infections, and management of lifestyle disorders like diabetes mellitus. It is also commonly used for skin, musculo-skeletal and genito-urinary disorders in both rural and urban parts of India.

Homoeopathy is largely being preferred by its users for its known virtues like 'holism, harmless therapy and cost-effectiveness', as well as due to the rising distrust among the users for the existing practices in the conventional medicine. With the advancing use of Homoeopathy across the world, educational needs of the science are increasing. Education in Homoeopathy can enable graduates to develop as independent and competent public health care providers, to work in a variety of roles ranging from private practice to being an integrated member of a team of healthcare practitioners working in large scale clinical setting. In many countries of the western world, the education system is well regulated and homoeopathic practitioners are mostly professionals with a previous medical background and an additional qualification in Homoeopathy. A need to devise a common path which enables a standardized framework for homeopathic education which is taught and recognized in every part of the world looks pertinent.

Besides, a worldwide increase in the use of homeopathic medicines and the rapid expansion of the global market has

opened the door for many new and combination products without any pre-clinical testing of their safety. There is a clear mandate to assure safety of homeopathic medicines even before drug proving is carried out. In recent times, research on pre-clinical safety evaluation of homeopathic medicines has enhanced and studies are demonstrating the safety of these medicines. Ensuring adequate qualification of homeopathic physicians is another core action area to safeguard the right of the patients to safe treatment.

Talking of medical ethics, a homoeopath, in order to avoid any harm to the patient at emotional level, besides the physical level, is skilled enough to handle a patient's emotions and illnesses with compassion. On another note, since Homoeopathy offers one of the most gentle and harmless approaches towards treatment, it is logical to administer this therapy first along with other CAM options, with the technology of conventional medicine being used as a back-up when needed. Homoeopathy, it can be stated, is a system of medicine that has offered most harmless treatment to the mankind.

Despite its known effectiveness and wide usage, Homoeopathy has been a subject of discussion for its therapeutic utility since its discovery in 1796. In the whirlwind of scepticism, it still continues to be a medicine of choice of many people across the globe. Researchers from different biomedical and science discipline are trying to prove and reprove its efficacy/ effectiveness in different disease conditions through clinical research and basic research. Mathie et al from their systematic review concluded that "Homoeopathic medicines prescribed on individualization basis may have small specific, treatment effects". With reference to hierarchy of evidence, different designs have been used in clinical research to prove or disprove the treatment. The randomized controlled trial is believed to be the only method that enables clear inferences about cause and effect of an intervention. Systematic reviews in homoeopathy provide (qualitative) overall view of evidence for a given medical condition, for a given homoeopathic medicine, for a given mode of homoeopathy and for all homoeopathic interventions together. Meta-analysis provides (quantitative) estimate of Homoeopathy's treatment effect size in a given category. On the other hand, quasi experimental studies, observational studies, case reports, case series, are

important research tools for describing real-time treatment effects and should be applied to research derived from RCTs.

Considering the large pool of studies on Homoeopathy, meta-analysis and systematic reviews have been increasingly conducted in the last 25 years to develop evidence base in favor or against Homoeopathy as a whole, as a system of medicine for various diseases, and for individual conditions. In last 25 years, 18 meta-analysis have been conducted on Homoeopathy as a whole, pooling data from heterogenous trials. Meta-analyses of pooled data from the treatment of many conditions are difficult to interpret. From a clinical point of view, such analyses are warranted only if the same effect is measured. With an increasing number of studies being conducted on individual disease conditions, meta-analysis have been conducted on Post operative ileus, Pollinosis, Vertigo, Fibromyalgia, Allergic rhinitis and diarrhoea in children. An overall glance of clinical trials and the meta-analyses or systematic review that followed are presented inside.

Drug proving of homeopathic medicines and its clinical verification has been an essential aspect in clinical practice since Hahnemann discovered Homoeopathy. Homeopathic pathogenetic trials (HPTs) appear safe. However, the central question of whether homeopathic medicines in high dilutions can provoke effects in healthy volunteers has not yet been definitively answered, because of methodological weaknesses of the reports. In moving forward and evaluating the usefulness of provings, it can be concluded that there is a need to combine innovative research strategies that respect both Homoeopathy and qualitative research as well as the more well known tools of quantitative research. Further, the basis for Evidence Based Homoeopathy (EBH) can be formed by extensive ‘verifications’ of ‘homeopathic symptoms’ which are the framework on which the concept of patient relief and cure depends for a homeopathic physician. Such verifications are not simple due to the fact that physicians in this system use varying methodologies and strategies according to their training, expertise and clinical experience. It will be a tedious process to bring in uniformity to the interpretation of symptoms due to the multitude of inter-rater variability factors that arise due to the uniqueness of homeopathic principles. EBH can only be built on the framework of homeopathic concept of similarity.

Fundamentally, in the last few decades, basic researches in Homoeopathy have reached incredible heights. Although the exact mode of action underlying specific effects of highly diluted homeopathic preparations is a matter of debate and yet to be established, a variety of local and non-local models have been proposed based on various studies. It is obvious thus that the basic researches in Homoeopathy are increasing both in

terms of quantity and quality of the publications. Number of papers identified so far is 183. Countries with most publications till the end of 2015 are Germany (n=42, 23%), France (n=29, 16%), India (n=27, 15%), and Italy (n=26, 14%).

Besides human, the evidence for Homoeopathy in animals and plants has pooled up in the past few years. Whatever is being practiced with homeopathic medicines on humans, has been successfully adapted to veterinary medicine. Homoeopathy has gained the reputation of an effective alternative therapy in veterinary practice. High cost of modern medicine, their inherited side effects and problems of antimicrobial residues in animal products have caused an apparent discomfort to animal owners invoking their interest in alternative approaches of animal health care. More formal trials with homeopathic medicines have shown encouraging results in the management of various veterinary conditions. Also, studies have shown that plant-based test systems may be a promising tool in homeopathic basic research for identifying specific effects of homeopathic preparations and investigating further research questions, such as hypotheses about the mode of action.

Finally, in the recent times, many epidemic diseases have changed their clinical presentations, and there has been an emergence of new conditions which were previously either not know or were not epidemic in nature. Homoeopathy has had an old association with treating epidemic conditions successfully, thus reducing both morbidity and mortality. Recent studies in dengue, leptospirosis, filariasis and Japanese Encephalitis validate this association. Given the worth Homoeopathy seems to be projecting in preventing and treating epidemics, it would be irresponsible not to further investigate seriously the observations made over two centuries by thousands of homeopaths in this field, which stands further corroborated with the recent evidence. The ongoing pandemic of COVID19 has brought to fore many unanswered problems in management of epidemics, especially in comorbid patients who are more at risk for a more severe attack. Role of Homoeopathy in this pandemic is being explored, and as on date, many preventive and treatment initiatives are reported to have encouraging outcomes. The Epidemics Chapter will provide a sneak peek into these initiatives.

All in all, the inside chapters will reflect how ‘scientific framework’ of Homoeopathy is gradually becoming firmer, and larger. This summary just provides the gist of each chapter in advance. The references to the findings mentioned here can be found in the respective chapters.

**Dr. Raj K. Manchanda**

## Chapter-1

# Homoeopathy in Health Care

**Kaur Harleen<sup>1</sup>, Sachdeva Jyoti<sup>2</sup>, Katarmal Daisy<sup>3</sup>**

1. Research Officer (H) | 2. Research Associate (H) | 3. Senior Research Fellow (H)  
Central Council for Research in Homoeopathy, Ministry of AYUSH, Govt. of India, New Delhi, India

### Introduction

Homoeopathy has established itself as an integral part of CAM. Complementary and Alternative medicine (CAM) is very popular, with patients frequently combining it with orthodox health care. There is adequate evidence of people using alternative medicine in the past.<sup>1,2</sup> The high prevalence of CAM use and resulting satisfaction is reported even today by patients, which directly challenges an orthodox system that can only approve such use if it results from the application of biomedical concepts and science. Research studies highlighting this as a cultural, sociological and historical phenomenon emphasise the value of choice for consumers of health care.<sup>3</sup> The objective of medicine is to address people's unavoidable needs for emotional and physical healing. Public health and medical practices have now advanced to a point at which people can anticipate—and even feel entitled to—lives that are longer and of better quality than ever before in human history. Yet despite the pervasiveness, power, and promise of contemporary medical science, large segments of humanity either cannot access its benefits or choose not to do so. More than 80 percent of people in developing nations can barely afford the most basic medical procedures, drugs, and vaccines. In the industrial nations, a surprisingly large proportion of people opt for practices and products for which proof as to their safety and efficacy is modest at best, practices that in the aggregate are known as complementary and alternative medicine (CAM) or as traditional medicine (TM).<sup>4</sup> According to WHO, Traditional and Complementary Medicine (T&CM) is an important and often underestimated health resource

with many applications, especially in the prevention and management of lifestyle-related chronic diseases, and in meeting the health needs of ageing populations. Given the unique health challenges of the 21st century, interest in T&CM is undergoing a revival. Homoeopathy is an integral and widely used form of T&CM. A WHO report reveals that Homoeopathy is one of the most common forms of practice used by the Member States of WHO.<sup>5</sup> In fact, as a history spanning more than two hundred years illustrates, Homoeopathy constitutes, as no other CAM approach, the Litmus test for medical pluralism. The attacks on non-established medical systems are almost always directed at Homoeopathy, even though other methods of complementary medicine provide similar targets for critics.<sup>6</sup> In the current CAM workforce of EU, Homoeopathy is the second most provided method (45,000 doctors and 5,250 non-medical practitioners), only after acupuncture.<sup>7</sup> However in the UK, Homoeopathy isn't widely available on the NHS anymore. In 2017, NHS England recommended that GPs and other prescribers should stop providing it.<sup>8</sup> The number of prescribers specifically trained in Homoeopathy (homeopathic prescribers) has been stated in the ECHAMP report. Poland, Spain and Netherlands have 14.4, 10.9 and 10.8 homeopathic prescribers per 100,000 inhabitants respectively and these numbers are very close to the European mean of 11.4. In contrast, Bulgaria shows a very different profile with 21.6 prescribers per 100,000 inhabitants.<sup>9</sup> In India alone, as in January 2017, there were 284,471 registered homeopathic practitioners (213.6 practitioners per million population), trained and

educated in hundreds of homeopathic medical colleges, recognized and supported by the Indian Government.<sup>10</sup>

### Clinical Evidence

There have been six global systematic reviews (SRs) of clinical trials on Homoeopathy, which include 5 meta-analyses. Out of these, four SRs were positive<sup>11,12,13,14</sup> and one negative<sup>15</sup>. Many other reviews have revealed positive outcomes of Homoeopathy in various conditions.<sup>16, 17, 18</sup> Since 2013, overviews and SRs of the clinical evidence base in Homoeopathy have made significant progress in the form of Dr. Robert Mathie's comprehensive review programme, which comprises the reliable use of a contemporary, rigorous methodology and making clear distinctions between Homoeopathy type and comparator. Dr Mathie's programme included four planned SRs with meta-analysis, each covering all clinical conditions, but with appropriate segregation into treatment types and comparators. The first SR and meta-analysis by Mathie et al. published in 2014, found that individualised homeopathic treatment (IHT), are 1.5 to 2.0 times more likely to have a beneficial effect than placebo<sup>19</sup>. Similarly, the most recent 2018 paper by Mathie et al. looked at pragmatic trials of individualised homeopathic treatment compared to no treatment, another treatment or as an adjunctive treatment. The most promising results were shown for IHT as an adjunct to usual care<sup>20</sup>. The study by Mathie et al.<sup>21</sup> published in 2017 included 75 double blind, randomised placebo controlled clinical trials of non-individualised homeopathic treatment for a broad range of conditions. For the 54 trials with extractable data for meta-analysis, the results showed a small beneficial effect for non-individualised homeopathic treatment that was statistically significantly different from placebo. An analytical report on Homoeopathy research summarizes the results of 300 clinical studies and around 1800 basic research experiments on Homoeopathy for the public<sup>22</sup>. Similar analysis is available on another reliable information website on Homoeopathy.<sup>23</sup> Homoeopathy treatment improves the clinical outcomes when prescribed along with the conventional treatment and therefore has a role in integrative medicine.<sup>24</sup> Homoeopathy's positive role as adjuvant treatment in secondary and tertiary care has been ascertained for the diseases like thrombocytopenia due to dengue<sup>25</sup> and acute encephalitis syndrome<sup>26</sup>. Homoeopathy extended the survival time in cancer patients and can be used as an adjuvant with conventional treatment or to remove side effects of conventional treatment.<sup>27</sup> Even in the veterinary and agriculture fields, research studies have been attempted to explore the clinical evidence.<sup>28,29</sup> Considering the global threat of anti-microbial resistance, such promising areas deserve investment in further research, in particular

high-quality randomized clinical trials. A meta-analysis by Mathie and Clausen<sup>30</sup> showed that overall there is a positive trend in the evidence on veterinary Homoeopathy which is robust upon sensitivity analysis.<sup>31</sup>

### Costs

Integration of Homoeopathy with medicine may bring in more success at less cost. It seems rational to support Homoeopathy as an effective practice.<sup>32</sup> In a study, economic analysis of EPI3 data was analyzed on basis of three types of cost: consultation, prescription and total costs. Overall health expenditure was 20% less for patients consulting homeopathic family physicians in France compared to conventional family physicians. The lower cost of prescriptions for homeopathic GPs was partially offset by higher consultation costs. Homoeopathic physicians prescribed far fewer potentially hazardous drugs including psychotropics, antibiotics and non-steroidal anti-inflammatory drugs.<sup>33</sup> In India 13.3% of allocated amount used for homoeopathy. Study reported that homeopathic unit will spend no more than INR 100 on a patient per visit, given the much lesser cost of the medicines (including patents), an allopathic unit spends at least INR250 to INR300 on an average patient visit.<sup>34</sup> Eight studies on European population showed remarkable direct costs savings by the use of Homoeopathy.<sup>35</sup>

### Users

A recent market survey by Ipsos and Omeoimprese (November 2018) confirms that Homoeopathy has a strong support in France and Italy.<sup>36</sup> Further, a survey conducted by Global TGI in 2008 found 15% of the population of Britain trusted Homoeopathy<sup>37</sup>. Homoeopathy remains popular choice of the treatment due to individualised and holistic treatment. Many surveys conclude that people integrate, use and value Homoeopathy as a complementary treatment option.<sup>38</sup> A recent paper reveals usage of homeopathic medicines through self-medication among German people.<sup>39</sup> A cross-sectional survey was conducted on patients and people visiting the health check-up camp and exhibition stall set-up during Magh Mela at Sangam, Allahabad using a self-administered questionnaire devised by the Central Council for Research in Homoeopathy<sup>40</sup>. In this survey, 779 (68.1%) responders had knowledge about Homoeopathy out of which 594 76.3% of persons responded that Homoeopathy is better than other systems of treatment and the reason for that being no side effects 46.6%, cost-effective 15.1%, palatable 5%. A Brazil study reported that the increased use of Homoeopathy is limited to those individuals with higher education and income.<sup>41</sup> A survey in Argentinian hospital revealed that the lifetime

prevalence use of alternative therapies was near 55%; and the most used were homeopathy and herbal medicines (40.8% and 37.6%, respectively).<sup>42</sup>

### Clinical outcomes

Over the course of many years, there has been an increasing interest in the homeopathic treatment for various ailments. In children, not only cough and the common cold, but also acute diseases such as pneumonia or severe chronic illnesses like rheumatism, asthma, etc. have been targets for a homeopathic supportive therapy.<sup>43</sup> Studies includes condition like Diarrhoea<sup>44</sup>, Otitis Media<sup>45,46</sup> Allergic rhinitis<sup>47, 48, 49</sup> vertigo<sup>50</sup> atopic diseases<sup>51</sup> headache<sup>52</sup>, menopausal disorders<sup>53</sup> ADHD in children<sup>54</sup> primary teething<sup>55</sup> and cancer<sup>56, 57</sup>. In a study from Iran, the highest level of patient satisfaction upon using Homeopathy was related to relief of symptoms. Satisfaction of physician performance and improvement of general health came next. The four symptoms that showed better improvement in 2008 were headache, gastrointestinal (GI) disturbances, fatigue, and insomnia. After using Homeopathy for several years, patients' satisfaction was found to be still high. Shifting the area of satisfaction from general health to relief of symptoms could be related to physicians' experiments for remedy selection.<sup>32</sup> A cross-sectional survey<sup>58</sup> was done in Germany with women diagnosed with endometriosis. Out of 133 patients, Homeopathy (52.7%) was often used among the CAM therapies. 91.8% of women described an improvement in their symptoms and quality of life through the use of CAM. In an international

pragmatic, randomised controlled pilot study<sup>59</sup> comparing individualised homeopathic add-on treatment and usual care only in women with premenstrual disorders (PMD), 47 completed the study of which 83% women preferred Homeopathy. After four months, the relative mean change of premenstrual symptom scores in the HT (individualised Homeopathy) group was significantly better than in the UC (usual care) group. In a non-randomized, retrospective, unicentric clinical study<sup>60</sup> of 517 consecutive patients operated on for secondary community peritonitis to assess the effects of Integrative Medicine (Homeopathy and Bach Flowers Remedies plus Allopathic Therapy) on postoperative complications in patients operated upon for secondary acute peritonitis. As compared to the Allopathic Therapy group, patients receiving integrative medicine had a significantly shorter postoperative stay probably linked to less postoperative ileus and other non-severe complications. In a study in Spain, Homeopathy was the only prescription in 46.7% of chronic cases (main in 89% and adjuvant in 44.4%). Most frequently treated complaints were musculoskeletal (28.9%), respiratory (17.8%), psychic (16.7%), cardiovascular (78%) and cutaneous (67%).<sup>61</sup> In 2015 a Resolution of the Tuscan Regional Government ratified to develop the use of some CM as treatment of cancer-related symptoms, and side effects of conventional cancer therapy, and chose Homeopathy for hot flushes of iatrogenic menopause and the side-effects of radiotherapy.<sup>62</sup> The status of each country known to be having Homeopathy can be seen at a glance in the table below:

### Status of Homeopathy in various countries

Sources: 1. WHO global report on traditional and complementary medicine 2019. Geneva: World Health Organization; 2019. License: CC BY-NC-SA 3.0 IGO.

2. Worldwide online survey by LMHI-CCRH conducted through Monkey Survey in 2017. This source is denoted by (S) in the table.

S No.	Country Name	Usage	Regulation of system	Practice sector (Public/private)	Regulations/ Associations of health providers	No. of homeopathy practitioners	Infrastructure	Insurance coverage
1	<b>Armenia</b>	T&CM practices in use; includes Homeopathy	Homeopathy is well-regulated and government policies exist to assure access and growth of the system. (S)	T&CM providers practice in public and private sector clinics and hospitals	T&CM providers of acupuncture, chiropractic, herbal medicines and Homeopathy have been regulated since 2001.	--	--	No Information

## SCIENTIFIC FRAMEWORK OF HOMOEOPATHY

S No.	Country Name	Usage	Regulation of system	Practice sector (Public/private)	Regulations/ Associations of health providers	No. of homoeopathy practitioners	Infrastructure	Insurance coverage
					The national Government issues the T&CM license required to practice.			
2	<b>Argentina</b>	T&CM 55% Homoeopathy 22.5%	Regulated only the expenditure of remedies, not the practice. Practiced by MD, Vets, Dentistry, Pharm.	Practiced by MD, Vets, Dentistry, Pharm. Only private.	License as MD, Vets, Dent or Pharmacists.	No registered. Estimated 400 – 500.	Private Schools and offices.	No Information
3	<b>Australia</b>	T&CM practices in use; includes Homoeopathy	The practices of naturopathy and Homoeopathy remain unregulated in all jurisdictions. Survey – Homoeopathy has a self-regulation system via the Australian Register of Homeopaths (AROH).	--	--	According to data from the Australian Institute of Health and Welfare (25), the following numbers of T&CM providers practice in Australia: acupuncture (950), chiropractic (2486), Homoeopathy (235),	--	In Australia, there are currently 35 different private health insurance organizations providing over 22 000 different private health insurance products. Health insurers are free to determine the services that attract general treatment benefits and that T&CM practices fall under. Health insurers can place limitations on entitlements, to impose quality and accreditation requirements that must be met by individual T&CM practices in order to receive insurance benefits.
4	<b>Austria</b>	T&CM practices in use; includes Homoeopathy	Homoeopathy is partially regulated, as a part of Traditional and Complementary Medicine.(S)	Providers of acupuncture, chiropractic, herbal medicines, Homoeopathy and traditional Chinese medicine practice in Austria	--	--	--	There is partial insurance coverage for T&CM services.

S No.	Country Name	Usage	Regulation of system	Practice sector (Public/private)	Regulations/ Associations of health providers	No. of homoeopathy practitioners	Infrastructure	Insurance coverage
5	<b>Bahrain</b>	T&CM practices includes 20–39% of population used Homoeopathy.	T&CM was practiced in Bahrain but was not well regulated until 2016,	--	--	--	--	Integration of Homoeopathy with medicine may bring in more success at less cost.
6	<b>Bangladesh</b>	T&CM practices in use; includes Homoeopathy	--	--	National-level regulations on providers of Homoeopathy since 1983. The national Government issues the T&CM licence required to practice	222 diploma holders in homeopathic medicine	Clinic settings in the private sector and in hospitals in the public sector.	As at end 2016, T&CM services are not covered by health insurance in Bangladesh.
7	<b>Belgium</b>	T&CM practices in use; includes Homoeopathy	It is partially regulated, as a part of Traditional and Complementary Medicine. (S)	--	--	--	--	T&CM services are not covered by health insurance;
8	<b>Benin</b>	80–99% of the population use Indigenous TM, which also includes Homoeopathy	National policy and laws on T & CM was updated in 2016 & regulations on T&CM practice was in 2013.	T&CM providers practice only in private sector clinics and hospitals	A T&CM license or certificate, issued by the national Government, is required for practice	2200	--	--
9	<b>Bolivia (Plurinational State of)</b>	Homoeopathy is accessible in healthcare as a part of Traditional/ Complementary medicine. The use of indigenous TM is considered important in the Plurinational State of Bolivia, with an estimated 60– 79% of the population using it, out of which Homoeopathy usage is 20–39%.	It is partially regulated, as a part of Traditional and Complementary Medicine(s).	T&CM providers practice in private clinics only.	A T&CM licence or certificate – issued by the national, provincial, city or community government – is required to practice	--	--	As at end 2016, T&CM services are reimbursed by health insurance in 60 public establishments.

## SCIENTIFIC FRAMEWORK OF HOMOEOPATHY

S No.	Country Name	Usage	Regulation of system	Practice sector (Public/private)	Regulations/ Associations of health providers	No. of homoeopathy practitioners	Infrastructure	Insurance coverage
10	<b>Brazil</b>	1–19% of the population uses Homoeopathy. Homoeopathy is at par with conventional medicine, in terms of availability and access to physicians(S).	Homoeopathy is well-regulated and government policies exist to assure access and growth of the system (S).The national policy for T&CM called integrative and complementary practices (Política Nacional de Practicas Integrativas y Complementarias) is part of the unified health system (Sistema Unico de Saúde [SUS]). It covers five practices, which includes Homoeopathy also. The most recent update of the regulations governing T&CM practitioners was in 2016.	T&CM providers practice in both private and public sector clinics and hospitals.	A T&CM licence or certificate is required for practice, with self-regulation by delegated special technical associations. The Government also officially recognizes certified T&CM training programmes.	FUNASA data for 2007 puts the number of T&CM providers practising in the unified health system at 560 for homeopathic medicine providers.	--	Homoeopathic medicines are fully covered by government and partially by private insurance. As at end 2016, T&CM services are reimbursed by both public and private health insurance
11	<b>Brunei Darussalam</b>	T&CM practices in use; includes Homoeopathy	Since 2009, there are regulations in progress for providers of acupuncture, ayurvedic medicine, chiropractic, Homoeopathy, naturopathy, traditional Chinese medicine, Unani medicine and other practices such as spa, massage, beauty care and health practices.	T&CM providers practice only in the private sector. The T&CM Unit is required to submit a support letter to the Labour Department for foreign T&CM providers to be granted a work quota and subsequently a working	Currently the T&CM Unit only registers (administratively) practitioners of traditional Chinese medicine, traditional Chinese medicine herbal dispensing, traditional Malay medicine, traditional Indian medicine, acupuncture, chiropractic, Homoeopathy, osteopath,	--	--	No Information

S No.	Country Name	Usage	Regulation of system	Practice sector (Public/private)	Regulations/ Associations of health providers	No. of homoeopathy practitioners	Infrastructure	Insurance coverage
				visa by the Immigration Department, before they can practice in the private sector.	massage, reflexology and cupping.			
12	<b>Burkina Faso</b>	Estimated 60–79% of the population use Indigenous TM, and homoeopathy is one of that	Regulations at the national level apply to indigenous TM providers	T&CM providers practice only in the private sector	A T&CM license or certificate is required for practice. The Government does not officially recognize any T&CM training programs	--	--	--
13	<b>Burundi</b>	T&CM practices in use; includes Homoeopathy	--	T&CM providers practice in the private sector and home-based settings.	--	--	--	T&CM not covered by public or private health insurance.
14	<b>Cameroon</b>	T&CM practices in use; includes Homoeopathy	--	--	--	--	--	--
15	<b>Canada</b>	The Canadian Community Health Survey (2005) indicates that 1–19% of the population uses Homoeopathy. It is accessible in healthcare as a part of Traditional/ Complementary medicine.(S)	Homoeopathy is regulated only in province of Ontario since April 2015(S).	--	--	--	--	--
16	<b>Chile</b>	Health surveys estimate that 1–19% of the population use T&CM practices which include Homoeopathy also.	There are advisory commissions for Homoeopathy after the publication of the decrees that regulate	Homoeopathy is available only as a private service.	A T&CM licence or certificate, issued by the MoH via the regional health authorities, is required to practice the	The numbers of T&CM providers in practice in Chile of homeopathic medicine is 200	--	--

## SCIENTIFIC FRAMEWORK OF HOMOEOPATHY

S No.	Country Name	Usage	Regulation of system	Practice sector (Public/private)	Regulations/ Associations of health providers	No. of homoeopathy practitioners	Infrastructure	Insurance coverage
			it (beginning in 2009). Homoeopathy is recognized as therapies and are governed under regulations Decree No. 19 of 2009, which grants recognition to and regulates Homoeopathy as an Auxiliary Profession of Health. It is partially regulated, as a part of Traditional and Complementary Medicine. Between 2005 and 2008, the practice of Acupuncture, Naturopathy and Homoeopathy was regulated.		recognized therapies		--	--
17	<b>Colombia</b>	T&CM practices in use; includes Homoeopathy	Homoeopathy is well-regulated and government policies exist to assure access and growth of the system(S).	T&CM providers practice in the private sector, Homoeopathy is available only as a private service.	--	--	--	T&CM services such as acupuncture, chiropractic, Homoeopathy, osteopathy and traditional Chinese medicine are partially covered by private health insurance.
18	<b>Comoros</b>	T&CM practices in use; includes Homoeopathy	--	--	--	--	--	--
19	<b>Congo</b>	T&CM practices in use; includes Homoeopathy	--	--	--	--	--	--
20	<b>Côte d'Ivoire</b>	20–39% of population uses Homoeopathy	--	--	--	--	--	--

S No.	Country Name	Usage	Regulation of system	Practice sector (Public/private)	Regulations/ Associations of health providers	No. of homoeopathy practitioners	Infrastructure	Insurance coverage
21	<b>Croatia</b>	T&CM practices in use; includes Homoeopathy	Homoeopathy is not recognised as a healing system (S).	Homoeopathy is available only as a private service (S).	--	--	--	No data are available on T&CM practices, providers, education or health insurance in Croatia.
22	<b>Cuba</b>	According to a 2010 report on use of NTM within Cuba, Homoeopathy used by 40–59% of population.	There is a regulation exclusively for herbal medicines, which was updated in 2016.	--	--	--	--	Cuban system is universal, accessible, regionalized, and free of charge, so there are no private health services, providers or insurance.
23	<b>Cyprus</b>	T&CM practices in use; includes Homoeopathy	Providers of herbal medicines and Homoeopathy have been regulated at a national level since 2006	T&CM providers practice in the private sector	The national Government issues the T&CM licence required to practice.	--	--	No Information
24	<b>Denmark</b>	T&CM practices in use; includes Homoeopathy	--	T&CM providers practice in public and private sector hospitals and clinics.	--	--	--	Indigenous TM services are covered by private health insurance and there is partial coverage of chiropractic services by government and private health insurance.
25	<b>Ecuador</b>	Homoeopathy is at par with conventional medicine, in terms of availability and access to physicians(S).	The Health Control Registry regulates the registration, manufacture, distribution and marketing of both herbal medicines and homeopathic medicines (under the regulation for health registration and control of processed natural products for medicinal use, and establishments where such products are manufactured,	--	--	--	--	--

## SCIENTIFIC FRAMEWORK OF HOMOEOPATHY

S No.	Country Name	Usage	Regulation of system	Practice sector (Public/private)	Regulations/ Associations of health providers	No. of homoeopathy practitioners	Infrastructure	Insurance coverage
			stored, distributed and marketed). Homoeopathy is partially regulated, as a part of Traditional and Complementary Medicine.					
26	<b>Estonia</b>	T&CM practices in use; includes Homoeopathy	Homoeopathy is partially regulated, as a part of Traditional and Complementary Medicine.	--	National-level regulations apply to acupuncture providers (since 2002), herbal medicine providers (since 2004) and homeopathic medicine providers (since 2005).	14 homeopathic medicine providers, 17 traditional Chinese medicine providers, 28 aroma therapists, eight Nuad Bo-Rarn natural therapists and 24 reflexologists	--	No Information
27	<b>Finland</b>	T&CM practices in use; includes Homoeopathy	--	--	Health care professionals need authorization to practice	As at 2012, there were an estimated 77 chiropractic providers, 1600 homeopathic medicine providers, 245 osteopathic providers, 750 TM providers and 125 naprapaths practising in Finland.	--	There is partial insurance coverage provided by the Patient Insurance Centre for patients who suffer a personal injury during health care treatment by health care professionals, including chiropractic, osteopathy and naprapathy providers.
28	<b>Gabon</b>	Indigenous TM is considered important in Gabon, with 80–99% of the population using it and homoeopathy is one of that.	--	--	--	--	--	--

S No.	Country Name	Usage	Regulation of system	Practice sector (Public/private)	Regulations/ Associations of health providers	No. of homoeopathy practitioners	Infrastructure	Insurance coverage
29	<b>Gambia</b>	Homoeopathy used in Gambia, but usage data is not available.	--	T&CM providers practice in the private sector	--	--	--	--
30	<b>Germany</b>	According to 2000 data, 60–79% of the German population uses indigenous TM practices (9). A 2004 study estimated that 1–19% of the population uses acupuncture, ayurvedic medicine, chiropractic, Homoeopathy and traditional Chinese medicine; herbal medicines are used by 20–39%; and naturopathy is used by 80–99% (22).	Homoeopathy is accessible in healthcare as a part of Traditional/ Complementary medicine and is partially regulated. (S)	--	--	--	--	No Information
31	<b>Ghana</b>	Data obtained from the Tracking Adaptation and Measuring Development (TAMD) issues from 2004 to 2006 provide estimates of population use of homoeopathy is 1–19%.	--	--	Homoeopathy is regulated at the national level. Regulations for T&CM practitioners were updated in 2016.	The TMPC's national register of T&CM providers for 2009 includes 40 homeopathic medicine providers	--	As at end 2016, T&CM services are not reimbursed by public health insurance.
32	<b>Guinea-Bissau</b>	T&CM practices in use; includes Homoeopathy	Regulation of T&CM providers has been in place since 2010, and it is enforced at national, province, city and community levels.	T&CM providers practice in private clinics and home-based settings.	--	--	--	--

## SCIENTIFIC FRAMEWORK OF HOMOEOPATHY

S No.	Country Name	Usage	Regulation of system	Practice sector (Public/private)	Regulations/ Associations of health providers	No. of homoeopathy practitioners	Infrastructure	Insurance coverage
33	<b>Hungary</b>	T&CM practices in use; includes Homoeopathy	Homoeopathy is partially regulated, and private conventional Hospitals/ health centres providing homeopathic health services alongside. (S)	--	Only physicians (161.e. medical doctors) are allowed to practice the following T&CM practices: acupuncture, chiropractic, herbal medicines, Homoeopathy, osteopathy, traditional Chinese medicine, neural therapy, anthroposophic medicine and detoxification therapies	--	--	There is partial insurance coverage for acupuncture in public hospitals and in public outpatient consulting rooms, if the providing doctor has a licence.
34	<b>India</b>	T&CM practices in use under the ambit of AYUSH; includes Homoeopathy	In India, the national policy on T&CM is the National Policy on Indian Systems of Medicine and Homoeopathy, issued in 2002. There are national and state level regulations that apply to providers of homeopathic medicine.	Homoeopathy practitioners practice in both public and private sector clinics and hospitals	The national Government issues the T&CM licence required to practice. Regulations for Homoeopathy practitioners were updated in 2014 and the list of registered TM practitioners was updated in 2016.	Numbers of T&CM practitioners registered (as at 1 January 2019): 293 307.	The Government of India created a separate department known as the Department of Indian Systems of Medicine and Homoeopathy in 1995, later renamed as the Department of Ayurveda, Yoga, Unani, Siddha and Homoeopathy (AYUSH), to serve as the national office for T&CM, which is administered under the MoH. councils for research under AYUSH. Central Council for Research in Homoeopathy.	T&CM services are covered under public health funding schemes like CGHS at central level and similar schemes at state level.

S No.	Country Name	Usage	Regulation of system	Practice sector (Public/private)	Regulations/ Associations of health providers	No. of homoeopathy practitioners	Infrastructure	Insurance coverage
							A national plan for integrating T&CM into national health delivery began in 2014. Government and public research funding is allocated towards T&CM.	
35	<b>Iran (Islamic Republic of)</b>	Homoeopathy used in Iran, study suggests satisfaction was found high. 32 #	The Islamic Republic of Iran has an integrated national policy on T&CM – the “doctrines of revival and indication” for Iranian TM, issued in 1996 and revised in 2010. A law on T&CM relates to responsibility and administrative structure in the Ministry of Health and Medical Education.	T&CM providers practice in public and private sector clinic	--	--	--	As at end 2016, 56 herbal drugs are covered by public health insurance but visits and services of TCM practitioners are not covered by any health insurance.
36	<b>Ireland</b>	T&CM practices in use; includes Homoeopathy	--	T&CM providers of acupuncture, ayurvedic medicine, chiropractic, herbal medicines, Homoeopathy, naturopathy, osteopathy, traditional Chinese medicine, aromatherapy, reiki and reflexology practice in Ireland	--	--	--	There is partial health insurance coverage by the Government of some T&CM services such as acupuncture, chiropractic, homeopathic medicines and osteopathy.

## SCIENTIFIC FRAMEWORK OF HOMOEOPATHY

S No.	Country Name	Usage	Regulation of system	Practice sector (Public/private)	Regulations/ Associations of health providers	No. of homoeopathy practitioners	Infrastructure	Insurance coverage
37	<b>Israel</b>	T&CM practices in use; includes Homoeopathy	--	Indigenous TM providers and T&CM providers of acupuncture, chiropractic, herbal medicines, Homoeopathy, naturopathy and osteopathy practice in Israel.	--	--	--	There is partial coverage of T&CM practices by private health insurance.
38	<b>Japan</b>	In the government report for Integrative Medicine, the percentage of people who have tried Homoeopathy or are currently using it is 0.4%. 5.5% of the respondents either know a lot about Homoeopathy or know generally about it (S).	--	--	--	--	--	The T&CM practices of acupuncture and herbal medicines by government health insurance.
39	<b>Liberia</b>	1-9% of population used Homoeopathy	--	T&CM providers practice in the private sector in a hospital setting	The national Government (Ministry of Health and Social Welfare) issues the license required to practice.	--	--	T&CM practices are not covered by health insurance.
40	<b>Lithuania</b>	Indigenous TM and other T&CM practices are used by the population of Lithuania, but the percentages of use are not available	Homoeopathy is accessible in healthcare as a part of Traditional/ Complementary medicine. (S)	TM providers practice in public and private sector hospitals and clinics	A TM licence, issued by the national Government, is required to practice. The Government officially recognizes certified training programmes	--	--	The mandatory public health insurance fund covers expenses of health care services provided by a general practitioner or by specialists, who are allowed to use both conventional and alternative medical practices, according to the professional competence of the specialist. Contracts with the fund are signed with both private and government health care providers.

S No.	Country Name	Usage	Regulation of system	Practice sector (Public/private)	Regulations/ Associations of health providers	No. of homoeopathy practitioners	Infrastructure	Insurance coverage
41	<b>Madagascar</b>	T&CM practices in use; includes Homoeopathy	Indigenous TM providers have been regulated, with enforcement at the national level, since 2005.	T&CM providers practice in the private sector and in public sector clinics and hospitals	T&CM providers require a relevant license or certificate, issued by the national Government or relevant academic institution, to practice. There are also other T&CM training programmes that the Government officially recognizes.	--	--	--
42	<b>Malaysia</b>	T&CM practices in use; includes Homoeopathy	Homoeopathy is accessible in healthcare as a part of Traditional/ Complementary medicine (S).	--	--	600	10 private institutions of higher education offering T&CM courses at diploma or degree levels	Health coverage by private insurance companies will follow when minimum safety standards for T&CM practice are ensured, registration of T&CM practitioners completed and appropriate regulations enforced in a highly professional T&CM industry.
43	<b>Mali</b>	T&CM practices in use; includes Homoeopathy	Indigenous TM providers have been regulated at national level since 1994. .	T&CM providers practice in private clinics, health care practices and herbal stores	A license or certificate, issued by the national Government, is required to practice	--	--	Some complementary health insurance companies reimburse prescription herbal medicines. As of 2016, T&CM services are reimbursed by compulsory health insurance (assurance maladie obligatoire).
44	<b>Mexico</b>	According to the results of a survey by the national office published in 2009–2010, indigenous TM practices and herbal	Herbal medicines are regulated as “health products”, alongside conventional pharmaceuticals, allopathic medicines and	T&CM providers practice in public clinics and hospital.	A T&CM licence or certificate issued by a relevant academic institution is required to practice.	According to the Registry data, the T&CM providers in practice includes 7171 in homeopathic medicine.	--	--

## SCIENTIFIC FRAMEWORK OF HOMOEOPATHY

S No.	Country Name	Usage	Regulation of system	Practice sector (Public/private)	Regulations/ Associations of health providers	No. of homoeopathy practitioners	Infrastructure	Insurance coverage
		medicines are used by 20–39% of the population, while 1–19% of the population uses Homoeopathy.	homeopathic medicines.					
45	<b>Mozambique</b>	According to a report from August 2010, 1–19% of the population used Homoeopathy.		T&CM providers practice in private sector clinics.	City and community governments issue the licence required for T&CM practice	According to the 2010 report, about 70,000 indigenous TM providers practice in Mozambique out of which 80 are Homoeopathy providers Practice.	--	--
46	<b>Nepal</b>	T&CM practices in use; includes Homoeopathy	Government registers the Homeopaths at Nepal Health Professional Council. Government of Nepal has recognized Homoeopathy as a system of Medicine	There is one OPD Clinic opened by the government, and it has been running with the government's management since last 65 years.	--	--	--	No Information
47	<b>Netherlands</b>	T&CM practices in use; includes Homoeopathy	Homoeopathy is accessible in healthcare as a part of Traditional/ Complementary medicine. (S)	--	--	--	--	There is partial health insurance coverage by private insurance companies for some T&CM practices such as acupuncture, chiropractic, herbal medicines, homeopathic medicines, naturopathy, osteopathy and traditional Chinese medicine.
48	<b>Norway</b>	1–19% of Norway's population uses	--	--	The Government also recognizes certified training programmes in CAM.	T&CM providers of acupuncture, herbal medicines,	--	No Information

S No.	Country Name	Usage	Regulation of system	Practice sector (Public/private)	Regulations/ Associations of health providers	No. of homoeopathy practitioners	Infrastructure	Insurance coverage
		acupuncture, Homoeopathy and naturopathy.	--	--		Homoeopathy, naturopathy, osteopathy, traditional Chinese medicine and others are found in Norway but their numbers are not known.	--	
49	<b>Oman</b>	T&CM practices in use; includes Homoeopathy	T&CM is regulated by national-level regulations, but their numbers are not known.	T&CM providers practice in the private sector clinics.	The national Government issues the licence required for T&CM practice.	--	--	There is partial health insurance coverage of some T&CM services such as acupuncture, herbal medicines and traditional Chinese medicine by government agencies, and of homeopathic medicine by private organizations.
50	<b>Pakistan</b>	T&CM practices includes use of Homoeopathy by 20–39% of population. Study suggests majority of students knew about the use of traditional herbs and considered Homoeopathy 86.5%, NP: 81%, p = 0.064] # (Mariam Ashraf, Hamid Saeed, Zikria Saleem,, Hassaan Answer Rathore, Fawad Rasool, Eman Tahir , Tooba Bhatti, Javeria Khalid , Iqra Bhatti and Ayesha Tariq; A cross-sectional assessment of knowledge,	In Pakistan, the policy on T&CM is integrated into the national health policy of 2001. The law relating to T&CM is the Unani, Ayurvedic, Homoeopathic Act of 1965 (updated in 1982 and 2003). National-level regulations under Homoeopathic Practitioners are fully enforced.	T&CM providers practice in both public and private sector clinics and hospitals.	The National Council for Tibb and Homoeopathy issues the T&CM licence that is required to practice	About 120 000 homeopaths practice in Pakistan.	--	--

## SCIENTIFIC FRAMEWORK OF HOMOEOPATHY

S No.	Country Name	Usage	Regulation of system	Practice sector (Public/private)	Regulations/ Associations of health providers	No. of homoeopathy practitioners	Infrastructure	Insurance coverage
		attitudes and self-perceived effectiveness of complementary and alternative medicine among pharmacy and non-pharmacy university students. Ashraf et al. BMC Complementary and Alternative Medicine (2019) 19:95. )						
51	<b>Palau</b>	T&CM practices in use; includes Homoeopathy	--	T&CM providers practice in the private sector.	--	--	--	No Information
52	<b>Paraguay</b>	Indigenous TM is considered important in Paraguay. TCM practices such as Homoeopathy is also used.	As at 2017, there is a draft regulation for T&CM providers that is being reviewed by the MoH's legal advisory office.	T&CM providers practice in private clinics only.	--	--	--	--
53	<b>Peru</b>	Providers of indigenous TM and other T& amp CM practices, homeopathic medicines is also found in Peru.	--	T&CM providers practice in private and public clinics and hospitals.	The Government also officially recognizes a certified training programme.	--	--	Government social security insurance (EsSalud), which provides care to about 30% of the population, provides T&CM services for those it insures.
54	<b>Philippines</b>	T&CM practices in use; includes Homoeopathy	Regulated at the national level since 2008	Both public and private sectors	PITAHC accredits and certifies T&CM practitioners, clinics and training centres. PITAHC has developed policies, standards and guidelines for the practice	--	--	There is no health insurance coverage for T&CM services.

S No.	Country Name	Usage	Regulation of system	Practice sector (Public/private)	Regulations/ Associations of health providers	No. of homoeopathy practitioners	Infrastructure	Insurance coverage
55	<b>Portugal</b>	T&CM practices are used by Portugal's population, but the percentages of use are not available	T&CM legislation in Portugal started in 2003, to cover six "nonconventional therapies" (NCT): acupuncture, chiropractic, Homoeopathy, naturopathy, osteopathy and phytotherapy (herbal medicines).	--	--	. Indigenous TM providers and T&CM providers of acupuncture, chiropractic, herbal medicines (phototherapy), Homoeopathy, naturopathy, osteopathy, traditional Chinese medicine and ayurvedic medicine all practice in Portugal, but their numbers are not known.	--	Homoeopathic medicines, naturopathy and osteopathy are partially covered by some private health insurance.
56	<b>Republic of Moldova</b>	Estimates from Homoeopathy private clinics data are that 20–39% of the population uses acupuncture, 60–79% uses herbal medicines and 20–39% uses Homoeopathy.	--	--	The national Government, relevant academic institution or licensing authority issues the T&CM licence that practitioners require to practice.	The number of T&CM providers of acupuncture, Homoeopathy, chiropractic and osteopathy in 2010 were 96, 37, 48 and 37, respectively	--	T&CM practices of acupuncture, chiropractic and osteopathy are partially covered by government health insurance.
57	<b>Romania</b>	Homoeopathy is accessible in healthcare as a part of Traditional/ Complementary medicine. There are Homoeopathy pharmacies and government run Homoeopathy health centres.	Homoeopathy is well-regulated and government policies exist to assure access and growth of the system. (S)	--	Registration of homeopathic practitioners is done.	--	--	No data are available on T&CM practices, providers, education or health insurance in Romania.
58	<b>Saint Vincent and the Grenadines</b>	T&CM practices such as Homoeopathy are also used by the population.	--	--	--	--	--	--
59	<b>Sao Tome and Principe</b>	T&CM practices in use; includes Homoeopathy	--	practice in private clinics only	--	--	--	--

## SCIENTIFIC FRAMEWORK OF HOMOEOPATHY

S No.	Country Name	Usage	Regulation of system	Practice sector (Public/private)	Regulations/ Associations of health providers	No. of homoeopathy practitioners	Infrastructure	Insurance coverage
60	<b>Senegal</b>	According to a 2003 census by Ministry of Health and Prevention, Homoeopathy is used in Senegal	--	T&CM providers practice in the private and public sectors	--	--	--	--
61	<b>Serbia</b>	National-level regulation commenced in 2007 for indigenous TM providers and providers of acupuncture, ayurvedic medicine, chiropractic, herbal medicines, Homoeopathy and traditional Chinese medicine	--	T&CM providers practice in public and private sector hospitals and clinics.	--	60 homeopathic medicine providers	--	T&CM services are paid mainly by patients (users) and are not covered by health insurance.
62	<b>Slovakia</b>	T&CM practices in use; includes Homoeopathy	--	--	Regulation of homeopathic medicine providers commenced in 2004. The national Government issues the T&CM licence required to practice.	350 homeopathic providers	--	No Information
63	<b>Slovenia</b>	T&CM practices are used in Slovenia.	--	--	Regulation of providers of ayurvedic medicine, chiropractic, homeopathic medicine, osteopathy, traditional Chinese medicine and Unani medicine has been in place since 2007. The national Government issues the T&CM licence required to practice.	--	--	No Information

S No.	Country Name	Usage	Regulation of system	Practice sector (Public/private)	Regulations/ Associations of health providers	No. of homoeopathy practitioners	Infrastructure	Insurance coverage
64	<b>South Africa</b>	According to 2010 estimates from the Allied Health Professions Council of South Africa (AHPCSA), 1–19% of the population uses T&CM practices, including Homoeopathy. Homoeopathy is at par with conventional medicine, in terms of availability and access to physicians.	Homoeopathy is well regulated and government policies exist to assure access and growth of the system. Medicines are regulated under the South African Health Products Regulation Act.	T&CM providers practice in the private sector.	The AHPCSA, a statutory body, issues the T&CM licence required to practice.	The AHPCSA database for 2010 included a total of 3289 practising T&CM providers in which 574 are homeopaths.	--	--
65	<b>Spain</b>	T&CM practices are used in Spain.	--	Providers practice in the private sector	The state Government issues the T&CM licence required to practice.	Providers of acupuncture, ayurvedic medicine, chiropractic, herbal medicines, Homoeopathy, naturopathy, osteopathy and traditional Chinese medicine practice within Sweden, but their numbers are not known.	--	No Information
66	<b>Sri Lanka</b>	Acupuncture, Homoeopathy and Unani medicine practices were used by 1–19% of the population	National-level regulation has applied to indigenous TM providers and ayurvedic medicine providers since 1962 and to homeopathic providers since 1972.	T&CM providers practice in public and private sector clinics and hospitals, and in hotels	The national Government issues the licence required for T&CM practice.	Ayurvedic Medical Council data from 2009 indicate that there were about 16 650 indigenous TM providers practising in Sri Lanka; data from 2007 indicate		Full government health insurance coverage is available for ayurvedic medicine and Unani medicine. Partial private insurance coverage is also available for ayurvedic medicine. As at 2018, some insurance schemes do cover other T&CM practices, but none covers indigenous TM practice.

## SCIENTIFIC FRAMEWORK OF HOMOEOPATHY

S No.	Country Name	Usage	Regulation of system	Practice sector (Public/private)	Regulations/ Associations of health providers	No. of homoeopathy practitioners	Infrastructure	Insurance coverage
						there were 500 acupuncture providers, 15 000 Ayurveda medicine providers, 350 homeopathic medicine providers, 300 Unani medicine providers and 500 Siddha providers.		
67	<b>Sweden</b>	T&CM practices are used in Sweden	--	T&CM providers practice in public and private sector hospitals and clinics.	--	--	--	Chiropractic services are partially covered by government health insurance.
68	<b>Switzerland</b>	T&CM practices in use; includes Homoeopathy	--	--	Homoeopathy is at par with conventional medicine, in terms of availability and access to physicians. Homoeopathy is well regulated and government policies exist to assure access and growth of the system.	homeopathic (255)	--	T&CM services are partially covered by health insurance that is provided by private insurance companies that assume compulsory health insurance defined by federal legislation (referred to as "government" below).
69	<b>Syrian Arab Republic</b>	T&CM practices are used, but the percentages of the population using acupuncture, herbal medicines, Homoeopathy, naturopathy, traditional Chinese medicine and Unani medicine are not known	--	T&CM providers practice in private sector clinics	--	--	--	Indigenous TM services are covered by private and government health insurance, and there is partial coverage of some T&CM services (e.g. herbal medicines) by government agencies and private organizations.

S No.	Country Name	Usage	Regulation of system	Practice sector (Public/private)	Regulations/ Associations of health providers	No. of homoeopathy practitioners	Infrastructure	Insurance coverage
70	<b>Thailand</b>	The Division of Complementary and Alternative Medicine reported that, in 2010, ayurvedic medicine, chiropractic, Homoeopathy, naturopathy, osteopathy and Unani medicines were used by less than 1% of the population.	--	T&CM providers practice in public and private sector clinics and hospitals	The national Government issues the T&CM licence or certificate required to practice	--	--	A consumer education programme for self-help care using T&CM has been in place since 1996. As at 2018, T&CM services are reimbursed by public insurance.
71	<b>Tunisia</b>	T&CM practices such as acupuncture, ayurvedic medicine, chiropractic, herbal medicines, and Homoeopathy are used by the population of Tunisia but percentages of use are not known.	In Tunisia, the national policy is integrated into the law on medicines (Loi sur le médicament No. 85–91 of 1985) and related regulations.	T&CM providers practice in the private and public sectors	Regulation of T&CM providers of acupuncture, chiropractic, herbal medicines, homeopathic medicine and osteopathy is enforced at the city or county level. A licence or certificate, issued by the national Government, is required to practice T&CM	--	--	No Information
72	<b>Turkey</b>	T&CM practices in use; includes Homoeopathy	Homoeopathy is well-regulated and government policies exist	Public and Private Clinics	The national Government issues the T&CM license required to practice.	587 Homoeopathy licenses were given by the MoH. till 2020 286 of them are pharmacists, 280 Medical Doctor and 21 dentist.	Units operate in public hospitals, medical centres, polyclinics and clinics,	T&CM practices are not covered by (public) general health insurance. However, it is expected that private insurance companies are planning work on this issue. Some T&CM practices that are similar to conventional medicine – such as physical medicine, rehabilitation practices and thermal spa practices – are partially or fully covered by insurance. However,

## SCIENTIFIC FRAMEWORK OF HOMOEOPATHY

S No.	Country Name	Usage	Regulation of system	Practice sector (Public/private)	Regulations/ Associations of health providers	No. of homoeopathy practitioners	Infrastructure	Insurance coverage
								for reimbursement, these practices must be prescribed by a specialist doctor.
73	<b>Uganda</b>	According to practitioner data from 2010, between 1% and 19% of the population use homoeopathy.	The policy on T&CM is integrated into the National Policy on Public-Private Partnership Policy for Health (final draft 2009). Regulation of T&CM has been part of the law since 1957.	T&CM providers practice in private sector clinics and home-based settings.	--	--	--	--
74	<b>United Arab Emirates</b>	T&CM practices are as follows: acupuncture 20–39%; ayurvedic medicine, chiropractic, Homoeopathy, naturopathy, osteopathy, traditional Chinese medicine and Unani medicine all 1–19%; and other T&CM practices, such as cupping therapy, 40–59%.	National-level regulations have applied to indigenous TM providers since 2010, and to T&CM providers of acupuncture, ayurvedic medicine, chiropractic, herbal medicines, Homoeopathy, naturopathy, osteopathy and Unani medicine since 2002	T&CM providers practice in private sector clinics and hospitals	State or provincial government issues the relevant licence required for T&CM practice.	--	--	There is partial private health insurance coverage of T&CM services such as acupuncture, ayurvedic medicine, chiropractic, Homoeopathy, naturopathy, osteopathy, Unani medicine and other practices such as ozone therapy.
75	<b>United Kingdom of Great Britain and Northern Ireland</b>	T&CM practices in use; includes Homoeopathy	Integrated into the national health policy.	--	--	--	Public and private clinics and hospitals.	Information on coverage of private health insurance are not readily available.
76	<b>United Republic of Tanzania</b>	T&CM practices in use; includes Homoeopathy	Regulation of indigenous TM and T&CM providers is enforced at national, state, city and community level and since 2002, there have been regulations	T&CM providers practice in the private sector, in both clinic and hospital settings.	The national Government issues the T&CM licence required to practice	--	--	--

S No.	Country Name	Usage	Regulation of system	Practice sector (Public/private)	Regulations/ Associations of health providers	No. of homoeopathy practitioners	Infrastructure	Insurance coverage
			governing providers of T& CM including Homoeopathy.					
77	<b>United States of America</b>	According to the 2012 National Health Interview Survey (NHIS), an estimated 5 million adults and 1 million children used Homoeopathy. The 2012 survey also reported that although about 1.8 percent of children used Homoeopathy, only 0.2 percent of children went to a homeopathic practitioner # (Black LI, Clarke TC, Barnes PM, Stussman BJ, Nahin RL. A 2016 analysis of data from this survey suggests that most adults who use homeopathic products self-prescribe them for colds and musculoskeletal pain.	It is partially regulated, as a part of Traditional and Complementary Medicine(S).	--	--	--	--	--
78	<b>Uruguay</b>	--	Homoeopathy is recognized as a medical act and homeopathic medicines are legally regulated(S).	--	--	--	--	--
79	<b>WHO Region of the Americas</b>	Homoeopathy is well tolerated, but as a separate science, integration model doesn't exist at all	It is not regulated to the extent that availability of medicine is a challenge.	--	--	--	--	--

S No.	Country Name	Usage	Regulation of system	Practice sector (Public/private)	Regulations/ Associations of health providers	No. of homoeopathy practitioners	Infrastructure	Insurance coverage
80	<b>WHO South-East Asia Region</b>	T&CM practices in use; includes Homoeopathy	accessible in healthcare as a part of Traditional/ Complementary medicine	--	--	--	2 homeopathic hospitals are there within the NHS.	No Information

## Conclusion

Homoeopathy can be a useful therapeutic option in a public primary care setting. Homoeopathy is available in around eighty countries in the world. Its usage is growing, thus necessitating its regulation by the governments. In many countries, the homoeopathic practitioners are being provided license to practice, mostly under the ambit of T&CM healthcare provider. However, some countries still allow only allopathy practitioners to practice

Homoeopathy. Insurance cover for homoeopathic treatment is another aspect that has improved over time, and there are countries that provide this cover to both private and public sectors. Overall, regulations for the system have improved, thus making it more acceptable and accessible. Given the merits of Homoeopathy, especially in the primary healthcare setting, Homoeopathy can be advocated as useful therapeutic option in public primary care.

- Astin JA. Why Patients Use Alternative Medicine. Results of a National Study. *JAMA*. 1998;279(19):1548–1553. doi:10.1001/jama.279.19.1548.
- Avina RL, Schneiderman LJ. Why Patients Choose Homoeopathy. *West J Med*. 1978;128(4):366–369.
- Corp N, Jordan JL, Croft PR. Justifications for using complementary and alternative medicine reported by persons with musculoskeletal conditions: A narrative literature synthesis. *PLoS One*. 2018 13(7): e0200879. <https://doi.org/10.1371/journal.pone.0200879>
- Debas HT, Laxminarayan R, Straus SE. Complementary and Alternative Medicine. In: Jamison DT, Breman JG, Measham AR, et al., editors. *Disease Control Priorities in Developing Countries*. 2nd edition. Washington (DC): The International Bank for Reconstruction and Development / The World Bank; 2006. Chapter 69. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK11796/> Co-published by Oxford University Press, New York.
- World Health Organisation. WHO global report on traditional and complementary medicine. 2019. Available from: <https://www.who.int/traditional-complementary-integrative-medicine/WhoGlobalReportOnTraditionalAndComplementaryMedicine2019.pdf?ua=1>
- Jütte R. Medical Pluralism: What we can learn from history. Stuttgart 2017; Available from: <https://www.igm-bosch.de/files/img/pdf-dokumente-publikationen/Pluralismus%20in%20der%20Medizin/MedicalPluralism.pdf>
- Von Ammon K et al. Health Technology Assessment (HTA) and a map of CAM provision in the EU. Final Report of CAMbrella Work Package 5. 2012. Available from: <https://phaidra.univie.ac.at/detail/object/o:300096>
- Available from: <https://www.nhs.uk/conditions/Homoeopathy/>
- European Coalition on Homoeopathic and Anthroposophic Medicinal Products European Economic Interest Group. The Availability of Homoeopathic and Anthroposophic Medicinal Products in the EU. May 2012. Available from: [https://echamp.eu/availability-report-documents/the\\_availability\\_of\\_homeopathic\\_and\\_anthroposophic\\_medical\\_products\\_in\\_the\\_eu\\_echamp\\_may\\_2012.pdf](https://echamp.eu/availability-report-documents/the_availability_of_homeopathic_and_anthroposophic_medical_products_in_the_eu_echamp_may_2012.pdf)
- Central Council for Research in Homoeopathy. Dossier Homoeopathy: Science of Gentle Healing. Revised edition. New Delhi, CCRH, 2018; Govt. of India; URL:; Accessed on: 05.03.2020
- Kleijnen, J., Knipschild, P. & ter Riet, G. Clinical trials of Homoeopathy. *BMJ*. 1991;302(6782):960. doi:10.1136/bmj.302.6782.960
- Linde K, Clausius N, Ramirez G, Melchart D, Eitel F, Hedges LV, et al. Are the clinical effects of Homoeopathy placebo effects? A meta-analysis of placebo-controlled trials. *Lancet*, 1997; **350**:834–843 doi: 10.1016/S0140-6736(97)02293-9.
- Linde K, Scholz M, Ramirez G, Clausius N, Melchart D, Jonas WB. Impact of study quality on outcome in placebo-controlled trials of Homoeopathy. *J. Clin. Epidemiol*. 1999 Jul;52(7):631-6. doi: 10.1016/S0895-4356(99)00048-7.
- Cucherat M, Haugh MC, Gooch M, Boissel JP Evidence of clinical efficacy of Homoeopathy. A meta-analysis of clinical trials. HMRAG. Homoeopathic Medicines Research Advisory Group. *Eur. J. Clin. Pharmacol*. 2000;56(1):27-33. doi: 10.1007/s002280050716.
- Shang A, Huwiler-Müntener K, Nartey L, Jüni P, Dörig S, Sterne JA, et al. Are the clinical effects of homoeopathy placebo effects? Comparative study of placebo-controlled trials of homoeopathy and allopathy. *Lancet*. 2005 Aug 27-Sep 2;366(9487):726-32. doi: 10.1016/S0140-6736(05)67177-2.
- Boissel JP, Cucherat M, Haugh M, Gauthier E. Critical literature review on the effectiveness of Homoeopathy: overview of data from homeopathic medicine trials. In: Homoeopathic Medicine Research Group: report to the European Commission Directorate General XII: science, research and development. Brussels. 1996: 195-210
- Linde K, Melchart D. Randomized controlled trials of individualized Homoeopathy: a state-of-the-art review. *J Altern Complement Med*. 1998 Winter;4(4):371-88. doi: 10.1089/acm.1998.4.371.

- 18 Bornhoft G, Matthiessen P F. *Homeopathy in Healthcare: Effectiveness, Appropriateness, Safety, Costs*. Goslar, Germany: Springer, 2011.
- 19 Mathie RT, Lloyd SM, Legg LA, Clausen J, Moss S, Davidson JR, et al. Randomised placebo-controlled trials of individualised homeopathic treatment: systematic review and meta-analysis. *Syst Rev*. 2014 6;3:142. doi: 10.1186/2046-4053-3-142.
- 20 Mathie RT, Ulbrich-Zürni S, Viksveen P, Roberts ER, Baitson ES, et al. Systematic Review and Meta-Analysis of Randomised, Other-than-Placebo Controlled, Trials of Individualised Homeopathic Treatment. *Homeopathy*. 2018; 107(4): 229-243. doi: 10.1055/s-0038-1667129.
- 21 Mathie RT, Ramparsad N, Legg LA, Clausen J, Moss S, Davidson JR, et al. Randomised, double-blind, placebo-controlled trials of non-individualised homeopathic treatment: systematic review and meta-analysis. *Systematic Reviews*, 2017; 6(1):63. doi: 10.1186/s13643-017-0445-3.
- 22 Wissenschaftliche Gesellschaft für Homöopathie Scientific Society for Homeopathy. *WissHom research reader and FAQ*. [Internet] Available from: <https://www.wisshom.de/ueber/sektionen/sektion-forschung/wisshom-forschungsreader-und-faq/>
- 23 Homeopathy Research Institute. *Essential evidence*. [Internet] Available from: <https://www.hri-research.org/resources/essentialevidence/>
- 24 Rossi E, Di Stefano M, Picchi M., Panozzo MA, Noberasco C, Nurra L, et al. *Integration of Homeopathy and complementary medicine in the Tuscan public health system and the experience of the homeopathic clinic of the Lucca hospital*. *Homeopathy* 2018; 107(2):90-98. doi: 10.1055/s-0038-1636839.
- 25 Nayak D, Chadha V, Jain S., Nim P, Sachdeva J, Sachdeva G, et al. *Effect of adjuvant Homeopathy with usual care in management of thrombocytopenia due to dengue: a comparative cohort study*. *Homeopathy* 2019;108(3):150-157. doi: 10.1055/s-0038-1676953.
- 26 Oberai P, Varanasi R, Padmanabhan M., Upadhyaya A, Singh S, Singh SP, et al. *Effectiveness of homeopathic medicines as add-on to institutional management protocol for acute encephalitis syndrome in children: an open-label randomized placebo-controlled trial*. *Homeopathy* 2018; 107(3):161-171. doi: 10.1055/s-0038-1656715.
- 27 Sharma B, Sharma PK. *Homeopathy and Cancer: A Review*. *Journal of Applied Dental and Medical Sciences*. 2019,5(1):66-69.
- 28 Camerlink I, Ellinger L, Bakker EJ, Lantinga EA. *Homeopathy as replacement to antibiotics in the case of Escherichia coli diarrhoea in neonatal piglets*. *Homeopathy*. 2010;99(1):57-62. doi: 10.1016/j.homp.2009.10.003.
- 29 Uecker A, Baumgartner S, Sokol A, Huber R, Doesburg P, Jaeger T. *Systematic review of plant-based homeopathic basic research: an update*. *Homeopathy*. 2018 May;107(02):115-29.
- 30 Mathie RT, Clausen J. *Veterinary Homeopathy: meta-analysis of randomised placebo-controlled trials*. *Homeopathy*. 2015;104(1):3-8. doi: 10.1016/j.homp.2014.11.001. Epub 2014 Dec 17.
- 31 Lutz B, Heer I, Katzensteiner R, Raak C, Wolf U, Heusser P, et al. *Development of a whole plant bioassay to test effects of potentized calcium carbonate in pillule formulation*. *Complementary therapies in medicine*. 2018;40:13-21.
- 32 Mahmoudian A, Sadri G. *Homeopathy satisfaction in Iran*. *Iranian J Nursing Midwifery Res* 2014;19:496-502
- 33 Colas A, Danno K, Tabar C, Ehreth J, Duru G. *Economic Impact of Homeopathic Practice in General Medicine in France*. *Health Econ Rev*. 2015;5(1):55. doi:10.1186/s13561-015-0055-5.
- 34 Kaur H, Chalia DS, Manchanda RK. *Homeopathy in Public Health in India*. *Homeopathy* 2019; 108:76–87.
- 35 European Coalition on Homeopathic and Anthroposophic Medicinal Products European Economic Interest Group. *Reducing healthcare costs with Homeopathy and anthroposophic medicine: A summary of available literature*. Brussels, 2014. Available from: <https://echamp.eu/echamp-resources/special-reports>
- 36 European Coalition on Homeopathic & Anthroposophic Medicinal Product. *New surveys confirm support for Homeopathy in France and Italy*. ECHAMP. [Internet] 2018. Available from: <https://www.echamp.eu/news-and-events/news/new-surveys-confirm-support-for-homeopathy-in-france-and-italy>.
- 37 Homeopathy Research Institute. *Homeopathy use around the world*. [Internet]. HRI. Available from: <https://www.hri-research.org/resources/essentialevidence/use-of-homeopathy-across-the-world/>
- 38 Manchanda RK. *Building quality research evidence in Homeopathy*. *Indian J Res Homeopathy* 2018;12:109-12
- 39 Achstetter K, Teut M. *Use of Self-Medication with Homeopathy in Germany: Results of an Online Questionnaire Survey*. *Complement Med Res*. 2018;25(6):383-390.
- 40 Sarangi M R, Pramanik A, Gupta J, Prasad R, Singh P, Shah M, et al. *A survey regarding awareness and beliefs about Homeopathy among general population during Magh Mela at Allahabad, Uttar Pradesh, India*. *Indian J Res Homeopathy* 2019;13:12-21
- 41 Lima CA, Santos AMVS, Messias RB, Costa FM, Barbosa DA, Silva CSO, et al. *Integrative and complementary practices: use by community health agents in self-care*. *Rev Bras Enferm* [Internet]. 2018; 71(Suppl 6):2682-8. [Thematic Issue: Good practices in the care process as the centrality of the Nursing] DOI: <http://dx.doi.org/10.1590/0034-7167-2018-0078>
- 42 Franco JA, Pecci C. *La relacion medico-paciente, la medicina cientifica y las terapias alternativas*. *Medicina (B Aires)*. 2003;63(2):111–8.
- 43 Schönauer A. *Implementation of integrative medicine in a german pediatric hospital setting – Homeopathy as one pillar of an integrative treatment approach for hospitalized children*. *BMC Complementary and Alternative Medicine* 2017, 17(Suppl 1):X20; pp 18
- 44 Jacobs, J., Jonas, W. B., Jiménez-Pérez, M. Crothers, D. *Homeopathy for childhood diarrhea: combined results and meta-analysis from three randomized, controlled clinical trials*. *Pediatr Infect Dis J*, 2003; 22:229–234.
- 45 Jacobs J, Springer DA, Crothers D. *Homeopathic treatment of acute otitis media in children: a preliminary randomized placebo-controlled trial*. *Pediatr Infect Dis J*, 2001; 20(2): 177-83
- 46 Sinha, M. N, Siddiqui VA, Nayak C, Singh V, Dixit R, Dewan D, et al. *Randomized controlled pilot study to compare Homeopathy and Conventional therapy in Acute Otitis Media*. *Homeopathy*. 2012 Jan;101(1):5-12. doi: 10.1016/j.homp.2011.08.003.
- 47 Wiesenauer M, Lütke R. *Wiesenauer and Lütke. A meta-analysis of the homeopathic treatment of pollinosis with Galphimia glauca*. *Forsch. Komplementärmed*. 1996;3:230-234. doi: 10.1159/000210233
- 48 Reilly, D. T., Taylor, M. A., et al. "Is homeopathy a placebo response? Controlled trial of homeopathic potency, with pollen in hayfever as model." *Lancet*, 1986;2(8512):881-886
- 49 Ferreri R, Bernardini S, Pulcri R, Cracolici F, Rinaldi M, Porciani C; *Improved quality of life and reduction of conventional drugs in allergic patients treated with Homeopathy*. *HRI Research in Focus*, Issue 31 Summer 2016
- 50 Schneider et al. *Treatment of vertigo with a homeopathic complex remedy compared with usual treatments – a meta-analysis of clinical trials*, *Arzneim-Forschung*, 2005;55(1):23-29
- 51 Rossi E, Picchi M, Bartoli P, Panozzo M, Cervino C, Nurra L. *Pediatric atopic diseases: short- and long-term results of homeopathic treatment*. *HRI Research in Focus*, 2016;33

- 52 Muscari-Tomaoli G, Allegri F, Miali E, et al. Observational study of quality of life in patients with headache, receiving homeopathic treatment. *Br Hom J* 2001; 90: 189–197
- 53 Rossi E, Panozzo M, Picchi M, Cervino C, Nurra L. Women and complementary medicine: the experience of the homeopathic clinic for women in a public hospital. *BMC Complementary and Alternative Medicine* 2017, 17(Suppl 1): P252; pp 133
- 54 Frei H, Thurneysen A. Treatment for hyperactive children: Homoeopathy and methylphenidate compared in a family setting. *Br Hom J* 2001; 90: 183–188.
- 55 Taneja D, Khurana A, Vichitra A, Sarkar S, Gupta AK, Mittal R, et al. An Assessment of a Public Health Initiative of Homoeopathy for Primary Teething. *Homoeopathy*.2019 Feb;108(1):2-11
- 56 Frass M, Friehs H, Thallinger C, Sohal NK, Marosi C, Muchitsch I, et al. Influence of adjunctive classical Homoeopathy on global health status and subjective wellbeing in cancer patients – A pragmatic randomized controlled trial. *Complement Ther Med*. 2015 Jun;23(3):309-17
- 57 Menut V, Seigneur E, Gras Leguen C, Orbach D, Thebaud E. Utilisation des médecines complémentaires et alternatives chez l'enfant et l'adolescent atteint de cancer : une pratique fréquente [Complementary and alternative medicine use in two French pediatric oncology centers: A common practice]. *Bull Cancer*. 2019 Mar;106(3):189-200.
- 58 Ee C, Thuraingam S, Pirotta M, et al. World Congress Integrative Medicine & Health 2017: part two: Berlin, Germany. 3–5 May 2017. *BMC Complement Altern Med*. 2017;17(Suppl 1):317. Published 2017 Jun 30. doi:10.1186/s12906-017-1783-3
- 59 Laansma CTK, Jong M, Hagens CV, Jansen JP, Wietmarschen HV, Jong MC. An international pragmatic, randomised controlled pilot study comparing individualised homeopathic add-on treatment and usual care only in women with premenstrual disorders (PMD). *BMC Complementary and Alternative Medicine* 2017, 17(Suppl 1):P92
- 60 Estrems MS, Sabater MV. The impact of Integrative Medicine on the postoperative course of acute peritonitis. *BMC Complementary and Alternative Medicine* 2017, 17(Suppl 1):P219
- 61 José Ignacio Torres-Jimenez, Gualberto Diaz-Saez, Olga Garcia-Gomez, Luis Hortal-Muñoz, Camino Diaz-Diez, Use of Homoeopathic Medicines in a Public Primary Care Setting, *Homoeopathy* 2018; 107(S 01): 55-78; DOI: 10.1055/s-0038-1633341
- 62 Rossi E, Baccetti S, Firenzuoli F, Monechi MV, Stefano MD, Amunni G. Integrative oncology in the region of Tuscany: a successful integration. *BMC Complementary and Alternative Medicine* 2017, 17(Suppl 1):044; pp 39

## Chapter-2

# Users of Homoeopathy

**Deepti Singh<sup>1</sup>, Kavita Bharti<sup>2</sup>**

1. Research Officer (H) | 2. Senior Research Fellow (H)

Central Council for Research in Homoeopathy, Ministry of AYUSH, Govt. of India, New Delhi, India

The users of Homoeopathy are a significant part of evolution of Homoeopathy worldwide. As Homoeopathy spread in different parts of world, its users grew. Homoeopathy remains popular choice of the treatment due to individualised and holistic treatment. Many surveys conclude that people integrate, use and value Homoeopathy as a complementary treatment option.<sup>1</sup> However, there is a need to contemplate on the reasons that make a patient choose Homoeopathy over conventional medicine.

### Historical Aspects

The Founder of Homoeopathy, Christian Friedrich Samuel Hahnemann was born on 10 April 1755 to the porcelain painter Christian Gottfried Hahnemann and his second wife Johanna Christiane Spiess. His famous Cinchona experiment, where he himself took four drams of good Cinchona twice daily for several days and suffered from the symptoms of intermittent fever, which led to the discovery of “law of Similars” which was published in 1796 in Hufeland’s Journal for Applied Medical Science under the Title “Essay on a new principle for ascertaining the curative power of drugs” marked the Birth of Homoeopathy. The word homeopathic was used by Hahnemann in 1807 and it was not until 1810 that he introduced the noun “Homoeopathy”.

His famous “the Organon of Rational Medicine”, was published in 1810 by Johann Christoph Arnold in Dresden. During the lifetime of Hahnemann, five consecutive editions were published, all of them improved and extended. Sixth edition prepared by Hahnemann was not published until 1921 because his wife withheld her permission for the publication while she was alive.

During the time of Hahnemann, the reason that can be traced was the crude treatment methods prevalent then and more personal time in case-taking, which indirectly meant being taken seriously. People who met Homoeopathy for the first time are usually struck with how different it is from today’s main stream medicine with its “five minutes per patient” approach. Since Hahnemann’s time individualization has been one of the fundamental principles of Homoeopathy, along with in-depth history taking in each individual case including physical examination if necessary.

Hahnemann was against healing methods such as “Venesection” and “blending of many medicines’ which were common at that time. He would only allow purgatives in exceptional cases such as poisoning.

Hahnemann has also said that homeopathic physicians needed to know the symptom picture of an illness in the individual case rather than names of diseases.

Hahnemann has given very much importance to case taking in Organon of the Rational Art of Healing (1<sup>st</sup> edition 1810). According to Hahnemann in order to obtain clear picture of the disease, the physician should first take note of patient’s reports of his symptoms, next the relatives’ account of what happened, and thirdly the physician’s own observations. Hahnemann gave the advice ‘to write down accurately all that the patient and his friends have told him in the very expression used by them and also noting not only what the patients say, but also how they say it, their manner of communication, their appearance, temperament and posture. Hahnemann

also advised in detailed questioning of the patient, the physician, should by no means ask leading questions because the patient could be tempted to give a false answer or a misleading account of his symptoms. After recording of all the symptoms, the characteristic symptoms are picked out to choose similar morbid force in the form of a homeopathically chosen medicine.<sup>2</sup>

During case taking, Hahnemann was mostly interested in symptoms that were associated with sleep, bowel movements, appetite and body temperature. He always asked patients about their coffee consumption. He was more interested in patient's lifestyle from dietetic views.<sup>3</sup>

Besides these guidelines for case taking, points which make Hahnemann different from others during his time were that, during his practice years he wants his patient to consult him at his practice and he avoids making house calls. He had said that a doctor should not waste his valuable time and maintain his dignity and should not make house calls to any chronically sick person, though he is a prince, if that person is able to come to our practice. He had said a doctor should visit only acutely ill, bed-ridden patients.

Hahnemann was also very sensitive, regarding his treatment and generally reacted in a surly manner to the patient who does not follow the treatment, the only compromise he was willing to make was only on matters concerning the method of administration particularly to the olfaction of homeopathic remedies, though it's effective he could not prescribe to all of his patients as people are accustomed to taking powders, even if there is nothing in them.

About payment, Hahnemann takes his payment in advance and in cash which was very unusual at that time. According to him, a purely homeopathic doctor should value his treatment high enough and chronically sick patient, at least preferably pay a monthly fee in advance and the poor man should pay an amount at each consultation even if it is little. In this way a doctor is never left empty handed and remains in good cheer seeing cash in return for his efforts.<sup>4</sup>

Within the period 1843-1960, the recognition of the fact that Homoeopathy was a 'harmless' therapy encouraged self-medication, which became a major reason for the increase in its users. Besides being harmless, Lay people could easily acquire knowledge to apply Homoeopathy successfully in cases of illnesses. Homoeopathic

remedies were not expensive and were often cheaper than other remedies, and in some cases they were more successfully applicable than other methods.<sup>5</sup> The trend of prescribing within the family and relatives caught up. The homeopathic pharmacies played a major role in training the laymen about Homoeopathy through manuals, guides and pamphlets. However, as health awareness grew in the second part of nineteenth century, the need for trained homeopathic practitioners increased. Such was the demand from the homeopathic users that sometimes a doctor in a locality was moved to familiarise himself with Homoeopathy, and, in the process, overcame his initial prejudices. Organised patient groups and societies in Germany in the early twentieth century lobbied repeatedly for chairs of Homoeopathy in universities and ensured the cost of homeopathic medicines remained low. In places like London, Munich and some parts of USA, homeopathic hospitals existed, which, owing to their well-developed infrastructure, only well-to-do patients visited. The attempts of single committed doctors or those of the patients' groups to develop smaller homeopathic hospitals proved to be short-lived, with most of these centers turning into orthodox hospitals towards the end of twentieth century. This was basically due to the changing attitudes of the doctors who preferred a more attractive scientific medicine. However, the public demand for Homoeopathy continued to increase and as a result, the homeopathic market grew even after 120 years of Hahnemann's death<sup>6</sup>.

With the advances in the late twentieth century, the orthodox medicine saw a greater optimism by the patients, where the tangible progress made by the system seemed to be capable of conquering all epidemics. On the flipside though, it was gradually observed that the medical practices were incurring much cost, spending less time per patient and shedding the 'holistic' element of treatment. This, in turn, was seen as a compromise in the patient autonomy, a subject that has gained more importance ever since.<sup>2</sup> Even today, one reason why patients opt for homeopathic treatment is because they feel they enjoy more respect as individuals in this therapy.<sup>7,8</sup>

To understand the new age users of Homoeopathy, it is important to visualise the scenario globally. While some factors that drive a patient to a homeopath remain fairly consistent worldwide, others vary as per the geographic or ethnic considerations. Anywhere in the world, however, in selecting a treatment, it is likely that a patient wants to know what chance s/he has of getting better after consulting a practitioner.<sup>9</sup>

There is a chance that a patient, before selecting a therapy which s/he has not tested before, would either follow a recommendation by a friend or a relative<sup>9,10,11</sup>, or as is true for more sophisticated individuals, would gather more information about the therapy.<sup>12</sup> While the former is reported as a trend in countries like Norway<sup>9</sup> and India<sup>13</sup>, the latter is catching on in various parts of the world.

### Current rise Globally

Homoeopathy is gaining popularity with increasing numbers of users worldwide, despite the false propaganda and criticism. There have been several surveys and reviews that demonstrate its popularity and prevalence. There is significant demand in homeopathic medicinal products in the European Union, member states as per reports. A recent market survey by Ipsos and Omeoimprese (November 2018) confirms that Homoeopathy has a strong support in France and Italy.<sup>14</sup> Further, a survey conducted by Global TGI in 2008 found 15% of the population of Britain trusted Homoeopathy<sup>15</sup>.

A systematic review conducted to assess prevalence of Homoeopathy use worldwide, concluded that in 11 countries viz. USA, UK, Australia, Israel, Canada, Switzerland, Norway, Germany, South Korea, Japan and Singapore, a small but significant percentage of general populations use Homoeopathy each year. The use includes visits to homeopaths as well as purchase of over the counter homeopathic medicines.<sup>16</sup>

### India

The National Sample Survey Office in India (NSSO 2014), revealed that Homoeopathy has a significant presence with use of Homoeopathy relatively more among children (under-five years) and particularly in urban areas.<sup>17</sup> Also, Homoeopathy services, are being used fully and thus sharing the patient load in the government-run wellness centres.<sup>18</sup>

### Poland

In a survey conducted among 170 Polish physicians (89 senior and 81 junior doctors) between October 2014 and April 2015. It was reported that experienced physicians had a more positive attitude towards CAM (Homoeopathy, acupuncture, herbal medicine and energy therapy) than junior doctors.<sup>19</sup>

### Germany

According to the results of the study conducted in Germany, approximately half of the respondents had taken Homoeopathy, of which 70% were satisfied or very satisfied

with its efficacy and tolerability. The Bundesverband der Pharmazeutischen Industrie e. V. (BPI) reported that Homoeopathy is a recognized and effective therapy for patients and it is a recognized and accepted therapy for the German patients and the first choice for many of them.<sup>20</sup>

### Saudi Arabia

An observational, descriptive, cross-sectional study was done to assess attitude of Saudi Arabia medical students towards CAM and need of CAM courses showed that although most of the students agreed with the inclusion of CAM courses in the medical curriculum, Homoeopathy was the least known CAM modality in Saudi colleges and is uncommon in the Gulf region.<sup>21</sup> Homoeopathy use is also reported among CAM users in Pakistan.<sup>22</sup>

### Characteristics of users

It is seen that the education level of patients who see a homeopath is usually high, with evidence reported from U.K.<sup>7,23,24</sup>, France<sup>8</sup>, Germany<sup>25</sup>, Austria,<sup>26</sup> Brazil<sup>11,26</sup>, USA<sup>26</sup> and Switzerland.<sup>27</sup>

On assessment of the age profile of the users of Homoeopathy, the consistent trend reported across all nations including U.K.<sup>7,23</sup>, Norway<sup>9</sup>, Germany<sup>25</sup>, Switzerland<sup>27</sup>, India<sup>28</sup>, U.S.A.<sup>29</sup>, Belgium<sup>10</sup> and France<sup>30</sup>, is that most users belong to the middle age group ranging 35-55 years. Also, it has recently been reported that the patients who see a homeopath have a healthier lifestyle and a positive attitude towards CAM.<sup>8</sup> This coupled with a decent education level, reflects that an average homeopathic user of today is capable of making an informed choice, and his or her choice of using Homoeopathy can be no different.

A study carried out in Poland in 8 urban areas and 1 rural. The questions on the use of alternative medicine were asked to 4671 respondents in the age of 20–44 years. Homoeopathy was the most popular among all respondents and statistically significant relation between the sex of the respondent and the use of Homoeopathy, yoga and herbalism was demonstrated. The highest percentage of declarations of the alternative medicine use was observed in the case of Homoeopathy (69.4%). The study demonstrated higher level of education and higher monthly income of alternative medicine users. Statistically significant relation between the use of different methods of alternative medicine at any time and the declaration of allergic symptoms has been demonstrated. The occurrence of allergic diseases and asthma influences the frequency of alternative medicine use.<sup>31</sup>

Female preponderance in the demographic profile is another consistent finding in most studies.<sup>7,8,9,11,12,24,25,26,27,28,30</sup> It has also been seen that these females usually have higher education.<sup>8</sup> One study<sup>24</sup> relates this to the fact that young and middle age women first seek homeopathic care in their reproductive ages, and then, being the health watchers of their families, take it further to their children, also leading to higher children inflow at homeopathic clinics. This perhaps explains why another prominent age group of homeopathic users is below 15.<sup>63-75</sup> A recent study verifies the fact that children usually are accompanied with female parent.<sup>11</sup>

In a cross-sectional analysis conducted in Germany, over a 3-year period reported Homoeopathy users were mostly female, having high school level education.<sup>32</sup>

According to National Health Interview Survey, conducted in 2012 among U.S. Civilians, who are not institutionalized shows that 0.7% of U.S. adults used Homoeopathy only in the past 12 months out of which 70.6% of Homoeopathy users were female. It was observed that Homoeopathy users have moderate mental distress than non-users and more than half users had three or more healthy behaviours.<sup>33</sup>

In a survey of 1035 individuals, conducted in United States on the use of alternative health care, health status, values, and attitudes toward conventional medicine, it was reported that individuals with higher education (50% with graduate degrees) were more likely to use alternative forms of health care. Poor health status and specific health problems such as back problems, chronic pain, anxiety, and urinary tract problems were also observed for higher use of alternative medicines. It was also seen that users are using alternative medicines because they are more congruent with their own values, beliefs, and philosophical orientations towards health and life rather than being dissatisfied with conventional medicine. It was also reported that perceived efficacy and relief of symptoms are the major factors for the use of alternative health care.<sup>34</sup>

Another study conducted in Germany on drug utilization (past 4 weeks) and consultation with CAM providers (past year) on 4677 adolescents reported that 15.1% of homeopathic drugs were used and 4-week prevalence for Homoeopathy use was 8.1%. Homoeopathy was used by adolescent girls, mostly for chronic condition (allergies).<sup>35</sup>

A trial was conducted for relief of menopausal symptoms in a large UK cohort of postmenopausal women aged 50–

74. As a part of follow-up questionnaire, the participants were asked about the use of CAM therapies including Homoeopathy (as one out of six CAM therapies). It was found that a smaller percentage of women used Homoeopathy with prevalence of 3.2% (2791/88430) only across the responders.<sup>36</sup>

This speaks of Homoeopathy commonly perceived as a gentle and effective therapy by mothers for their children. Yet, the study by Wassenhoven reveals statistically that the parents usually are not comfortable informing their paediatrician about seeking homeopathic treatment for their children. Around half of parents whose children were undergoing a parallel treatment did not tell their paediatrician about it. Only for 38.3% of patients, both the paediatrician and the homeopath were fully aware of the treatment the patient was taking and for some of these, the paediatrician was also the homeopath.<sup>11</sup>

Further, it has been observed that patients who use Homoeopathy, especially in U.S.A.<sup>12</sup> and France<sup>30</sup>, belong to rather affluent class and are usually into more refined professions like that of teachers or is the only driving force for the patients, especially those who can afford private insurances<sup>8,12</sup> and pricier treatment options. The socio-demographic profile of Homoeopathy users in Spain showed that the type profile of the user of Homoeopathy in Spain is a woman, middle / upper class, with university studies and a progressive political ideology.<sup>37</sup> Ninety-four articles were selected for a systematic literature review which was conducted in the databases MEDLINE, PsycInfo and AMED (1995 to 2005). It was seen that CAM users want to participate in treatment decisions, are likely to have active coping styles and might believe that they can control their health. They value non-toxic, holistic approaches to health and hold 'postmodern belief systems' while viewing themselves as unconventional and spiritual. CAM users also tend to believe that psychological and lifestyle factors are important in the development of illness.<sup>38</sup>

Another survey was conducted in San Francisco Bay where 100 patients were interviewed between December 3, 1976, and January 5, 1977, at three different homeopathic practices and it was seen that majority (57 percent) of users pursued white-collar occupations. It was observed 89 % of users, visits were for symptomatic problems involving various organ systems and about 88% of the users had previously consulted one or more conventional physicians for their condition, while 15 % were seeing such physicians concurrently 47 % of the patients reported

good progress with their illness. A larger number of patients (81 percent) described dissatisfaction with one or more aspects of conventional health care. It was also observed that homeopathic physicians used homeopathic remedies alone in 63 percent of the patients, and in combination with conventional medication in 11 percent. Homoeopathic physicians spent an average of one hour with new patients and 20 minutes for return visits.<sup>39</sup>

### Morbidity Profile of users

The morbidity profile of the users varies greatly, depending both on the location and the type of set up. While a collective study from four countries of Europe<sup>40</sup> and separate ones from U.K.<sup>41</sup>, Norway,<sup>9</sup> Belgium,<sup>10</sup> France,<sup>30</sup> USA,<sup>12</sup> Germany<sup>25</sup> and India<sup>28</sup> advocate the positive effects of Homoeopathy on many chronic ailments, studies from France, Belgium and Norway also reveal that Homoeopathy can be used to treat acute illnesses just as effectively.

Homoeopathy is used more frequently in upper respiratory tract infections, infant colic, sleep disturbances, and recurrent infections.<sup>42</sup> It is significant to note use of Homoeopathy for teething troubles.<sup>43</sup> Some of the studies that are available have assessed the role of Homoeopathy in management of lifestyle disorders like diabetes<sup>44</sup>

The users of Homoeopathy mark their improvement as above average<sup>10,63-75</sup> mostly, or more than 50% so to say, within six months.<sup>9</sup> Among the most reported problems lie infectious diseases (both acute and chronic and especially viral), psychological illnesses<sup>45</sup> like sleep, anxiety and depressive disorders (SADD), rheumatological illnesses, cardiovascular illnesses, dermatological problems, gynaecological problems, endocrinological problems and respiratory allergic illnesses<sup>61-73</sup>.

Homoeopathy is reported to be most commonly used for Skin, muscular-skeletal and genital-urinary disorder in both rural and urban part of India.<sup>17</sup>

At least two studies<sup>23,28</sup> reflect that a short time of 5-10 minutes duration, especially at primary healthcare centers or hospitals (where the set up and available time are different from the private clinics), was not a deterrent to providing adequate homeopathic consultation in most cases. A study revealed that the allocated time to a homeopathic physician was very similar to those for other chronic disease specialists like rheumatologists, neurologists and was substantially shorter than what

was allocated to psychiatrists. Yet another study from India revealed a rather ironical situation where a singly employed homeopathic doctor in a PHC is able to spend on an average only 5.2 minutes per patient due to the patient overload, as opposed to 12.9 minutes available to the conventional doctors, who are more in number in the same center. Nevertheless, the popularity of such clinics is increasing. These examples reflect the viability of Homoeopathy as a workable model at the primary healthcare level. Further, such real-world examples counter argue the 'more consultation time' reasoning offered by the sceptics as one of the 'placebo' facto that make Homoeopathy work.

Another cross-sectional analysis reported that homeopathic users were mostly suffering from fibromyalgia or subthreshold depression, being fast food abstinent, part time employment, high satisfaction with health, and high internal health locus of control and about one third of internal medicine patients reported having used Homoeopathy for their primary medical complaint with 50.2% reporting perceived benefits.<sup>32</sup>

Overall, the factors that primarily attract the patients to Homoeopathy have been assessed as 'worried about side effects of other treatment methods'<sup>8,11,25,26,41</sup>, 'no results from conventional medicine or evading its long term treatment'<sup>10,41</sup> 'better consultation experiences'<sup>7</sup>, 'personal preference or family trend'<sup>9,10,11,41</sup> 'lesser cost'<sup>23,28</sup>, 'overall wellbeing'<sup>7,8,9,10,26</sup>, 'traditional belief in the immaterial or holistic concept'<sup>8,25</sup> 'awareness about the lack of role of antibiotics in viral diseases'<sup>30</sup> and 'distrust in conventional medicine'.<sup>11,27</sup>

The increasing use of Homoeopathy is due to several merits and specific benefits of individualised treatment. It has been reported that patients use Homoeopathy for treatment only and for treatment and wellness as well.<sup>33</sup>

### Conclusion

It can be concluded that Homoeopathy is being preferred by its users for reasons that are partly due to increasing realisation by its users of its own virtues like 'holism, harmless therapy and cost-effectiveness', for treatment as well as wellness but also partly due to the rising distrust among the users for the existing practices in the conventional medicine. Homoeopathy is preferred by female patients and those with high level of education and in chronic diseases.

- 1 Manchanda RK. Building quality research evidence in Homoeopathy. *Indian J Res Homoeopathy* [serial online] 2018 [cited 2019 Sep 10];12:109-12. Available from: <http://www.ijrh.org/text.asp?2018/12/3/109/242284>
- 2 Jütte, Robert: Case Taking in Homoeopathy in the 19th and 20th Centuries. In: *British Homoeopathic Journal* 87 (1998), S. 39–47.
- 3 <https://www.igm-bosch.de/files/img/pdf-dokumente-publikationen/Pluralismus%20in%20der%20Medizin/SamuelHahnemannTheFounderofHomoeopathy.pdf>
- 4 The Doctor-Patient Relationship as Reflected in the Case Books of Samuel Hahnemann. In: *Hopathy Ezine*, April 2008 (<http://www.hopathy.com/papersnew/jutte-doctor-patienthahnemann.asp>).
- 5 Baschin, Marion. Globules at Home': The History of Homoeopathic Self-medication. *Social History of Medicine* Vol. 29, No. pp. 717–733
- 6 Dinges M., Patients in the History of Homoeopathy, *European association for the History of Medicine and Health Publications* 2002; pp. 2-16
- 7 Stewart W. M., David R., Graham C.M.W., The importance of empathy in the enablement of patients attending the Glasgow Homoeopathic Hospital; *British Journal of General Practice*; November 2002, 52, 901-05
- 8 Lert et al; Characteristics of patients consulting their regular primary care physician according to their prescribing preferences for Homoeopathy and complementary medicine; *Homoeopathy* (2014) 103, 51-57
- 9 Steinsbekk A., and Ludtke R., Patients' assessments of the effectiveness of homeopathic care in Norway: A prospective observational multicentre outcome study; *Homoeopathy* (2005) 94, 10-16
- 10 Framework of the practice: Belgium as an example; *Scientific framework of Homoeopathy: Evidence Based Homoeopathy* 2013; Revised edition after 67th LMHI Congress, September 2012 (Nara, Japan); pp 22-26
- 11 Wassenhoven M.V., Pediatric Homoeopathy: A prospective observational survey based on parent proxy reports of their children's health-related Quality of Life in six European countries and Brazil; *Homoeopathy* (2014) ... , 1-7 (in print)
- 12 Jennifer F.H., Dip S.A. and Nancy L.; Doctor-Patient Communication: A Review; *The Ochsner Journal*; 10:38–43, 2010
- 13 Manchanda R. K. and Kaur H.; Medical pluralism: past, present, future; *Medical Pluralism in Health Care – Experience from New Delhi* (2013); by Robert Jütte; pp 189-94
- 14 New surveys confirm support for Homoeopathy in France and Italy. *European Coalition on Homoeopathic & Anthroposophic Medicinal Product. ECHAMP*. Available from: <https://www.echamp.eu/news-and-events/news/new-surveys-confirm-support-for-Homoeopathy-in-france-and-italy>.
- 15 Homoeopathy Research Institute. HRI. Available from: <https://www.hri-research.org/resources/essentialevidence/use-of-Homoeopathy-across-the-world/>
- 16 Clare Relton, Katy Cooper, Petter Viksveen, Philippa Fibert and Kate Thomas. Prevalence of Homoeopathy use by the general population worldwide: a systematic review; *Homoeopathy* (2017) 106, 69-78
- 17 Rudra S, Kalra A, Kumar A, Joe W. Utilization of alternative systems of medicine as health care services in India: Evidence on AYUSH care from NSS 2014. *Virgili G, ed. PLoS ONE*. 2017;12(5): e0176916. doi: 10.1371/journal.pone.0176916
- 18 Kaur H, Chalia DS, Manchanda RK. Homoeopathy in Public Health in India. *Homoeopathy*. 2019 May;108(2):76-87. doi: 10.1055/s-0038-1673710.
- 19 Agnieszka Olchowska-Kotala, Jarosław Barański; Polish physicians' attitudes to complementary and alternative medicine; *Complementary Therapies in Medicine* 27 (2016) 51–57
- 20 Available from: <http://www.lmhi.org/Article/Detail/4344> Last accessed on 5/9/19
- 21 Albadr BO, Alrukban M, Almajed J, Alotaibi K, Alangari A, Bawazir A, et al. Attitude of Saudi medical students towards complementary and alternative medicine. *J Fam Community Med* 2018; 25:120-6
- 22 Ghulamullah Lail, Nasir Hassan Luck, Abbas Ali Tasneem, Ayesha Aslam Rai, Syed Mudassir Laeeq, Zain Majid. The usage of complementary and alternative medicine in gastrointestinal patients visiting the outpatients' department of a large tertiary care centre-views from Pakistan; *Pan African Medical Journal*. 2016; 24:247
- 23 Spence D. and Thompson E.A.; Homoeopathic treatment for chronic disease: A 6-year, university-hospital outpatient observational study; *The Journal of Alternative and Complementary Medicine*; 11(5); 2005; pp 793-98
- 24 Robinson T., Responses to homeopathic treatment in National Service general practice; *Homoeopathy* (2006) 95; 9-14
- 25 Arndt B., Thomas O., Christa R., and Peter F.M., Adaptive coping strategies and attitudes toward health and healing in German Homoeopathy and Acupuncture users; *Explore* July/August 2010 6(4), pp 237-245
- 26 Dinges M., The next decade for Homoeopathy: Any lessons from the last decade?; *Proceedings of 66th Liga Medicorum Homoeopathical Internationalis Congress* 2011
- 27 Pedro M. et al; Prevalence and characteristics of Homoeopathy users in a representative sample of the Lausanne population: CoLaus study; *Pharmacoepidemiology and Drug Safety* 2008; 17: 209-13
- 28 Manchanda R.K, Verma S.K, Chhatre L.V., Kaur H., Homoeopathy in Urban Primary Healthcare Units of the Delhi Government: An Assessment; Dinges M.; *Medical Pluralism and Homoeopathy in India and Germany (1810-2010): A comparison of practices*; 91-104, 2013
- 29 Jennifer J., Patient characteristics and practice patterns of physicians using Homoeopathy; *Arch Fam Med/ Vol. 7. Nov/Dec 1998*; 537-40
- 30 Colin P, An epidemiological study of a homeopathic practice; *British Homoeopathic Journal* (2000) 89; pp 116-21
- 31 Anna Klak, Filip Raciborski, Edyta Krzych-Fałta, Dagmara Opoczyńska-Łwieńska, Jakub Szymański, Agnieszka Lipiec, Barbara Piekarska, Adam Sybilski, Aneta Tomaszewska, Bolesław Samoliński; Persons with allergy symptoms use alternative medicine more often; *Pneumonol Alergol Pol* 2016; 84: 251–257
- 32 Amie Steel, Holger Cramer, Brenda Leung, Romy Lauche, Jon Adams b Jost Langhorst, Gustav Dobos ; Characteristics of Homoeopathy Users among Internal Medicine Patients in Germany; *Forsch Komplementmed* 2016;23:284–289
- 33 Taeho Greg Rhee , Jeremy Y. Ng , Jeffery A. Dusek ; Utilization and perceived benefits of Homoeopathy and herbal therapies in U.S. adults: Implications of patient-centered care; *Complementary Therapies in Clinical Practice* 29 (2017) 9-15
- 34 Astin, John: Why Patients Use Alternative Medicine. Results of a National Study. In: *Journal of the American Medical Association* 279 (1998), S. 1548–1553.

- 35 Salvatore Italia, Irene Brüske, Joachim Heinrich, Dietrich Berdel, Andrea von Berg, Irina Lehmann, Marie Standl, ilke Britta Wolfenstetter; *Complementary and Alternative Medicine Use Among Chronically Ill Adolescents from 2 German Birth Cohorts*; *Forsch Komplementmed* 2016;23:246–252
- 36 A. Gentry-Maharaj, C. Karpinskyj, C. Glazer, M. Burnell, K. Bailey, S. Apostolidou, A. Ryan, A. Lanceley, L. Fraser, I. Jacobs, M. S. Hunter & U. Menon (2017) Prevalence and predictors of complementary and alternative medicine/non-pharmacological interventions use for menopausal symptoms within the UK Collaborative Trial of Ovarian Cancer Screening, *Climacteric*, 20:3, 240-247, DOI: 10.1080/13697137.2017.1301919
- 37 Cano-Orón L, Mendoza-Poudereux I, Moreno-Castro C. [Sociodemographic profile of the Homoeopathy user in Spain]. *Aten Primaria*. 2018 Sep 24. pii: S0212-6567(18)30347-0. doi: 10.1016/j.aprim.2018.07.006. PMID:30262221
- 38 Bishop, Felicity; Yardley, Lucy; Lewith, George: A Systematic Review of Beliefs Involved in the Use of Complementary and Alternative Medicine. In: *Journal of Health Psychology* 12 (2007), S. 851–867.
- 39 Avina, Robert; Schneiderman, Lawrence: Why Patients Choose Homoeopathy [sic!]. In: *sWestern Journal of Medicine* 128 (1978), S. 366–369.
- 40 Riley D., Fischer M., Singh B., Haidvogel M. and Heger M., Homoeopathy and conventional medicine: An outcomes study comparing effectiveness in a primary care setting; *The journal of Alternative & Complementary Medicine*; 7(2) 2001; pp149-159
- 41 Sharples FMC., Haselen R.V., Fisher P., NHS patients' perspective on complementary medicine: a survey; *Complementary therapies in Medicine* (2003; 11, 243-48
- 42 André-Michael Beer, Ievgeniia Burlaka, Stephen Buskin, Borislav Kamenov, Andrea Pettenazzo, Diana Popova, Maria Pilar Riveros Huckstadt, Virgilijus Sakalinskas, and Menachem Oberbaum ; *Usage and Attitudes Towards Natural Remedies and Homoeopathy in General Pediatrics: A Cross-Country Overview*; *Global Pediatric Health* Volume 3: 1 –9
- 43 Taneja D, Khurana A, Vichitra A, Sarkar S, Gupta AK, Mittal R et al. An Assessment of a Public Health Initiative of Homoeopathy for Primary Teething. *Homoeopathy* 2019;108:2–11
- 44 Allah Bukhsha, Siew Hua Gan, Bey-Hing Goha, Tahir Mehmood Khan ; *Complementary and alternative medicine practices among type 2 diabetes patients in Pakistan: A qualitative insight*; *European Journal of Integrative Medicine* 23 (2018) 43–49
- 45 Grimaldi-Bensouda L, Engel P, Massol J, et al. Who seeks primary care for sleep, anxiety and depressive disorders from physicians prescribing homeopathic and other complementary medicine? Results from the EPI3 population survey. *BMJ Open* 2012;2:e001498. doi:10.1136/bmjopen-2012-001498

## Chapter-3

# Educational Scenario

**Anupriya Chaudhary<sup>1</sup>; Swati Pandey<sup>2</sup>**

1. Research Officer (H) | 2. Senior Research Fellow (H)

Central Council for Research in Homoeopathy, Ministry of AYUSH, Govt. of India, New Delhi, India

With the advancing use of Homoeopathy across the world, educational needs of the science are increasing. Education in Homoeopathy can enable graduates to develop as independent and competent public health care providers, to work in a variety of roles ranging from private practice to being an integrated member of a team of healthcare practitioners working in large scale clinical setting.

The current scenario however shows a wide variation in the educational framework & standards across the globe.

In many countries of the western world, the education system is well regulated and homoeopathic practitioners are mostly professionals with a previous medical background and an additional qualification in Homoeopathy. These include mostly medical doctors, dentists, veterinarians and pharmacists. International Homoeopathic associations such as *Liga Medicorum Homoeopathica Internationalis (LMHI)*, and regional homoeopathic associations such as *European Committee for Homoeopathy (ECH)* and several others in respective countries facilitate practice, learning, education and research. The standards of education and practice: LMHI - ECH Homoeopathic Medical Education Standards and the CEN Standards (NF EN 16872) have been laid down by the ECH & LMHI. These standards are followed at large by the countries in the *WHO European region*; by many countries in the *WHO American region*, Thailand and Japan. However, variations in eligibility conditions, educational standards and syllabi within countries falling in a region also exist.

WHO Eastern Mediterranean and Western Pacific region have no well-defined courses in Homoeopathy but offer only some basic level introductory courses in T&CM.

The WHO South Asian region set an example for the rest of the world and are more evolved with most countries imparting homeopathic education through government regulatory bodies through a well institutionalized approach.

However, around the world, India remains the infrastructural leader with 231 homeopathic medical colleges offering homoeopathic education at undergraduate/post graduate level. It has adopted an organized university level education system, at par with corresponding conventional and other Indian medicine systems in the country, when most other countries in the world are still to adopt independent educational courses.

A need to devise a common path which enables a standardized framework for homeopathic education which is taught and recognized in every part of the world looks pertinent.

The chapter provides a summary about the educational framework in the various countries which has been collected as first-hand information from the respective NVPs/NCs of LMHI through a survey in the year 2017 & 2018.<sup>1</sup> In addition to this information, some relevant information has been also been added from the latest WHO report on the Traditional & Complementary medicine (2019)<sup>2</sup>; *Unity in Diversity*, Homoeopathy

in Europe-Unity in Diversity ((25th Anniversary of the European Committee for Homoeopathy (ECH)<sup>3</sup> and a book by Eswara Das on the History& Status of Homoeopathy around the World<sup>4</sup>.

The countries have been grouped as the 06 WHO regions and while country specific detailed information is bulleted, a regional overview gives a bird's eye view.

### WHO European Region

Homoeopathy is known to be present as an individual science or as a part of T&CM in more than 50 % of the countries in this region. Most of the countries in this region offer homoeopathic education at the post graduate level as Diploma/Degree which is open to graduates/medical doctors/dentists/veterinarians/pharmacists.

European Committee of Homoeopathy (ECH) and LMHI accredited teaching centers offer these post graduate diplomas. Syllabus of these courses follow the LMHI-ECH Medical Homoeopathic Educational Standards or the CEN (NF EN 1682) Standards.

The teaching centres of some ECH National associations are not accredited by ECH which is the case of the Faculty of Homoeopathy in the UK which offers post graduate courses in its own qualifications.

Some countries like Croatia, Denmark, Estonia, Finland, UK, Ireland, Germany, Switzerland, Netherland, Norway, Portugal, Spain, Sweden etc. have qualifications for persons without a previous medical degree. Teaching centres in these countries offer courses at the undergraduate level which can be taken up by persons of any academic background.

### Armenia<sup>1</sup>

- Medical doctors can take up post- graduate degree and post doctorate degree as specialization in Homoeopathy.
- Duration of the course is 1170 hours and includes 1 year of residency for medical doctors. Subjects include Introduction to Homoeopathy, History of Homoeopathy, History of Homoeopaths, Introduction to theory & practice of acute diseases, Repertorization, Theory of medications, Acute diseases, Miasm, Admission of chronic disease case, Local diseases, Suppression, One sided diseases, Nosodes, Toxicology, Theory of prescription, Treatment after clinical diagnosis, Treatment of Cancer, Materia Medica and Examples of acute & chronic cases.

- All the Homoeopathy practitioners are registered by government.

### Austria

- An officially recognized post graduate diploma can be taken up as an additional qualification by medical doctors / veterinarians who can then practice homoeopathy legally. The duration of the course is 3 years. An optional introductory course on CAM during basic education at the universities of Vienna, Innsbruck and Graz is also available.
- Vienna Faculty of medicine, the campuses in Graz and Innsbruck, *Arzte Der Klassischen Homoeopathic/ Physician of classical Homoeopathy, Osterreichische Gesellschaft Fur Homeopathische Medizin* and *Ludwig Boltzmann institute fur Homoeopathic Allgemeine poliklinik Der Stadt* are the institutions imparting Homoeopathy education.<sup>4</sup> The *Osterreichische Arztekammer* (OAK- Austrian Medical Chamber) issues the complementary Medicine Homoeopathy Diploma- *OAK Diplom Komplementare Medizin homeopathie-* to medical doctors who have successfully passed an examination in Homoeopathy.<sup>3</sup> Homoeopathy practitioners are registered by the associations.<sup>1</sup>

### Belgium<sup>1</sup>

- ECH affiliated diploma, Post-graduate diploma, Post-graduate degree and a Post doctorate degree, offered by private schools.
- Medical doctors, Veterinarians, dentists or mid-wives can take up education in homoeopathy.
- Homoeopathy courses cover 400 hours of theory and 200 hours of practical in accordance with the CEN standards and cover subjects like Organon, Chronic diseases, Materia Medica, Repertory and cases.
- Registration of homeopathic practitioners is optional and not mandatory.

### Bulgaria<sup>1</sup>

- Medical Doctors, dentists, veterinarians, pharmacy graduates can take up Homoeopathy as an additional course.
- Post graduate diploma, ECH affiliated diploma are available where the ECH affiliated diploma at Edicta school is for 600 hours and a course on clinical Homoeopathy is for 200 hours.

- Homoeopathic practitioners are registered under the government and by the associations.

### Croatia

- Homoeopathic education isn't a part of the academic curriculum at any level. Anybody who is interested regardless of their background can take up education in Homoeopathy.<sup>1</sup>
- A certified course of 2 years duration is available in private schools.<sup>1</sup>
- Homoeopathic practitioners are registered under associations.<sup>3</sup>

### Czech Republic<sup>3</sup>

Only medical doctors can practice Homoeopathy and acupuncture. There is no general CAM legislation in the Czech Republic. A Postgraduate diploma in CAM is available in private schools.

### Denmark

Some level of homoeopathic education available in private schools which is open for everybody (no formal medical education required as minimum qualification).

### Estonia<sup>1</sup>

- Undergraduates, graduates, medical doctors, veterinarians, pharmacy graduates, nurses or anyone who is interested regardless of their background can take up education in homoeopathy.
- ECH affiliated diploma and a certified course lasting for 1-2 years is available in private schools.
- Belgian Russian Homoeopathic Academy, School based on Finnish Homoeopathic Academic Curriculum are important institutions. Registered societies can take establish school/college for imparting education.
- Homoeopathic practitioners are registered by the associations.

### Finland

Homoeopathic education is available in private schools, which is open for everybody (no foregoing medical education required)

### France

- An officially recognized diploma in Homoeopathy can

be attained as an additional qualification by a medical /veterinary doctor.

- Optional introductory course of CAM during the basic education at some universities is also available.
- Post-graduate education is available at the universities in Aix-Marseille, Besancon, Lille, Paris-Bobigny, Bordeaux II, Limoges, Poitiers and Lyon. Private schools also exist.

Homoeopathic teaching is provided by *Ecole D' Homeopathie Hahnemanniene DauphineSavoie*.<sup>4</sup>

### Germany

- An officially recognized diploma as an additional qualification for medical doctors /veterinary doctors is available. Post-graduate education available at the universities of Berlin, Düsseldorf, Hannover, Heidelberg and Freiburg.<sup>4</sup> Private schools also exist.
- A higher level of training course is provided by the German National Association of Homoeopathic Doctors (DZVhA) and is compliant with the ECH medical homeopathic educational standards.<sup>3</sup>
- The Federal Medical Council (Bundesärztekammer) Homoeopathy is an official part of the advanced training programme of 100 hours.<sup>3</sup>
- Compulsory/ optional introductory courses of CAM during the basic education at some universities.

### Greece<sup>1</sup>

- Postgraduate diploma is available in private schools and some universities offer a 3 years course in Homoeopathy, affiliated with ECH.<sup>1</sup>
- Generally medical doctors, dentists and veterinarians can take up this course in Homoeopathy but anyone who's interested, regardless of their academic background can take up study in Homoeopathy.<sup>1</sup>
- International academy of classical Homoeopathy provides quality homeopathic education.<sup>4</sup>

### Hungary<sup>1</sup>

- No homeopathic education for doctors and pharmacists in universities.
- Postgraduate diploma in private schools, recognized

as a requirement for the university exam on Homoeopathy, which is needed for official private practice in Homoeopathy.

- Only medical doctors can practice Homoeopathy, anthroposophic medicine, traditional, Chinese medicine and manual medicine.<sup>3</sup>
- The Hungarian Homoeopathic Medical Association (Magyar Homeopata Orvosi Egyesület) offers an ECH accredited 3-year, 600-hour classical Homoeopathy course for medical doctors, pharmacists, and veterinarians, as only medical doctors can practice Homoeopathy in Hungary.
- CEDH is also active in the country and has a 2-year modular program on clinical Homoeopathy. Community health evangelism (CHE) offer 4 year - 1000-hour including medical training.
- The University of Pécs organizes licensing exams for those who accomplish these courses.
- Homoeopathic practitioners are registered under the government.

## Ireland

Postgraduate diploma in private schools, open for everybody (no foregoing medical education required).

## Italy

- Homoeopathic education is mostly available in private schools, affiliated to Federation of Medical Scientific Societies (FIAMO).
- Postgraduate diploma/Degree in private schools is mostly taken up by medical doctors, dentists, veterinarians, pharmacists.
- Post-graduate courses for medical doctors were available in university of Bologna earlier but presently at University of Roma and Siena; Provincial Medical College in Reggio Calabria have some options.
- Usual duration of Homoeopathy course is 3 years (600 hrs) which follows the ECH/LMHI guidelines.<sup>1</sup>

## Latvia<sup>3</sup>

- Latvian Medical association recognizes Homoeopathy as an additional medical specialty. Only medical doctors can study Homoeopathy as post-graduation degree.

- The national homeopathic doctor's association issues diplomas recognized by the Latvia medical association.
- Homoeopathic doctors are supervised by a commission of experts representing the medical society of the republic of Latvia and professional medical associations.<sup>3</sup>

## Lithuania

- Homoeopathy is a medical subspecialty and thus can be practiced only by medical doctors.<sup>1</sup>
- A 250 hours post graduate diploma in Homoeopathy recognized by the Health ministry can be taken up by medical professionals like medical doctors and pharmacy graduates.<sup>1</sup>
- Training courses in Homoeopathy are available at Vilnius or Kanunas University.<sup>3</sup>

## Luxembourg

- Postgraduate diploma is available in private schools

## Moldova<sup>1</sup>

- Medical doctors can take up post graduate diploma in Homoeopathy course which is divided in 2 parts "Alternative and complementary medicine (Homoeopathy, acupuncture, herbal medicine)" for 312 hours course and "Homoeopathy and herbal medicine- clinical issues" for 312 hours.
- Subjects being taught as a part of the course include Fundamental principles of homoeopathic theory & practice, Organon, three levels of human being, homoeopathic semiology, Materia medica, posology, Homoeopathic primary & repeated consultation, Repertorization, Homoeopathic nosologic doctrine on diathesis & constitutions and clinical homoeopathy.
- Some continuing training courses like Homoeopathy in pediatric diseases; Homoeopathy in the pathology of internal organs and Homoeopathy in psycho-emotional disturbance.
- A Post graduate qualification is the minimum required qualification to practice Homoeopathy.
- Government can establish school/college to teach homoeopathy.

## Netherlands<sup>1</sup>

- ECH affiliated postgraduate diploma can be taken up by undergraduates, graduates, medical doctors, veterinarians, pharmacy graduates, nurses or anyone regardless of their academic background as no minimum education criteria for taking up homeopathic education is specified.
- Post academisch curriculum homeopathie (PACH) usually take 3-4 years students must pass NVAI accredited diploma as well for basic medical knowledge.
- Post academic training in Homoeopathy for doctors is private education.
- Registration of homeopathic practitioners is optional and not mandatory.
- Homoeopathic education imparting institution are Vrije Universiteit, Amsterdam and Radboud University, Nijmegen and Rijks University, Groningen.<sup>4</sup>

## Norway

- Education in private schools, open to everybody (no foregoing medical education required).
- Schools like Nordisk Hogskole for Homoeopathy (NHH) provide Homoeopathy education and clinical training include for 750 hours; Norsk Akademi for Naturmedisin (NAN) provides training for 400 hours and Skandinavisk Institutt for Klassisk Homeopati (SIKH) for 850 hours.<sup>4</sup>

## Poland

Officially recognized diploma as an additional qualification (medical doctor /veterinary doctor qualified in Homoeopathy) available. Post-graduate education at 8 universities. No possibility for homeopathic care in hospitals.

## Portugal<sup>1</sup>

- Homoeopathic education isn't a part of academic curriculum at any level. Postgraduate diploma and certified course in Homoeopathy for 2 years in private schools. Graduates in any stream can take up homeopathic education and further practice Homoeopathy as profession.<sup>1</sup>
- No provision for registration of homeopathic practitioners. Depending on the quality of the submitted education and training data, the Central

Administration of the Health System decides on the issuance of a license.<sup>1</sup>

## Romania

- Officially recognized diploma as an additional qualification (medical doctor/veterinary doctor qualified in Homoeopathy) available. Post-graduate education at 8 universities. Optional introductory course of CAM during the basic education at some private universities.
- ECH affiliated diploma available which is usually 2 years duration after graduation.
- Homoeopathic practitioners are registered by the government which can establish a homoeopathic school/college.<sup>1</sup>

## Russia<sup>1</sup>

- Undergraduates, graduates, medical doctors, veterinarians, pharmacy graduates can take up education in homoeopathy.
- Courses available are for academic hours varying between 1-216 hrs.
- Post graduate training of 216 academic hours required as minimum qualification to practice homoeopathy.
- No provision for registration of homeopathic practitioners.

## Serbia<sup>1</sup>

- CAM is legally regulated since 2005. According to the law health workers 161.e. physicians, stomatologists, pharmacists, nurses and physiotherapists can take up Homoeopathy education.
- Homoeopathy is recognized by the national medical association as additional qualification for medical doctors.

## Slovenia<sup>1</sup>

- Slovenian Homoeopathic Society organizes a basic and advanced course in Homoeopathy which is of 3 years duration and is compliant with the ECH medical homeopathic education standards and the European Standard EN 16872:2016: "Services of medical doctors with additional qualification in Homoeopathy(MDQH-Requirements for healthcare provision by Medical doctors with additional qualification in homoeopathy"

- Only medical doctors can take up an additional qualification in Homoeopathy who are then eligible to practice homoeopathy.
- Slovenian Veterinary Homoeopathic Association organizes basic and advanced education & training course in Homoeopathy for veterinarians in compliance with the standards of International Association of Veterinary Homoeopathy (IAVH).
- Homoeopathic practitioners are not registered under any registered societies.

### Spain<sup>1</sup>

- Graduates, medical doctors, veterinarians, pharmacy graduates or anybody who's interested regardless of their academic background can take up Homoeopathy education.
- Post-graduate education at the universities of Sevilla, Murcia and Barcelona.
- Optional introductory course of CAM during the basis education at some universities
- Academia Medicao Homeopatica de Barcelona held a masters in homeopathic medicine for 25 years at University of Barcelona but now a Master's guided by ECH standards is being provided. Masters in Homoeopathy course is usually 460 hrs. Online courses are also available on different similar subjects. (FEMH).
- Main subjects being covered in these courses include History of Homoeopathy, principles of homoeopathic method, case taking & analysis of the case, selection of symptoms, Materia medica, Follow up, Pharmacy, Basic & clinical research.

### Sweden<sup>4</sup>

- Education in private schools open for everybody (no foregoing medical education required). Few private schools providing homeopathic training include:
- 4-years basic Homoeopathy medicine course taught by professors from University of Upssala.
- Nordiska akademi for Klassisk Homeopati (NAKH) is a 3 years part time school of Homoeopathy with minimum eligibility criteria of nurse's level training for the admission.

- Naturmedicinska Fackskolan (NMF) impart 5 years part time or 2 years full time school of Homoeopathy.
- Nordiska Hahnemann Institute (NHI) provide homeopathic teaching.

### Switzerland<sup>1</sup>

- Homoeopathy is at par with conventional medicine, in terms of availability and access to physicians. It is accessible in health as a part of T&CM, fully integrated in the health care delivery system.
- Undergraduates, graduates, medical doctors, veterinarians, pharmacy graduates; nurses or anybody who's interested, regardless of their academic background or can take up Homoeopathy education.
- Schweizerischer Verein Homöopathischer Aerzte (SVHA) academy accredited by ECH provides a 3 years post graduate diploma course in Homoeopathy.
- Registration of Homoeopathy practitioners is optional and not mandatory.
- SHI *Homoopathie Schule* in Zug of Switzerland is imparting education in Homoeopathy.<sup>4</sup>

### Great Britain/ United Kingdom<sup>1</sup>

Persons with both medical as well as a non-medical background can take up Homoeopathy education.

- Officially recognized diploma as an additional qualification (medical doctor/veterinary doctor qualified in Homoeopathy) is available. Homoeopathy courses are generally of 3-5 years depending upon previous medical knowledge of students.
- The Faculty of Homoeopathy offers a primary care certificate as LFHom which is the foundation level course and can be taken up by all statutorily regulated healthcare professionals i.e. medical doctors, dentists, nurses etc. MFHom is the membership course after LFHom for advanced knowledge in Homoeopathy; where the candidates are expected to pass a clinical examination before being awarded the MFHom.
- Postgraduate education in private schools is also available which is open for everybody. Optional introductory course of CAM during the basis education at some universities

- Homoeopathy doctors are registered by association, registration of practitioners is optional and not mandatory.

### Turkey <sup>1</sup>

- Homoeopathy is regulated under the T&CM regulations which was released at the end of November 2014 in Turkey.
- Medical graduates and dentists can be a homeopath after post-graduate specialization in Homoeopathy and can treat patients. Pharmacist can be homeopathic consultants. Homoeopathic school/ college can only be established by the government.
- Medipol University, Yildirim Beyazit University and Health Science University provide Homoeopathy courses. LMHI affiliated diploma are also available.
- Official government approved program is of 400 hours and LMHI diploma course is for 600 hours.
- Homoeopathic practitioners are registered by the government.

### Ukraine

- Development of Homoeopathy has been supported by the Ministry of Public Health of the Ukraine. Postgraduate teaching in homeopathic medicine was started in Kiev and Kharkov in 1990-92. The country is represented in the LMHI. <sup>5</sup>
- Ukrainian National Medicine association offers special courses for Homoeopathy and other alternative medicines.<sup>4</sup>

### WHO African Region

Homoeopathy is mostly present as T& CM in most of the African countries except South Africa where it recognised as a separate discipline and there exists a recognised institutionalised master's degree at the university level.

### Ghana <sup>2</sup>

- T&CM training programmes that the Government officially recognizes include apprenticeships with T&CM providers<sup>1</sup>.
- Homoeopathic education is provided by a private college which covers basic homoeopathic subjects over a span of 3-4 years.

### Madagascar <sup>2</sup>

- Homoeopathy providers have been regulated, with enforcement at the national level, since 2005.
- T&CM providers practise in the private sector and in public sector clinics and hospitals.
- T&CM providers require a relevant licence or certificate, issued by the national Government or relevant academic institution, to practise. T&CM education is provided at university level as a master's degree.

### South Africa <sup>1</sup>

- Durban University of technology and University of Johannesburg offer Homoeopathy professional courses: 5-year full time post-graduation master's degree which is the minimum qualification required to practice homoeopathy.
- Undergraduate as well as medical graduates, medical doctors, veterinarians can take up Homoeopathy. The course curriculum includes homeopathic subjects as well as undergraduate medical curriculum subjects.
- Homoeopathic practice needs mandatory registration with Allied Health Professions Council of South Africa after completion of the degree.
- Pharmacies provide Homoeopathy medicines along with conventional medicines.

### United Republic of Tanzania <sup>2</sup>

- T&CM is integrated into the national health policy of 1990.
- Homoeopathy with other T&CM can be practiced in the private sector clinic and hospital.
- The national government issues the T&CM license required to practice and master's degree in T&CM is available at the university level and is officially recognized.

### WHO American region

Out of the 23 independent states of the North American region, the 02 large countries namely Canada and USA provide many opportunities for taking up homoeopathic education where Diploma/Degree level courses with variable duration are available for medical doctors, veterinarians, dentists or pharmacy graduates or even

for lay people. Few options can also be traced in smaller countries like Costa Rica, El Salvador etc.

Interestingly, LMHI affiliated Diploma/Degree level courses in homoeopathic education are found available in half of the countries of the South Americas which are mostly taken up by medical doctors, veterinarians, dentists or pharmacy graduates though variations in eligibility, program design/subjects and registration of the homoeopathic practitioners can be easily observed.

### Argentina<sup>1</sup>

- LMHI affiliated diploma and post-graduate diploma of 1200 hrs./ year for 3 years is available for medical doctors, veterinarians, pharmacy graduates.
- Homoeopathic practitioners are registered by the associations which can establish schools for imparting homoeopathic education.

### Bolivia (Plurinational state of)

In Bolivia, the national policy for T&CM is integrated into the health sectoral plan.<sup>1</sup> Government officially recognizes certified training programmes which include apprenticeships with T&CM providers.<sup>2</sup>

### Brazil<sup>1</sup>

- Homoeopathic education is available as a part of academic curriculum in some universities at the graduate level and can be practiced as a specialty.
- Mainly four groups of people namely medical graduates, medical doctors, dentists, veterinarians and pharmacists can take up a course in Homoeopathy to practice as specialists.
- A 3 years duration course in Homoeopathy with subjects based on LMHI educational guidelines is available.
- Courses available range from certified course to post graduate diploma, post graduate degree, post doctorate degree.
- Educational schools/colleges can be established by the Government; registered societies and Associations. Brazilian Federal Councils of the respective areas viz. Brazilian Homoeopathic Medical Association for medical doctors, Brazilian Homoeopathic Veterinarian Medical Association for veterinarians, Brazilian Homoeopathic Dentistry Association for dentists and

Brazilian Homoeopathic Pharmacy Association for pharmacists and Brazilian ministry of education can establish schools as well. An approval of the program content of the specialization course is necessary by the respective Brazilian Federal specific professional councils.

- Three government federal universities offering courses are available in the states of Rio de Janeiro, Campo Grande, in Mato Grosso do Sul and Belo Horizonte in Minas Gerais.

### Canada<sup>1</sup>

- Diploma courses in Homoeopathy are available at graduation level for a duration of 1 to 3 years. Medical doctors, nurses, undergraduates or anybody who's interested regardless of their academic background can take up this educational course.
- As per the Regulated Health Professions Act, Homoeopathy courses are to be approved from College of Homeopaths of Ontario although in other provinces any school can offer Homoeopathy courses on their own.
- Subjects of teaching in these Homoeopathy courses includes Organon of medicine, Materia Medica, Repertory, Homoeopathic pharmacy, Anatomy, Physiology, Pathology and Medicine.
- College of Homeopaths of Ontario has a statutory regulatory council for registering homeopaths and only those registered with the council can use the title of homeopath. Other provinces have homeopathic associations too who register homeopaths for practicing Homoeopathy.
- Few prominent institutions providing Homoeopathy education include: Homoeopathic college of Canada (Luminos Homoeopathic Course) – Toronto; Centre De Techniques Homeopathiques-Montreal; British Institute of Homoeopathy - Canada; Manitoba College of Homoeopathic Medicine; College of Homeopaths of Ontario; Hahnemann Centre for Homoeopathy; Heilkunst Homoeopathic College - Canada and Vancouver Homoeopathic academy.<sup>4</sup>

### Chile<sup>1</sup>

- Both medically skilled and non-medical people can take up 2-3 years of Homoeopathy certified course although only approved final exam taken for a

homeopathic licence or certificate issued by the health ministry via the regional health authorities is required to practise the recognized therapies.<sup>1</sup>

- A bachelor's degree is available at university level. The numbers of Homoeopathic treatment providers in practice in Chile (as at 2012) are homeopathic medicine (200) and usually practise in private and public clinics.<sup>2</sup>

## Colombia

- Medical doctors can take 2 years post graduate degree in Homoeopathy by Universidad Nacional de Colombia.<sup>1</sup>
- Other institutions providing homeopathic education are *Escuela de medicina juan n. corpas*, *Instituto Homeopatico luis G. paez* and *fundacion Homoeopathica de columbia*.<sup>4</sup>
- Homoeopathic practitioners are registered by government.
- Government, registered societies as well as associations can establish a homoeopathic school/college.<sup>1</sup>

## Cuba<sup>2</sup>

- About 40-59 % of population uses Homoeopathy. Homoeopathy is providers practice in public, clinics, hospitals, integrated rehabilitation services, and municipal and provincial centers of "natural and traditional medicine" (NTM).
- A license or certificate issued by a relevant academic institution is required for Homoeopathy practice.<sup>2</sup>
- Universities offer higher education degrees such as a master's, a PhD in medicine or a clinical doctorate in various T&CM.

## Costa Rica<sup>1</sup>

- Only few introductory courses are available in some universities while a complete educational program is lacking. These are mostly a part of the pharmacy career program at some universities for a duration of 8 months in which principles of Homoeopathy and philosophy for 4 months along with Materia Medica and therapeutics for remaining 4 months are taught.

## El Salvador<sup>1</sup>

- Homoeopathic education isn't a part of the academic curriculum at any level.
- A post graduate diploma course is however available which can be taken up by both Medical doctors as well as by non-medical professionals, regardless of academic background.
- Usual duration of the course is 2 years in which Introduction to Homoeopathy, Materia Medica, Organon of medicine, Repertory and knowledge about homoeopathic potencies is imparted.

## Ecuador<sup>1</sup>

- Homoeopathic education isn't a part of the academic curriculum at any level even though Homoeopathy is well regulated and is at par with conventional medicine.
- Medical doctors, veterinarians, pharmacy graduates can take up Postgraduates diploma or degree in Homoeopathy of 2 years duration.
- Homoeopathic practitioners are registered by government.

## Mexico

- Homoeopathy is known to be well integrated into the national health system T & CM providers.<sup>2</sup>
- As per the 2011 data from Authorisation and Professional Registry Directorate, various degrees in T&CM: Bachelor's (Master); PhD; Clinical doctorate and technicians are provided at university level.
- Certified training programmes are also officially recognized by the Government.<sup>2</sup>
- Few institutions imparting homeopathic education are: *The Instituto de Estudios Superiores of Oaxaca*, *El instituto superior de medicina homeopatica*, *Ensenanza e Investigacion of Monterrey*, *The Instituto de Estudios Tecnologicos y Superiores "Matatipac" A.C. of Tepic* and *The Escuela De posgrado of homeopatia de Mexico*.<sup>4</sup>

## Uruguay<sup>1</sup>

- Medical doctors and veterinarians can take up homoeopathy courses like LMHI affiliated Post graduation degree/ diploma at graduation level which usually last for 3 years.

- *La Asociación de Medicina Homeopática del Uruguay* (AMHU) can establish a homeopathic school/college and offers post graduate courses for medicos and veterinarians.
- Homeopathic subjects being taught in these courses include: Homeopathic theory, History & principles; Repertory, Clinical homeopathy etc.

### United States of America<sup>1</sup>

- Both medically skilled and non-medically skilled undergraduates, graduates, medical doctors, veterinarians, pharmacy graduates, nurses and anyone who's interested regardless of their academic background can take up Homeopathy.
- Depending upon previous qualification Graduation degree, post graduate degree/ diploma, statutory boards affiliated diploma and Diploma at graduation level are available.
- Duration of these Homeopathy courses varies from 200 hours to 2000 hours and covers primarily homeopathic subjects like Repertory, Materia Medica, History, Posology, case taking etc.

### WHO Eastern Mediterranean region

Although it is seen that Homeopathy is practised in the prominent countries of this region, not much is available about its educational framework in these countries. Pakistan however offers defined courses in T& CM and Bachelor's, Master's, PhDs and Clinical doctorate degrees in T&CM are available at university level.

#### Egypt<sup>1</sup>

- Homeopathic education isn't a part of the academic curriculum at any level.
- Anyone who is interested regardless of their background can take up practice of homeopathy. A 3 days introductory course by a small association of non-medical Homeopathy prescribers is offered to interested people.
- Only a certified course from Lakeland college, UK with 3 years duration is available as some form of proper homeopathic education where some practicing homeopaths teach in collaboration with the college.

#### Oman<sup>2</sup>

- Guidelines for regulation of TM preparations are

integrated into the National Medicine Policy of 2008.

- The national government issues licence required for Homeopathy practice and homeopathic practitioners practise in the private sector clinics.
- Bachelor's and master's degrees in various T&CM systems are available at university level

### Pakistan<sup>2</sup>

- Homeopathy is fully regulated under *National-level regulations under the Unani, Ayurvedic and Homoeopathic Practitioners Act*.
- Homeopathy is practised in both public and private sector clinics and hospitals.
- The National Council for Tibb and Homoeopathy issues the T&CM licence that is required to practise.
- Bachelor's, Master's, PhDs and Clinical doctorate degrees in T&CM are available at university level.<sup>162</sup>
- Few institutions imparting homeopathic education: Sindh Homoeopathic Medical college & Hospital under University of Sindh, Al-Khair University and Peshawar University.<sup>4</sup>

### Syrian Arab Republic

Homeopathy is practised in private clinics. There are also postgraduate courses in alternative medicine for pharmacy students.<sup>2</sup>

### Tunisia

- Homeopathy practitioners practise in the private and public sectors.
- A licence or certificate, issued by the national Government, is required to practise T&CM. Education is provided at university level, such as a PhD in Pharmacy.<sup>2</sup>

### United Arab Emirates

- Homeopathy is regulated at National level.<sup>1</sup> About 120 Homeopathy practitioners' practice in Private Sector Clinics and hospitals. State provincial government issues the relevant license required for Homeopathy.<sup>2</sup>

### WHO Western Pacific Region

Meagre presence of homeopathy & its educational opportunities. Educational courses available for T&CM

except Japan which offers LMHI affiliated Diploma/ Degree.

### Australia<sup>1</sup>

- Homoeopathic education is not a part of the academic curriculum at any level.
- Currently no professional course is available in the universities, although the minimum standard for entry is an undergraduate degree BHSc (Hom) or B. Hom.
- Earlier a 4-5 year course covering subjects on health sciences and homoeopathic philosophical and practical studies was available.
- Homoeopathy isn't a registered profession with the government and there exists only a self-regulation through AROH- Australian Register of Homoeopaths.

### Brunei Darusslam<sup>2</sup>

- Since 2009, there are regulations in progress for providers of T&CM including Homoeopathy.
- Practitioners are either registered with their practitioner bodies from the country of origin or through trade certification.
- Homoeopathy treatment providers practise only in the private sector.

### Japan<sup>1</sup>

- LMHI affiliated Diploma and Statutory Boards Affiliated diploma of 3 years, over 150 hours is available for medical professionals 161.e. Graduates, Medical doctors, Dentists and Veterinarians.
- Japanese Physicians Society for Homoeopathy also provides homoeopathy education courses.
- No provision for registration of homeopathic practitioners.

### Malaysia<sup>1</sup>

- Homoeopathy is accessible in healthcare as part of T&CM.
- Undergraduates can take up Homoeopathy educational course.
- No provision for registration of homeopathic practitioners.

- The Faculty of Homoeopathy runs a proper training institution for the homeopathic practitioners.<sup>4</sup>

### Philippines<sup>2</sup>

- Homoeopathy providers practice in public and private sector clinics and hospitals.
- The Philippine Institute of Traditional and Alternative Health Care (PITAHC) accredits and certifies T&CM including Homoeopathy practitioners, clinics and training centers.
- Master's degree in T&CM and a Master of Science (MSc) in South Asian health practices are offered at universities in the Philippines. The MSc was first offered in 2008 and the first batch of graduates was in 2010.
- The Government also recognizes certified training programmes.

### WHO South-East Asian Region

The region clearly shows existence of organized educational programs in the form of Diploma/Degree in Homoeopathy especially in countries like India, Bangladesh and Nepal. India remains the infrastructure leader not only in this region but across the globe with well institutionalized educational framework in Homoeopathy, with other Asian countries seen to follow its footsteps. While Burma, Bhutan and Indonesia recognize education in T& CM, Thailand is an exception and offers post graduate level courses in accordance with the ECH-LMHI.

### Bangladesh<sup>1</sup>

- Undergraduates, graduates, medical doctors, pharmacy graduates can take up education in homoeopathy which includes Diploma at graduation level and graduation degree.
- DHMS (Diploma in Homoeopathic medicine & Surgery) and BHMS (Bachelors in Homoeopathic medicine & Surgery) are available and take 4.5 years and 6 years respectively.
- University of Dhaka and Bangladesh Homoeopathic Board are institutions of repute for seeking quality homoeopathic education.
- There are approx. 44 homeopathic colleges for DHMS and 03 homeopathic colleges for BHMS degree under Bangladesh Homoeopathic Board.

- Government/registered societies can set up educational institution/school/college.

### Bhutan

- Officially recognized formal training of traditional medical doctors (drungtsho) began in 1978 with the establishment of a five-year drungtsho programme.
- In 1979, the programme became a part of the National Institute of Traditional Medicine (NITM).
- The course now consists of five years of institutional training followed by a six-month internship. In 1998, NITM was upgraded to Institute of Traditional Medicine Services.

### Burma

- Burma Homoeopathic Society (BHS) conducts classes and issues certificates.
- A one-year course teaches basic principles of Myanmar TM.
- The University of Traditional Medicine confers a bachelor's degree after four years of training and a one-year internship.
- TM is included in the curriculum of third year M.B.B.S.
- Institutions imparting homeopathic Education in Rangoon are International Homoeopathic Medical College and Provincial Homoeopathic Medical College.<sup>4</sup>

### India<sup>1</sup>

In India, organized education in Homoeopathy began in the pre-independence period, beginning in Calcutta with the establishment of first homoeopathic college, 'Calcutta Homoeopathic Medical College' in 1883.

Subsequent to the passing of the Central Council bill in both the houses of the parliament, the then President of India gave his assent to the Homoeopathy Central Council Act 1973 on 19th December 1973. As per the provisions of the Act, the Government constituted the Central Council of Homoeopathy (CCH) to regulate education and practice of the system. There are 231 Undergraduate including 59 postgraduate colleges of Homoeopathy imparting homeopathic education.

Following courses for homoeopathic education are

available in the country:

- **BHMS Course:** The Bachelor of Homoeopathic Medicine and Surgery (BHMS) is presently the basic educational qualification in Homoeopathy. It is a regular full-time 5 ½ years graduate medical degree (including one year of compulsory internship training). The students are imparted training and teaching in pre-clinical, para-clinical and clinical subjects.
- **Post Graduate Degree Course:** In 1989, the Homoeopathy (Post Graduate Degree Course), Regulations were notified, through which post-graduation was made available in 3 specialty subjects. In 2001, four new specialty subjects were included. Physicians with a basic graduate homoeopathic degree can opt for Doctor of Medicine (Homoeopathy) with options for specialization in the following subjects: Practice of Medicine, Pediatrics, Psychiatry, Homoeopathic Pharmacy, Organon of Medicine & Homoeopathic Philosophy, Materia Medica and Repertory.
- **Post-doctoral research programs (Ph. D.) in Homoeopathy:** This has of late been initiated by some universities.

### Indonesia

- The Indonesian homoeopathic College has been established under the auspices of the Association of Homoeopaths of Indonesia. Homoeopathy Diploma Program is granted by the College.
- Training courses in traditional medicine are conducted by Centre for Traditional Medicine Research and Directorate of Selected Community Health Development, also under the Ministry of Health and Social Welfare.
- A Diploma Programme in Traditional Medicine (three years, part of Study Programme of Medical Faculty), complementary and alternative clinics (eight clinics in government hospitals) and private hospitals, and Model Community Health Care Centre for Complementary and Alternative Services have been established.

### Nepal

- Nepal Homoeopathic Medical College is the first and only homeopathic college in Nepal, currently offering 4½ years of study and 1 year of internship. This leads to a B.H.M.S. (Bachelor of Homoeopathic Medicine and

Surgery) degree.

- Homoeopathic Health Assistant (HHA) program is also approved by Council for Technical Education and Vocational Training.

### Sri Lanka

Council in Sri Lanka is empowered to register and recognize homeopathic medical practitioners; recognize homeopathic teaching institutes, dispensaries, and hospitals; hold examinations and award degrees in homeopathic medicine; and arrange for postgraduate study in Homoeopathy.

### Thailand <sup>1</sup>

- Medical doctors, pharmacy graduates and dentists can

take up education in Homoeopathy course as post-graduation diploma.

- A 2 years standard program of Certificate of Postgraduate in Homoeopathy is offered by Homoeopathic Association of Thailand (HAT) which is affiliated with LMHI. This includes classes 8 days every 2 months along with private practice.
- Subjects being taught in the course include: History, Organon & Philosophy, Materia Medica, Repertory, Clinical practice, Research & evidence-based Homoeopathy and Pharmacology.

- Homoeopathic practitioners are not registered under any registered societies

1 CCRH. Country Profile Survey (India; 2017 (Unpublished report)

2 WHO global report on traditional and complementary medicine, 2019

3 Homoeopathy in Europe- Unity in Diversity, 25th Anniversary of the European Committee for Homoeopathy (ECH)

4 Das Eswara, History & Status of Homoeopathy Around the World, B. Jain publishers, First Edition: 2005

5 Cited 2019 Sept 05. Available From: [http://www.wholehealthnow.com/Homoeopathy\\_pro/ukraine.html](http://www.wholehealthnow.com/Homoeopathy_pro/ukraine.html)

## Chapter-4

# Safety Issues in Homoeopathy

**Dr. Ritika Hassija Narula<sup>1</sup>; Ms. Renu Arya<sup>2</sup>; Mr. Pankaj Gupta<sup>3</sup>; Mr. Narasimah<sup>4</sup>**

1. Research Officer (H), CCRH, New Delhi, India

2. Research Officer (Pharmacognosy), CCRH, New Delhi, India

3. Assistant Director (Pharmacology), DDPRCRI (H), Noida, India

4. Research Officer (Pharmacology), Dr. Anjali Chatterjee RRI (H), Kolkata

Worldwide increase in the use of homeopathic medicines and the rapid expansion of the global market opened the door for many new and combination products without any proving of safety pre-clinically. There is a clear mandate and requirement of assuring safety of any medicine before being tested in humans. Thus, preclinical safety evaluation of homeopathic medicines needs to be carried out before drug proving. In recent times, research on pre-clinical safety evaluation of homeopathic medicines also has enhanced and studies are demonstrating the safety of these medicines evaluated. Singh et al., 2014 has carried out acute, sub-acute and chronic oral toxicity of different homeopathic drugs Ferrum phosphoricum 3X, Ferrum phosphoricum 6X, Calcarea phosphoricum 6X, Magnesium phosphoricum 6X as per the OECD guidelines and results revealed that these mineral-based homeopathic drugs were safe and produced no toxicity even when administered for longer durations<sup>1</sup>. In another study by Singh et al., 2014, acute and sub-acute oral toxicity evaluation of homeopathic mother tinctures *Bellis perennis*, *Curcuma longa*, *Rauwolfia serpentina*, *Ricinnus communis*, *Tribulus terrestris* and *Terminalia arjuna* indicated no signs of toxicity in animals tested<sup>2</sup>. More and more such type of studies are required for homeopathic medicines as per proper guidelines so that issues of safety and the quality of homeopathic medicines which is a major concern for health authorities, pharmaceutical industries and consumers could be addressed properly. Moreover, safety can be delivered only if the quality of medicines are assured and to assure quality of homeopathic medicines.

A general consensus exists on the fact that homeopathic treatment is safe and causes minimal to no adverse effects.<sup>3</sup>This, in fact, is one of the unique assets of Homoeopathy, which has worked in favour of the science, especially in today's era of adverse drug effects from long term treatment. Nonetheless, the researchers have tried to substantiate this existing truth with scientific data. Safety, as perceived by the medical science, has more meaning than one, with both direct and indirect risks included.<sup>4</sup>A homeopathic treatment is said to be safe when:

1. It doesn't cause adverse drug effects (ADE) in the patient
2. Inadequate qualification of a practitioner doesn't come in the way of establishing a right diagnosis, which could debar the patient from right treatment or timely reference
3. The medicines are quality-assured, and, therefore, safe

Critics have argued that even though homeopathic medicines are ultra-diluted, incidence of ADE have been reported.<sup>5</sup> Nevertheless, these have largely been non-serious in nature. On the other hand, homeopathic aggravations not to be confused with adverse drug effects, as it is a homeopathic phenomenon wherein a patient reports of slight worsening of the clinical symptoms, with a general sense of well-being, followed by overall relief.<sup>6</sup> Such an occurrence is interpreted as a positive development in the course of homeopathic treatment. Interestingly, the incidence of homeopathic aggravation have been reported in research papers, which speaks in

favour of the plausibility of Homoeopathy, with its ultra-diluted medicines stirring a response in an individual. Most homeopathic aggravations, being self-limiting, do not call for any counteraction by the homeopathic physician, and hence are not taken into account as an adverse effect. In some cases, however, the response stirred can be out of proportion, mostly owing to frequent repetition or over dosage, and needs to be settled with an antidote. Such occurrences fall in the category of ADE and accounted as such. Besides, the homeopathic medicines, taken in a combined form with other medicines, don't remain purely homeopathic in nature and the adverse reactions from such medicines cannot directly be attributed to the homeopathic medicines used.<sup>6</sup> What unfortunately remains a matter of concern is that not many clinical researches report of either ADE or homeopathic aggravation, thus barring the true analysis of the safety index of homeopathic treatment.<sup>7</sup>

Keeping in view the safety concerns and quality issues raised from different sources, Adverse drug reaction (ADR) monitoring can be used as a valuable tool to substantiate the safe use of Homoeopathic medicines. Ministry of AYUSH, New Delhi, India has recently approved and implementing Central Sector Scheme of Pharmacovigilance of Ayurveda, Siddha, Unani (ASU) & Homoeopathic Drugs for developing the culture of ADR reporting, documentation, causality assessment of the adverse reactions and events and analysis for regulatory action. In this initiative, All India Institute of Ayurveda (AIIA), New Delhi has been designated as the National Pharmacovigilance Coordination Centre, respective national institutes as the system-wise Intermediary Pharmacovigilance Centres and around 40 potential institutes / research centres as Peripheral Pharmacovigilance Centres<sup>8</sup>. This kind of ADR monitoring and reporting will categorize and can differentiate aggravations from ADR's and aggravations being reported as ADR's.

Central Council for Research in Homoeopathy (CCRH) under the Ministry of AYUSH, Govt. of India had organized two World Integrated Medicine Forum (WIMF) for regulation of homoeopathic medicinal products (HMPs) in 2017 & 2019 with an objective of facilitating an effective dialogue among all regulators, stakeholders, drug manufacturers and practitioners on the foremost issues as an agenda on safety, quality control, clinical effectiveness and regulatory framework for homoeopathic medicines as well as for veterinary medicine across the globe. The recommendations and outcomes of both the forums are being taken up for making strategies for

further development of harmonizing the regulations on homoeopathy around the world which will lead to an effective, safe and quality medicine for public health. The outcome of WIMF 2017 has been published in Indian Journal of Research in Homoeopathy (IJRH), an official publication of Council.<sup>9</sup>

For implementing and developing technical standards based on the existing knowledge of the drug substance, appropriate experimentation and the consensus of different stakeholders such as practitioners, industrialists and regulators, homoeopathic drug standardization is required. It ensures a predefined amount of quantity, quality and therapeutic effect of each ingredient<sup>10</sup>. The benchmark standards for raw drug plant material, the identification of source material (gross morphology of the raw drug), limit tests (for pesticide, heavy metals and fungi/bacteria) and complementary tests (foreign matter, total ash, water content, bitterness value, loss on drying and radioactive contamination) must be adhered by all the manufacturing units. Likewise, there are standards for drugs of animal origin, or human-derived origin, mineral and chemical origin along with mother tincture and finished products. Sophisticated instruments such as high-performance liquid chromatography, high-performance thin-layer chromatography fingerprinting and assays of marker compounds are being used for standardization of homoeopathic medicines.

WHO has prepared a document on safety issues that stresses upon Good Manufacturing Practices (GMP) and mentions all the necessary guidelines required to be followed for manufacturing homeopathic medicines.<sup>11</sup> It should be the mandate of the drug regulatory body of every country to ensure the WHO guidelines are strictly adhered to by the homeopathic pharmaceutical industries.

WHO vide above document has shown concerns about safety of Homoeopathic medicines prepared from biological materials, microorganisms etc. These concerns has been addressed showing safety of Homoeopathy products, some of which are referred below.

In the last decades, the study of homeopathic signaling molecules such as cytokines and specifically interleukins, hormones, growth factors and neuropeptides have become one of the most important challenges for all the scientific community, homeopaths included.

Historically, hormones have been used in Homoeopathy and classified as sarcodes by virtue of their origin. As

well as hormones, growth factors, neuropeptides, and interleukins are peptides normally secreted by human beings and lower animals and they can be extracted from fresh organs or tissues samples (as typical for hormones/sarcodes) or, nowadays, obtained by biotechnology production of recombinant proteins, which is a technique that provides all the necessary guarantees in terms of microbiological purity and safety.

After said that, the introduction of diluted and dynamized signaling molecules in Homoeopathic Pharmacopoeia has to be seen as an important enrichment of homeopathic pharmacology.

The crucial point for the clinical use of homeopathic signaling molecules is their safety. The homeopathic preparation of signaling molecules has been ascertained as safe. In fact, all the requirements mentioned in the GMP guidelines are fulfilled. Special attention is paid to the source of biological starting material: the origin of all signaling molecules is human and are obtained through recombinant technology in *E. coli*. The possibility of direct or indirect disease transmission has been evaluated according to ISO 14971/2009-based risk analysis. The material showed not to be a vector known for transmission of infectious virus or TSEs (Transmissible spongiform encephalopathies). All the homeopathic stocks manufactured in EU meet the requirements of the European Pharmacopoeia for microbiological control (Ph. Eur. 5.1.4 "Microbiological Quality of non-sterile pharmaceutical preparations and substances for pharmaceutical use", current edition). A risk assessment on the potential transmission of viral infectious agents has been performed in agreement with the requirements set by EMEA, ISO 22442-3 and European Pharmacopoeia. The complete inactivation of any possible infectious agent is reached by sterilization. Cytotoxicity and mutagenicity of these homeopathic signaling molecules are also evaluated, in agreement with the Italian Medicines Agency (AIFA) registration protocols. The specific *in vitro* tests are conducted by certified laboratories and no cytotoxic nor mutagenic effects are detected.

Also, in terms of biological effect and clinical evidence, homeopathic signaling molecules shown their safety. Both *in vitro* and *in vivo* preclinical studies highlighted the ability of homeopathic signaling molecules to modulate the targeted cellular pathways without the induction of unwanted imbalances of the immune system, both in terms of interleukins/cytokines expression and immune

cells sub-population ratios (that are the most important pitfalls in clinical use of high doses of cytokines)<sup>12,13</sup>

D'Amico and colleagues studied the effects of IL-12 on PBMCs from patients with Non-Small Cell Lung Cancer and the results demonstrates that only homeopathic IL-12 stimulates the proliferation of Th1, increasing at once the CD4<sup>+</sup>/IFN- $\gamma$  producing T-cell activity (which is fundamental to activate an anti-cancer response) without affecting immune cells populations ratio.

The high characteristics of purity, safe manufacturing and biological safety of homeopathic signaling molecules allow their high clinical safety, as assessed in clinical trials.

All the clinical trials conducted with homeopathic signaling molecules are equipped with specific ADRs recording tools such as eCRF (electronic Case Report Forms) or other validated reporting forms. No ADRs directly related to homeopathic signaling molecules administration are reported and, on the contrary, all clinical studies underline their high safety and compliance, and therapeutic efficacy<sup>14,15,16,17</sup>

Ensuring adequate qualification of homeopathic physicians is another core action area to safeguard the right of the patients to safe treatment. It is important that no profession earns a bad name simply because a doctor wasn't able to diagnose a rather serious case with threatening prognosis leading to dire consequences, also breaching the patient ethics in turn. Lack of knowledge of a physician makes Homoeopathy, or any other treatment for that matter, indirectly unsafe.<sup>4</sup> Efforts are in progress to standardize the homeopathic education in the world to ensure patient's safety in this regard. LMHI & ECH have together taken some key initiatives to standardize the education scenario of Homoeopathy worldwide<sup>18</sup>.

The current regulatory framework and its requirements for homoeopathic medicines differ from country to country. There are regulations for HMPs, either as part of complementary and traditional medicine or conventional medicine, with some countries having an official document regulating its production and quality, such as the Homoeopathic Pharmacopoeia of the United States, the Homoeopathic Pharmacopoeia of India, the Brazilian Homoeopathic Pharmacopoeia and the European Homoeopathic Pharmacopoeia. Indian regulatory framework has homoeopathic medicines covered under the provisions of the Drugs and Cosmetic Act, 1940, Rules 1945.<sup>19</sup>

- 1 Singh S, Kalra P, Karwasra R, Khurana A, Manchanda RK, Gupta YK. Safety studies of homoeopathic drugs in acute, sub-acute and chronic toxicity in rats. *Indian J Res Homoeopathy* 2017;11:48-57.
- 2 Singh S, Kumar R, Karwasra R, Kalra P, Rani S, Nayak D, et al. Evaluation of safety profile of homoeopathic mother tinctures. *Indian J Res Homoeopathy* 2014;8:81-6.
- 3 Bornhoff G, Matthiessen PF. *Homoeopathy in healthcare—effectiveness, appropriateness, safety, costs*. Berlin: Springer; 2011.
- 4 Ernst E. The safety of Homoeopathy. *Editorial.Br Horn J* 1995; 84: 193-4.
- 5 Posadzki P, Alotaibi A., Ernst E.. *Adverse Effects of Homoeopathy: A Systematic Review*.
- 6 Endrizzi C, Rossi E, Crudeli L and Garibaldi D; Harm in Homoeopathy: Aggravations, adverse drug events or medication errors?; *Homoeopathy* (2005) 94, 233–240.
- 7 FDantas and H Rampes; Do homeopathic medicines provoke adverse effects? A systematic review; *British Homoeopathic Journal* (2000)89,Suppl 1,S35-38.
- 8 Press Information Bureau, Government of India, AYUSH, 14.08.2018.
- 9 Kaur H, Chaudhary A, Khurana A, Hoover T, Van Haselen R, Manchanda RK. World integrated medicine forum on the regulation of homoeopathic medicinal products: National and global strategies. *Indian J Res Homoeopathy* 2017; 11: 123-35
- 10 Satti J. Homoeopathic drug standardization. *Semin Integr Med* 2005;3:11322.
- 11 World Health Organisation (WHO). *Safety Issues in the Preparation of Homoeopathic Medicines*.
- 12 Gariboldi S, Palazzo M, Zanobbio L, Dusio GF, Mauro V, Solimene U, Cardani D, et al. Low dose oral administration of cytokines for treatment of allergic asthma. *PulmPharmacolTher.* 2009;22(6):497-510.
- 13 D'Amico L, Ruffini E, Ferracini R, Roato I. Low Dose of IL-12 Stimulates T Cell Response in Cultures of PBMCs Derived from Non-Small Cell Lung Cancer Patients. *Journal of Cancer Therapy*, 2012, 3, 337-42.
- 14 Roberti ML, Ricottini L, Capponi A, Sclauzero E, Vicenti P, Fiorentini E, Savoia C, et al. Immunomodulating treatment with low dose interleukin-4, interleukin-10 and interleukin-11 in psoriasis vulgaris. *J BiolRegulHomeost Agents.* 2014;28(1):133-9.
- 15 Lotti T, Hercogova J, Wollina U, Chokoeva AA, Zarrab Z, Gianfaldoni S, Roccia MG, et al. Vitiligo: successful combination treatment based on oral low dose cytokines and different topical treatments. *J BiolRegulHomeost Agents.* 2015;29(1 Suppl):53-8
- 16 Carello R, Ricottini L, Miranda V, Panei P, Rocchi L, Arcieri R, Galli E. Long-term treatment with low-dose medicine in chronic childhood eczema: a double-blind two-stage randomized control trial. *Ital J Pediatr.* 2017;43(1):78.
- 17 Martin-Martin LS, Giovannangeli F, Bizzi E, Massafra U, Ballanti E, Cassol M, Migliore A. An open randomized active-controlled clinical trial with low-dose SKA cytokines versus DMARDs evaluating low disease activity maintenance in patients with rheumatoid arthritis. *Drug Des DevelTher.* 2017;11:985-994.
- 18 *Medical Homoeopathic Education Standards for ECHA and LMH Allied Schools; European Committee for Homoeopathy, 2001 & Liga Medicorum Homoeopathica Internationalis, 2005; Amended Version 2008.*
- 19 National Health Portal. Available from: [https://www.nhp.gov.in/Statusof-Homoeopathy-in-the-Drugs-and-Cosmetic-Act-and-rules\\_mtl](https://www.nhp.gov.in/Statusof-Homoeopathy-in-the-Drugs-and-Cosmetic-Act-and-rules_mtl). [Last accessed on 2018 Dec 20]

## Chapter-5

# Ethics in Practice and Research

**Dr. Praveen Oberai**

Research Officer (H)

Central Council for Research in Homoeopathy, Ministry of AYUSH, Govt. of India, New Delhi, India

The code of conduct for physicians was well laid out in traditional Indian systems of medicine and do no harm was the underlying universal principle besides other principles applicable to the prevalent culture and the class systems of the society<sup>1</sup>. It is incredible to think that 'ethics' was talked of even 2000 years ago. The Father of Medicine, Hippocrates, has left rich medical and ethical heritage. His collection of treatises *Corpus Hippocraticum*, from 5<sup>th</sup> and 4<sup>th</sup> centuries BC, comprise not only general medical prescriptions, descriptions of diseases, diagnoses, dietary recommendations etc., but also his opinion on professional ethics of a physician. The Hippocratic Oath, taken by ancient and medieval doctors, requires high ethical standards from medical doctors. Its principles are important in professional and ethical education of medical doctors even today<sup>2</sup>.

However, today ethics is a very large and complex field of study with many branches or subdivisions dealing with all aspects of human behaviour and decision-making. The focus of this chapter is medical ethics which is applicable for all systems of therapies including Homoeopathy<sup>3</sup>. A wide range of ethical issues that a homeopath is subject to is no different from the ones considered by the practitioners of the conventional medicine.

The principle of beneficence is associated with benefiting patients through curing, helping and healing. For a homoeopath, the term has a wider meaning as a homoeopath does not only limit to benefiting a patient physically, but also mentally and emotionally. That makes his duty professionally broader demanding wider range of skills and competencies. This aspect also includes assessing

the situation correctly and when the treatment ceases to provide benefit or is of limited benefit in comparison to some other line of treatment, it is ethically advisable to refer the patient or offer the treatment as only an adjuvant.

A homoeopath, in order to avoid any harm to the patient at emotional level, besides the physical level, is skilled enough to handle a patient's emotions and illnesses with compassion. On another note, since Homoeopathy offers one of the most gentle and harmless approaches towards treatment, it is logical to administer this therapy first along with other CAM options, with the technology of conventional medicine being used as a backup when needed<sup>4</sup>. However, severity of a patient's condition is given due consideration to decide which treatment is used first. For example, in a case of cancer, where chemotherapy is strongly advised, and the drastic side effects resulting from it can be overlooked keeping in mind the likelihood of success.

The basic principles of research ethics are well established. It was not always so, however. Many prominent medical researchers in the 19th and 20th centuries conducted experiments on patients without their consent and with little if any concern for the patients' well-being. Although there were some statements of research ethics dating from the early 20th century, they did not prevent physicians in Nazi Germany and elsewhere from performing research on subjects that clearly violated fundamental human rights. Following World War Two, some of these physicians were tried and convicted by a special tribunal at Nuremberg, Germany. The basis of the judgment is known as the Nuremberg Code, which has served as one

of the foundational documents of modern research ethics. Among the ten principles of this Code is the requirement of voluntary consent if a patient is to serve as a research subject<sup>5</sup>.

Research on human participants pertains to a broad range of scientific enquiry aimed at developing generalizable knowledge that improves health, increases understanding of disease and is ethically justified by its social value. Every research has some inherent risks and probabilities of harm or inconvenience to participants/communities. Therefore, protection of participants should be built into the design of the study. Do no harm (non-maleficence) has been the underlying universal principle guiding health care in all systems of medicine around the world.

While conducting biomedical and health research, the four basic ethical principles namely; respect for persons (autonomy), beneficence, non-maleficence and justice have been enunciated for protecting the dignity, rights, safety and well-being of research participants.

These four basic principles have been expanded into 12 general principles described below, and are to be applied to all biomedical, social and behavioural science research for health involving human participants, their biological material and data.

1. Principle of essentiality whereby after due consideration of all alternatives in the light of existing knowledge, the use of human participants is essential for the proposed research. This should be duly vetted by an ethics committee (EC) independent of the proposed research.
2. Principle of voluntariness whereby respect for the right of the participant to agree or not to agree to participate in research, or to withdraw from research at any time, is paramount. The informed consent process ensures that participants' rights are safeguarded.
3. Principle of non-exploitation whereby research participants are equitably selected so that the benefits and burdens of the research are distributed fairly and without arbitrariness or discrimination. Sufficient safeguards to protect vulnerable groups should be ensured.
4. Principle of social responsibility whereby the research is planned and conducted so as to avoid creation or deepening of social and historic divisions or in any way disturb social harmony in community relationships.
5. Principle of ensuring privacy and confidentiality whereby to maintain privacy of the potential participant, her/his identity and records are kept confidential and access is limited to only those authorized. However, under certain circumstances (suicidal ideation, homicidal tendency, HIV positive status, when required by court of law etc.) privacy of the information can be breached in consultation with the EC for valid scientific or legal reasons as the right to life of an individual supersedes the right to privacy of the research participant.
6. Principle of risk minimization whereby due care is taken by all stakeholders (including but not limited to researchers, ECs, sponsors, regulators) at all stages of the research to ensure that the risks are minimized and appropriate care and compensation is given if any harm occurs.
7. Principle of professional competence whereby the research is planned, conducted, evaluated and monitored throughout by persons who are competent and have the appropriate and relevant qualification, experience and/or training.
8. Principle of maximization of benefit whereby due care is taken to design and conduct the research in such a way as to directly or indirectly maximize the benefits to the research participants and/or to the society.
9. Principle of institutional arrangements whereby institutions where the research is being conducted, have policies for appropriate research governance and take the responsibility to facilitate research by providing required infrastructure, manpower, funds and training opportunities.
10. Principle of transparency and accountability whereby the research plan and outcomes emanating from the research are brought into the public domain through registries, reports and scientific and other publications while safeguarding the right to privacy of the participants. Stakeholders involved in research should disclose any existing conflict of interest and manage it appropriately. The research should be conducted in a fair, honest, impartial and transparent manner to guarantee accountability. Related records, data and notes should be retained for the required period for possible external scrutiny/audit.

11. Principle of totality of responsibility whereby all stakeholders involved in research are responsible for their actions. The professional, social and moral responsibilities compliant with ethical guidelines and related regulations are binding on all stakeholders directly or indirectly.
12. Principle of environmental protection whereby researchers are accountable for ensuring protection of the environment and resources at all stages of the research, in compliance with existing guidelines and regulations<sup>6</sup>.

Homoeopathy<sup>7</sup>, compared to other medical systems, is of recent origin, dating about 200 years back. Dr. Christian Friedrich Samuel Hahnemann, Founder of Homoeopathy, was a great scholar, linguist and a reputed German physician. He was dissatisfied with the state of medical practice at that time and took to experimentation in Chemistry and translation of scientific literature. On the whole, the homoeopathic treatment and researches address all the ethical issues concerning its patients.

The actual situation is, however, different from what critics seem to project. As has been pointed out in many rejoinders to such arguments<sup>8,9,10,11</sup>. Homoeopathy is one system of medicine that has offered most harmless treatments to mankind<sup>12</sup>. Several clinically recognized effects of homoeopathy which has led to a following of 200 million worldwide<sup>11</sup>, but also that up to the end of 2011, 163 randomized controlled trials (RCTs) comparing homoeopathy with placebo or conventional medicine

have been published in peer-reviewed journals. In terms of statistically significant results, 78 of these were able to draw firm conclusions: 67 were positive for Homoeopathy and 11 were negative<sup>13</sup>.

The existing researches indicate that Homoeopathy is not only plausible, but constitutes one of the frontiers of medical science, and more specifically of complexity science, biophysics, and nano pharmacology<sup>14</sup>. Further, the expenditure being incurred on Homoeopathy by the government or patients for the purpose of treatment, is much lesser than the total portion of the budget that is spent on public or individual healthcare, respectively, as also supported by many analyses<sup>15</sup>. In fact, Homoeopathy is one of the most cost-effective treatment options available today. In contrast, many a time, a patient refers to Homoeopathy after the conventional treatment has failed to relieve.

## Conclusion

It is clearly evident that Homoeopathy is the system of medicine which provides safe, cost-effective and holistic treatment to its patients. Also, quite like the practitioners and researchers of other therapies, homeopathic professionals ardently adhere to the ethical issues related to their patients or other subjects while carrying out a treatment or research. However, to make the medical stream more ethical as a whole, it is imperative that various therapies work together in an integrated fashion, so that the health and cost benefits to the patients are maximised and ill effects minimised. In all such interactions the well-being of patients should be the primary consideration<sup>3</sup>

1 Policy statement on ethical considerations involved in research on human subjects. New Delhi: Indian Council of Medical Research; 1980.

2 Bujalkova M; Hippocrates and his principles of medical ethics, Bratisl Lek Listy 2001;102(2):117-120.

3 World Medical Association; Medical Ethics Manual; 2nd edition 2009; pp9.

4 Stone J., An ethical framework for Complementary & Alternative therapists; Routledge 2002.

5 World Medical Association, 3rd Edition, Chapter Five, Ethics And Medical Research, pg.104.

6 National Ethical Guidelines for Biomedical and Health Research Involving Human Participants. Statement of General Principles, Section I, pg.3&4.

7 Homoeopathy, Science of Gentle Healing 2015, Chapter 1, pg. 1.

8 Milgrom L1, Chatfield K; Is homoeopathy really 'morally and ethically unacceptable'? A critique of pure scientism; Bioethics. 2012 Nov; 26(9):501-3.

9 Eames S., Darby P, Homoeopathy and its ethical use in dentistry; Br Dent J.2011 Apr 9; 210(7):299-301.

10 Sebastian I. Homoeopathy and extraordinary claims- a response to Smith's utilitarian argument; Bioethics. 2012 Nov;26(9):504-5.

11 Bellavite P; On the plausibility of homoeopathic 'similitude'; Bioethics; 2012 Nov;26(9):506-7.

12 Bornhott G, Matthiessen PF. Homoeopathy in healthcare- effectiveness, appropriateness, safety, costs. Berlin: Springer; 2011.

13 British Homoeopathic Association; The research evidence Base for Homoeopathy. [http://www.british-homeopathic.org/export/sites/bha\\_site/research/evidencesummary.pdf](http://www.british-homeopathic.org/export/sites/bha_site/research/evidencesummary.pdf); Accessed on June 16, 2014.

14 Iris R Bell; Mary Koithan. BMC Complement Altern Med. 2012; 12: 191.

15 Viksveen P1, Dymitr Z, Simoens S.; Economic evaluations of Homoeopathy: A review; Eur J Health Econ.2014 Mar; 15(2):157-74

## Chapter-6

# Meta-Analysis and Systematic Reviews

Renu Mittal<sup>1</sup>, Divya Taneja<sup>1</sup>, Divya Bansal<sup>2</sup>, Neha Kalra<sup>3</sup>, Anjula Narang<sup>4</sup>, Komal Sharma<sup>5</sup>, Sonal<sup>6</sup>

1. Research Officers (H)

2,3,4,5 Senior Research Fellows | 6. Junior Research Fellow

Central Council for Research in Homoeopathy, Ministry of AYUSH, Govt. of India, New Delhi, India

In last 25 years, an increasing number of meta-analysis and systematic reviews have been conducted. These studies are either disease specific or medicine specific or take up homoeopathy as a whole. Eighteen Meta-analyses, which pooled the heterogeneous data from all available studies with homeopathic interventions, have been conducted since 1991 (**Table 1**). This pooling of data from different treatment options and varied conditions is, however, difficult to interpret. From a clinical point of view, meta-analyses are warranted only if the same clinical outcome is being measured. Thus, over the past years, meta-analyses on individual disease conditions are conducted with an increasing number of disease focussed homoeopathic intervention studies. Some of these with favourable results for homeopathic interventions include post-operative ileus, vertigo, fibromyalgia, allergic rhinitis and childhood diarrhoea (**Table 2**).

Considering that different homoeopathic treatment strategies are adopted, specific interventions of the studies cannot necessarily be analysed jointly, making systematic reviews a better option. These systematic reviews have been conducted to identify study designs, research evidence, quality of trials, medicines used, dosages, etc. (**Table 1**) Comprehensive systematic reviews on specific conditions have been investigated; depression, dementia, anxiety disorders, Attention deficit hyperactive disorder, osteoarthritis, bronchial asthma, otitis media, upper respiratory tract infections, pregnancy, headache & migraine and fields such as paediatrics, dermatology and psychiatry (**Table 2**), as also on basic research and veterinary studies

with homeopathic interventions (**Table 3**).

The statistical approach of meta-analysis has led the researchers and practitioners differentiate between “types” of Homoeopathy and modal validity of Homoeopathy<sup>1</sup> for identification of approaches which would fall into individualized (classical) and non-classical Homoeopathy. These steps may make distinctions between the various homeopathic approaches and their value as a therapeutic strategy, allowing studies being pooled together to have some degree of homogeneity in the treatment approach other than being labelled as “Homoeopathy trials” only <sup>2</sup>.

Systematic review of homeopathic pathogenetic trials prompted enhancement of quality of studies and development of guidelines for conducting drug proving on international platforms. Translation of meta-analysis and systematic reviews for enhancing practice has however been limited and needs to be given more impetus. Over the years in homoeopathy the no. of meta-analysis being conducted have decreased and replaced by disease based systematic reviews (**Figure 1**).

We suggest that future meta-analyses should focus on specific diseases, discounting the different treatment approaches of Homoeopathy. Model validity and quality of trials included in the meta-analysis and systematic reviews is another area of consideration. Studies on classical approaches and individualized medicinal approach need to be considered separately from studies on combination medicine products.

**Table 1: LIST OF METAANALYSES AND SYSTEMATIC REVIEWS IN HOMOEOPATHY(GENERAL)**

S no.	Author	Year	Title	Journal	Area of evaluation
<b>META-ANALYSIS IN HOMOEOPATHY GENERAL</b>					
1.	Kleijnen J, Knipschild Peter Riet	1991	Clinical trials of Homoeopathy	British Medical Journal 1991;302:316-323	Types of clinical trial
2.	Linde K e.a.	1997	Are the clinical effects of Homoeopathy placebo effects? A meta- analysis of placebo-controlled trial.	Lancet1997;350:834-43	Homoeopathy as placebo effect
3.	Egger M, Smith GD, Schneider M, Minder C.	1997	Bias in meta-analysis detected by a simple, graphical test	Br Med J, 1997, 315, 629-634.	Bias in meta analysis
4.	Egger M, Smith GD, Phillips AN..	1997	Meta analysis: principles and procedures	Br Med J, 1997, 315, 1533-1537.	Principle & procedure
5.	Linde K, MelchartD..	1998	Randomized controlled trials of individualized Homoeopathy: a state-of-the art review	JAlter Complement Med1998;4:371-88.	RCT of individualised homeopathic treatment
6.	K. Linde, W.B. Jonas et al	1999	Impact of study quality on outcome in placebo-controlled trials of Homoeopathy	J Clin Epidemiol, 52 (1999), pp. 631-636	Impact of Study quality in clinical trials
7.	Tang J, Liu JL..J Clin	2000	Misleading funnel plot for detection of bias in meta-analysis	J Clin Epidemiol . 2000 May;53(5):477-84.	Bias (misleading funnel plot) in meta-analysis
8.	Cucherat M, Haugh MC, Gooch M, Boissel JP	2003	Evidence of clinical efficacy of Homoeopathy. A meta-analysis of clinical trials. HMRAG. Homoeopathic Medicines Research Advisory Group	EurJClinPharmacol; 2000 Apr;56(1):27-33	Clinical efficacy of homoeopathy
9.	Shang A, Huwiler-Müntener K, Nartey L, Jüni P, DörigS, Sterne JA, Pewsner D, Egger M.	2005	Are the clinical effects of homoeopathy placebo effects? Comparative study of placebo-controlled trials of homoeopathy and allopathy.	Lancet. 2005 Aug 27-Sep 2; 366 (9487) :726-32	Homoeopathy placebo effects
10.	Rutten ALB, StolperCF..	2005	The meta-analysis of Homoeopathy: the importance of post-publication data	Homoeopathy 2008;97:169-177	Post publication data
11.	FrassM, Schuster E, Muchitschl, Duncan J, GeirW, KozelG, Kastinger Mayr C, Felleitner AE, Reiter C, Endler C, Oberbaum M. et al	2006	Asymmetry in Lancet meta-analysis	Homoeopathy 2006;95:52-3	General
12.	Robert G. Hahna,b	2013	Homoeopathy: Meta-Analyses of Pooled Clinical Data	ForschKomplementmed 2013;20:376–381	Pooled Clinical Data
13.	Mathie et al	2014	Randomised placebo-controlled trials of individualised homeopathic treatment: systematic review and meta-analysis	Systematic Reviews 2014, 3:142	RCT of individualized homeopathic treatment
14.	SchweitzerMC, ZoboliE L.	2014	Role of complementary therapies in the understanding of primary health care professionals: a systematic review.	Rev Esc Enferm USP. 2014;48	Primary health care professionals

S no.	Author	Year	Title	Journal	Area of evaluation
15.	StubT, Musial F, KristoffersenAA, AlrækT, LiuJ.	2016	Adverse effects of Homoeopathy, what do we know? A systematic review and meta-analysis of randomized controlled trials	Complement TherMed. 2016;26:146-63	Adverse effects of Homoeopathy
16.	Mathie RT, Ramparsad N, Legg LA, Clausen J, Moss S, Davidson JR, MessowCM, McConnachie	2017	Randomised, double-blind, placebo-controlled trials of non-individualizedhomeopathic treatment: systematic review and meta-analysis	Syst. Rev.Mar 24;6(1):63.	RCT on non-individualized homeopathic treatment
17.	VithoulkasG	2017.	Seriousmistakesinmeta-analysisofhomeopathicresearch. Jan-Mar;10(1):47-49	JMedLife2017	Mistakes in meta-analysis of homeopathic research
18.	Mathie RT, Ulbrich-Zürni S, Viksveen P, Roberts ER, Baitson ES, Legg LA, Davidson JRT	2018	Systematic Review and Meta-Analysis of Randomised, Other-than-Placebo Controlled, Trials of Individualized Homoeopathic treatment.	Homoeopathy 2018	Other-than-Placebo Controlled, Trials of Individualized Homoeopathic Treatment.

#### SYSTEMATIC REVIEWS GENERAL

S no.	Author	Year	Title	Journal	Condition
1.	Wayne B Jonas , Rachel L Anderson , Cindy C Crawford , John S Lyons	2001	A systematic review of the quality of homeopathic clinical trials	BMC Complementary and Alternative Medicine 2001	Quality of homeopathic clinical trials
2.	Klaus Linde, Maria Hondras, Andrew Vickers, Gerben ter Riet & Dieter Melchart	2001	Systematic reviews of complementary therapies – an annotated bibliography. Part 3: Homoeopathy	BMC Complementary and Alternative Medicine Vol.1(4): 2001	Complementary therapy and homoeopathy
3.	E. Ernst	2002	A systematic review of systematic reviews of Homoeopathy	British journal of Clinical pharmacology, 17 December 2002	Systematic review
4.	Linde K. ter Riet G. · Hondras M. · Melchart D. · Willich S.N.	2003	Characteristics and Quality of Systematic Reviews of Acupuncture, Herbal Medicines, and Homoeopathy	ForschKomplementärmed Klass Naturheilkd2003;10:88–94	Quality of Systematic Reviews
5.	SzetaAL, RollwagenF, JonasWB..	2004	Rapid induction of protective tolerancetopotential terrorist agents: a systematic review of low- and ultra-low dose research	Homoeopathy 2004;93:173-178.	Low- and ultra-low dose research
6.	Timothy Caulfield & Suzann De Bow	2005	A systematic review of how Homoeopathy is represented in conventional and CAM peer reviewed journals	BMC Complementary and Alternative Medicine. Vol 5,12.2005	Homoeopathy in CAM
7.	Dantas F, Fisher P, Walach H, Wieland F, Rastogi DP, Teixeira H, Koster D, Jansen JP, Eizayaga J, Alvarez ME, MarimM, Belon P, Weckx LL.	2006	A systematic review of the quality of homeopathic pathogenetic trials published from 1945 to 1995.	Homoeopathy. 2007 Jan;96(1):4-16	Homoeopathic Pathogenetic Trial

S no.	Author	Year	Title	Journal	Condition
8.	Witt CM <sup>1</sup> , Bluth M, Albrecht H, Weissshuhn TE, Baumgartner S, Willich SN.	2007	The in-vitro evidence for an effect of high homeopathic potencies--a systematic review of the literature	Complement Ther Med. 2007 Jun;15(2):128-38.	Preclinical evidence
9.	Edzard Ernst	2010	Systematic Review- Homoeopathy: what does the "best" evidence tell us?	MJA 2010; vol. 192: 458–460	Evidence in Homoeopathy
10.	Katy L.CooperPhilipE. HarrisClareReltonKateJ. Thomas <sup>a</sup>	2013	Prevalence of visits to five types of complementary and alternative medicine practitioners by the general population: A systematic review	Complementary Therapies in Clinical Practice Volume 19, Issue 4, November 2013, Pages 214-220	Prevalence of visits to five types of complementary and alternative medicine practitioners
11.	Italia S, WolfenstetterSB, TeunerCM.	2014	Patterns of complementary and alternative medicine (CAM) use in children: a systematic review.	Eur J Pediatr. 2014 Nov;173(11):1413-28	Patterns of complementary and alternative medicine
12.	ViksveenP, DymitrZ, SimoensS..	2014	Economic evaluations of Homoeopathy: a review	Eur J Health Econ. 2014	Economic evaluation
13.	EndlerPC, BellaviteP,BonaminL, JägerT, MazonS..	2015	Replications of fundamental research models in ultra highdilutions1994 and 2015 - update on a bibliometric study	Homoeopathy.2015	Ultra highdilutions
14.	Relton C, Cooper K, Viksveen P, Fibert P, Thomas K.	2017	Prevalence of Homoeopathy use by the general population worldwide: a systematic review	Homoeopathy. 2017 May;106(2):69-78.	Prevalence of Homoeopathy use in general population
15.	Alison Fixsen,	2018	Homoeopathy in the Age of Antimicrobial Resistance: Is It a Viable Treatment for Upper Respiratory Tract Infections?	Homoeopathy 2018; 107(2): 99-114p.	Anti-microbial Resistance:

**Table 2: META-ANALYSIS & SYSTEMATIC REVIEW IN HOMOEOPATHY (DISEASE SPECIFIC)**

S.no	Author	Year	Title	Journal	Condition
<b>META-ANALYSIS IN HOMOEOPATHY DISEASE SPECIFIC</b>					
1.	Wiesenauer M, Lüdtke R.	1996	A meta-analysis of the homeopathic treatment of pollinosiswithGalphimiaglauca	Forschende Komplementärmedizin und Klassische Naturheilkunde, 1996; 3: 230–236.	Pollinosis
2.	Barnes J, Resch K-L, Ernst E. Journal of Clinical	1997	Homoeopathy for postoperative ileus? A meta- analysis.	Gastroenterology, 1997; 25: 628–633.	Post-operative ileus
3.	Jacobs J, Jonas WB, Jimenez-Perez M, Crothers D..	2003	Homoeopathy for childhood diarrhea: combined results and metaanalysis from three randomized, controlled clinical trials	Pediatric Infectious Disease Journal2003 Mar;22(3):229-34.	Childhood diarrhoea
4.	Schneider B, Klein P, Weiser M.	2005	Treatment of vertigo with a homeopathic complex remedy compared with usual treatments: a meta-analysis of clinical trials.	Arzneimittelforschung, 2005; 55: 23–29.	Vertigo
5.	Boehm K, RaakC, Cramer H, Lauche R,OstermannT.	2014	Homoeopathy in the treatment of fibromyalgia--a comprehensive literature-review and meta-analysis	ComplemetTher.Med.	Fibromyalgia

S.no	Author	Year	Title	Journal	Condition
<b>SYSTEMATIC REVIEWS DISEASE SPECIFIC</b>					
1.	Klaus KL Linde, A Jobst K	1998	Homoeopathy for chronic asthma	Cochrane Database of Systematic Reviews - Intervention Version published: 21 Oct.1998	Asthma
2.	Ernst E, Barnes	1998	Are homoeopathic remedies effective for delayed-onset muscle soreness?— A systematic review of Placebo-controlled trials	J.. Perfusion (Nürnberg), 1998; 11: 4–8	Muscle soreness
3.	Ernst E, Pittler MH.	1998	Efficacy of homeopathic arnica: a systematic review of placebo-controlled clinical trials	Arch Surg. 1998; 133(11):1187-1190.	Arnica
4.	Ernst E.	1999	Homoeopathic prophylaxis of headaches and migraine? A systematic review,	Journal of Pain and Symptom Management 1999; 18: 353–357.	Headaches and migraine
5.	Long L, Ernst E.	2001	Homoeopathic remedies for the treatment of osteoarthritis: a systematic review	British Homoeopathic Journal, 2001; 90: 37–43.	Osteoarthritis
6.	Robert W McCarney, James Warner, Peter Fisher, Robbert van Haselen	2003	Homoeopathy for dementia- Cochrane Systematic Review - Intervention	Cochrane Database of Systematic Reviews	Dementia
7.	Caroline A Smith	2003	Homoeopathy for induction of labor	Cochrane Systematic Review -Intervention Version published: 20 October 2003	Induction of labor
8.	Owen JM, Green BN	2004	Homoeopathic treatment of headaches: A systematic review of the literature.	Journal of Chiropractic Medicine, 2004; 3: 45–52	Headache
9.	Mc Carney RW, Lasserson TJ, Linde K, Brinkhaus B.	2004	An overview of two Cochrane systematic reviews of complementary treatments for chronic asthma: acupuncture and Homoeopathy.	Respiratory Medicine:Vol. 98 (8) August. 2004, 687-696	Chronic Asthma
10.	L Spiegelblatt, <u>Canadian Paediatric society, Community Paediatrics Committee</u>	2005	Homoeopathy in the paediatric population	Pediatrics& Child Health, Volume 10(3), March. 2005, 173–177	Paediatrics
11.	Pilkington K, Kirkwood G, Rampes H, et al.	2005	Homoeopathy for depression: a systematic review of the research evidence	Homoeopathy, 2005; 94: 153–163	Depression
12.	Milazzo S, Russell N, Ernst E.	2006	Efficacy of homeopathic therapy in cancer treatment.	European Journal of Cancer, 2006; 42: 282–289.	Cancer
13.	Pilkington K, Kirkwood G, Rampes H, et al.	2006	Homoeopathy for anxiety and anxiety disorders: A systematic review of the research	Homoeopathy, 2006; 95: 151–162.	Anxiety disorder
14.	<u>Giovanni Passalacqua</u> , <u>Philippe J Bousquet</u> , <u>Kai-Hakon Carlsen</u> , <u>James Kemp</u> , <u>Richard F Lockety</u> , <u>Bodo Niggemann</u> , Ruby Pawankar, David Price, Jean Bousquet	2006	ARIA update: I—Systematic review of complementary and alternative medicine for rhinitis and asthma	Journal of Allergy and Clinical Immunology Vol.11(5), May.2006, 1054-1062	Rhinitis and asthma

S.no	Author	Year	Title	Journal	Condition
15.	Morag Heirs, Mike Emmans Dean	2007	Homoeopathy for attention deficit/hyperactivity disorder or hyperkinetic disorder	Cochrane Systematic Review – Intervention Version published: 17 October 2007	Attention deficit hyperactivity disorder
16.	Altunç U, Pittler MH, Ernst E.	2007	Homoeopathy for childhood and adolescence ailments: systematic review of randomized clinical trials	Mayo Clinic Proceedings, 2007; 82: 69–75.	Childhood and adolescence ailments
17.	Andres Munar, Oscar A Gamboa, Nathalia I Ortiz	2007	Homoeopathy for osteoarthritis	Cochrane Systematic Review - Intervention - Protocol Version published: 24 January 2007	Osteoarthritis
18.	FrancescaBorrell, EdzardErns	2008	Black cohosh ( <i>Cimicifuga racemosa</i> ) for menopausal symptoms: A systematic review of its efficacy	Pharmacological Research Volume 58, Issue 1\, July 2008, Pages 8-14	Menopausal symptoms
19.	Kassab S, Cummings M, Berkovitz S, et al.	2009	Homoeopathic medicines for adverse effects of cancer treatments (Cochrane Review).	Cochrane Database of Systematic Reviews, 15th April 2009	Adverse effects of cancer treatments
20.	Perry R, Terry R, Ernst E.	2010	A systematic review of Homoeopathy for the treatment of fibromyalgia.	Clinical Rheumatology, 2010; 29:457–464.	Fibromyalgia.
21.	Cooper KL, Relton C. e.	2010	Homoeopathy for: A systematic review of research evidence	Sleep Medicine Reviews 2010; 14: 329–337.	Insomnia
22.	Ernst E.	2011	Homoeopathy for and sleep-related disorders: A systematic review of randomised controlled trials	Focus on Alternative and Comple-mentary Therapies, 2011; 16: 195–199	Insomnia and sleep related disorders
23.	Michelle Foisy, Katrina Williams	2011	The Cochrane Library and Non-Pharmacological Treatments for Attention Deficit Hyperactivity Disorder in Children and Adolescents: An Overview of Reviews	Evidence-Based Child Health	Attention Deficit Hyperactivity Disorder in Children and Adolescents
24.	Davidson JR, Crawford C, Ives A, Jonas WB	2011	Homoeopathic treatments in psychiatry: a systematic review of randomized placebo-controlled studies	Journal of Clinical Psychiatry, 72: 795–805.	Psychiatry
25.	Ernst E.	2011	Homoeopathic Galphimiaglauca for hay fever: A systematic review of randomised clinical trials and a critique of a published meta-analysis	Focus on Alternative and Complementary Therapies, 2011; 16: 200–203.	Hay fever
26.	Simonart T, Kabagabo C, De Maertelaer V	2011	Homoeopathic remedies in dermatology: a systematic review of controlled clinical trials	Br J Dermatol. 2011 Oct;165(4):897-905	Dermatology
27.	TerjeAlraek, Myeong Soo Lee, Tae-Young Choi ,Huijuan Cao & Jianping Liu	2011	Complementary and alternative medicine for patients with: A systematic review	BMC Complementary and Alternative Medicine Volume 11,; 87 (2011)	Chronic fatigue syndrome
28.	Ernst E.	2012	Homoeopathy for eczema: a systematic review of controlled clinical trials.	Br J Dermatol. 2012 Jun;166 (6):1170-2.	Eczema
29.	Raak, Büssing A, Gassmann G, Boehm K, Ostermann T	2012	A systematic review and meta-analysis on the use of <i>Hypericum perforatum</i> (St. John's Wort) for pain conditions in dental practice	Homoeopathy 2012; 101(04): 204-210	Pain conditions in dental practice
30.	Emily J Peckham, E Andrea Nelson Joanne Greenhalgh, Katy Cooper E Rachel Roberts, Anurag Agrawal	2013	Homoeopathy for treatment of irritable bowel syndrome	Cochrane Systematic Review Intervention Version published: 13 November 2013	Irritable bowel syndrome

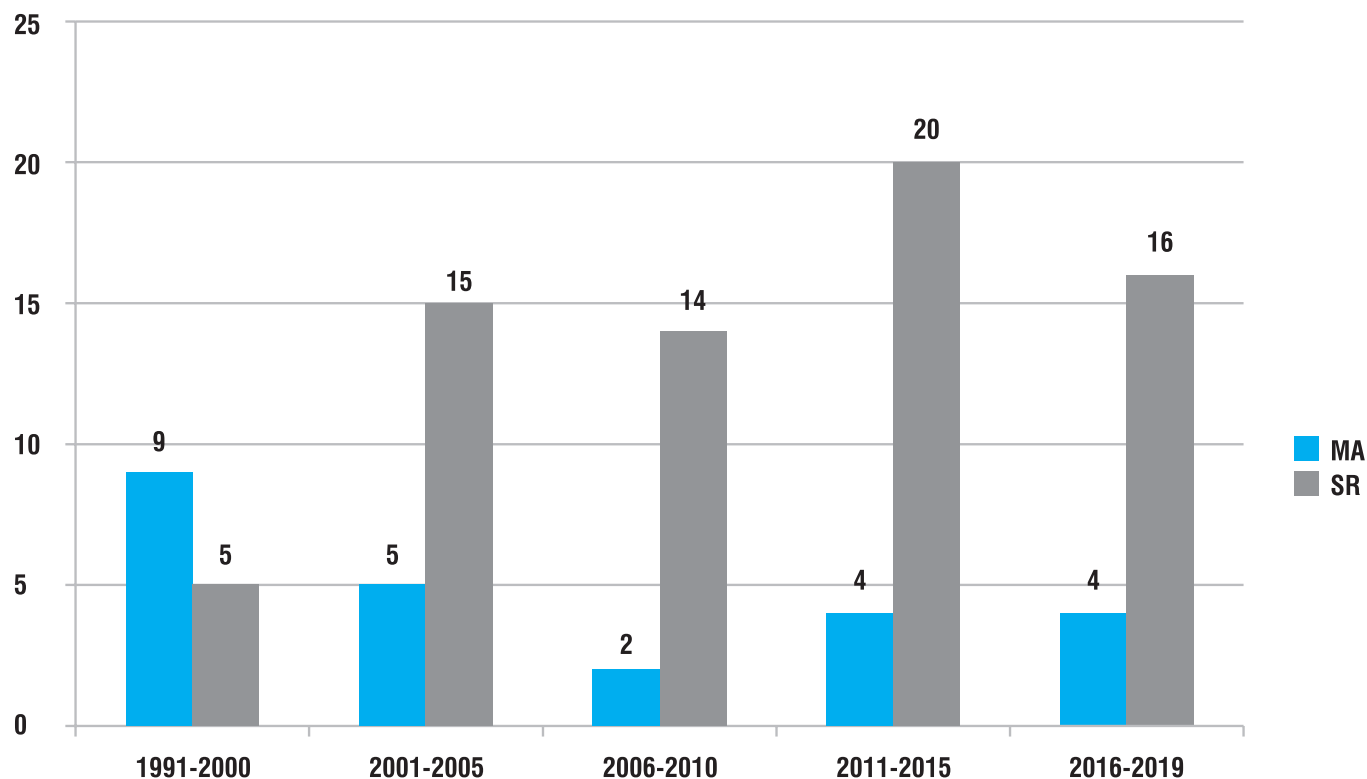
S.no	Author	Year	Title	Journal	Condition
31.	M Koley, S Saha, R Medhurst	2013	Clinical trials of homoeopathy in osteoarthritis: a systematic review	OA Alternative Medicine 2013 Nov 20;1(3):24	Osteoarthritis
32.	ShaddelF, GhaziradM, Bryant M.	2014	What is the best available evidence for using Homoeopathy in patients with intellectual disabilities	Iran J Pediatr. 2014;24(4):339-44.	Somatiform disorders
33.	Banerjee K, CostelloeC, MathieRT, HowickJ..	2014	Homoeopathy for allergic rhinitis: protocol for a systematic review	Syst Rev 3, 59 (2014)	Allergic rhinitis
34.	Yanju Bao, Xiangying Kong, Liping Yang, Rui Liu, Zhan Shi, Weidong Li BaojinHua and Wei Hou	2014	Complementary and Alternative Medicine for Cancer Pain: An Overview of Systematic Reviews	Evidence-Based Complementary and Alternative Medicine Volume 2014	Cancer Pain
35.	Robert T Mathie, Joyce Frye, Peter Fisher	2015	Homoeopathic Oscillocochinum® for preventing and treating influenza and influenza-like illness	Cochrane Systematic Review -Intervention Version published: 28 January 2015	Influenza-like illness
36.	Catalá-López F, Hutton B, Núñez-BeltránA, Mayhew AD, Page MJ, RidaoM, TobiasA, CataláMA, Tabarés-SeisdedosR, Moher D.	2015	The pharmacological and non-pharmacological treatment of attention deficit hyperactivity disorder in children and adolescents: protocol	PLoS One. Volume 12(7); 2017	Attention deficit hyperactivity disorder-protocol
37.	PosadzkiP, Al Bedah A M N, Khalil M M K, Al QaedM S, Lee MS, Ernst E, Car J.	2015	Complementary and alternative medicine or the prevention and treatment of migraine/ headache: an overview of systematic reviews	Focus on Alternative and Complementary Therapies, Vol.20(2):58-73	Migraine / headache
38.	Marom T, MarchisioP, Tamir SO, TorrettaS, GavrielH, Esposito S..	2016	Complementary and Alternative Medicine Treatment Options for Otitis Media: ASystematic Review	Medicine (Baltimore). 2016 Feb; 95(6)	Otitis Media
39.	Ho D, Jagdeo J, Waldorf HA.	2016	Is There a Role for Arnica and Bromelain in Prevention of Post-Procedure Ecchymosis or Edema? A Systematic Review of the Literature.	Dermatol Surg. 2016 Apr;42(4):445-63	Post-Procedure Ecchymosis or Edema
40.	HaarithaBoltman-Binkowski	2016	A systematic review: Are herbal and homeopathic remedies used during pregnancy safe?	Curationis 2016Apr 13;39(1):1514	Homoeopathic medicine in Pregnancy
41.	A. Unlu et al.	2017	Homoeopathy and cancer	Journal of Oncological Sciences 3 (2017) 77e80	Cancer
42.	Petter Viksveen, PhilippaFibert, Clare Relton,	2018	Homoeopathy in the treatment of depression	European Journal of Integrative Medicine Volume 22 September 2018	Depression
43.	Hawke K, van Driel ML, Buffington BJ, McGuire TM King D.	2018	Homoeopathic medicinal products for preventing and treating acute respiratory tract infections in children	Cochrane Database Syst Rev. 2018 Sep 9;9:CD005974. doi: 10.1002/14651858.CD005974.pub5.	Acute respiratory tract infections
44.	Monami M, Silverii A, Mannucci E	2018	Alternative treatment or alternative to treatment? A systematic review of randomized trials on homeopathic preparations for diabetes and obesity.	Acta Diabetol. 2019 Feb;56(2):241-243.	diabetes and obesity
45.	Jin AJ, Chin CJ..	2018	Complementary and Alternative Medicine in Chronic Rhinosinusitis: A Systematic Review and Qualitative Analysis	Am J RhinolAllergy. 2018 Nov 28;1945892418813079	Chronic Rhinosinusitis

S.no	Author	Year	Title	Journal	Condition
46.	Alison Fixsen,	2018	Homoeopathy in the Age of Antimicrobial Resistance: Is It a Viable Treatment for Upper Respiratory Tract Infections?	Homoeopathy 2018; 107(2): 99-114p.	Anti-microbial Resistance:
47.	Qutubuddin M, Singh SM, Nayak C, Koley M, Saha S	2019	A Systematic Review of Controlled Trials of Homoeopathy in Bronchial Asthma	Complement Med Res	Bronchial Asthma
48.	Xue-hanLiu, Chun-liLu, Li-iongWang, Ya-xi Shang,Trine Stub, Agnete E. Kristoffersen, Arne Johan Norheim, Frauke Musial, Terje Alraek, Vinjar Fonnebo, Jian-ping Liu.	2019	Beneficial effectiveness and safety of homeopathic therapy for upper respiratory tract infection in children	Advances in Integrative Medicine, Volume 6, Supplement May 2019	Upper respiratory tract infection in children

**Table 3: META-ANALYSIS & SYSTEMATIC REVIEW OF VETERINARY/PLANT/BASIC RESEARCH**

S no	Author	Year	Title	Journal	Condition
<b>META-ANALYSIS</b>					
1.	MathieRT, Clausen J	2015	Veterinary Homoeopathy: meta-analysis of randomised placebo-controlled trials	Homoeopathy 2015; 104	Veterinary
<b>SYSTEMATIC REVIEWS</b>					
1.	Vickers A.J.	1999	Independent Replication of Pre-Clinical Research in Homoeopathy: A Systematic Review	ForschKomplementär med 1999;6:311 -320	Preclinical Research
2.	MathieRT, Clausen J..	2014	Veterinary Homoeopathy: systematic review of medical conditions studied by randomised placebo-controlled trials	Vet Rec. 2014;175(15):373-81	Veterinary Homoeopathy
3.	M BonaminLV, Cardoso TN, de Carvalho AC, Amaral JG..	2015	The use of animal models in homeopathic research--a review of 2010-2014 PubMed indexed papers	Homoeopathy. 2015	Animal model
4.	FrancozD, WellemansV, DupréJP, RoyJP, LabelleF, LacasseP, DufourS. Invitedreview	2017	Asystematicreviewandqualitative analysisoftreatmentsotherthanconventional antimicrobialsfor clinicalmastitis indairy cows.	JDairy Sci. 2017 Oct; 100(10):7751-7770.	Mastitis in cows
5.	ÜckerAnne kathrin, Baumgartner Stephan, Sokol Anezkaetal	2018	Systematic Review of Plant-Based HomoeopathicBasicResearch- An Update	Homoeopathy 2018	Plant based Basic research
6.	Kokornaczyk MO, ScherrC, Bodrova NB, BaumgartnerS. Phase	2018	Transition-Induced Pattern Formation Applied to Basic Research on Homoeopathy: A Systematic Review	Homoeopathy2018	Basic research

**Figure 1 : META-ANALYSIS & SYSTEMATIC REVIEWS [YEAR WISE]**



**Table 4: AREA OF INTEREST IN META-ANALYSIS**

Category	No.
Comprehensive reviews	18
<b>Disease Specific (05)</b>	
Fibromyalgia	01
Post-operative ileus	01
Pollinosis	01
Vertigo	01
Diarrhoea	01
Veterinary Homoeopathy	01

**Table 5: AREA OF INTEREST IN SYSTEMATIC REVIEW**

Category	No.
Comprehensive	15
<b>Disease Specific (54)</b>	
Attention Deficit Hyperactivity Disorder	3

Category	No.
Antimicrobial resistance	1
Anxiety disorders	1
Arnica	1

Category	No.
Basic research	2
Bronchial Asthma	3
Cancer	4
Childhood and Adolescent conditions	1
Chronic fatigue syndrome	1
Dementia	1
Dental pain	1
Depression	2
Dermatology	1
Diabetes & obesity	1
Eczema	1
Fibromyalgia	1
Hay fever	1
Headache	1
Headache & Migraine	2
Influenza Like illness	1
Insomnia	2
Irritable bowel syndrome	1

Category	No.
Menopause	1
Muscular soreness	1
Osteoarthritis	3
Otitis media	1
Paediatrics	1
Plant based research	1
Post procedural ecchymosis and oedema	1
Pregnancy	2
Psychiatry disorders	1
Rhinitis	1
Rhinitis and Asthma	1
Rhinosinusitis	1
Somatoform disorders	1
Upper Respiratory Tract infections	2
Veterinary Homoeopathy	3
Total	54
Grand total	69

1 Mathie R.T., Roniger H., Van Wassenhoven M. et al. Method for appraising model validity of randomised controlled trials of homeopathic treatment: multi-rater concordance study. BMC Med Res Methodol 2012; 12: 49)

2 Mathur M. Gupta VK. NHMRC report on Homoeopathy; mixing apples with oranges. Homoeopathy 2016 Feb;105(1):126-7. doi: 10.1016/j.homp.2015.09.001. Epub 2015 Nov 6.)

## Chapter-7

# Clinical Research

**Roja Varanasi<sup>1</sup>, Sana Parveen<sup>2</sup>**

1. Research Officer (H) | 2. Senior Research Fellow (H)

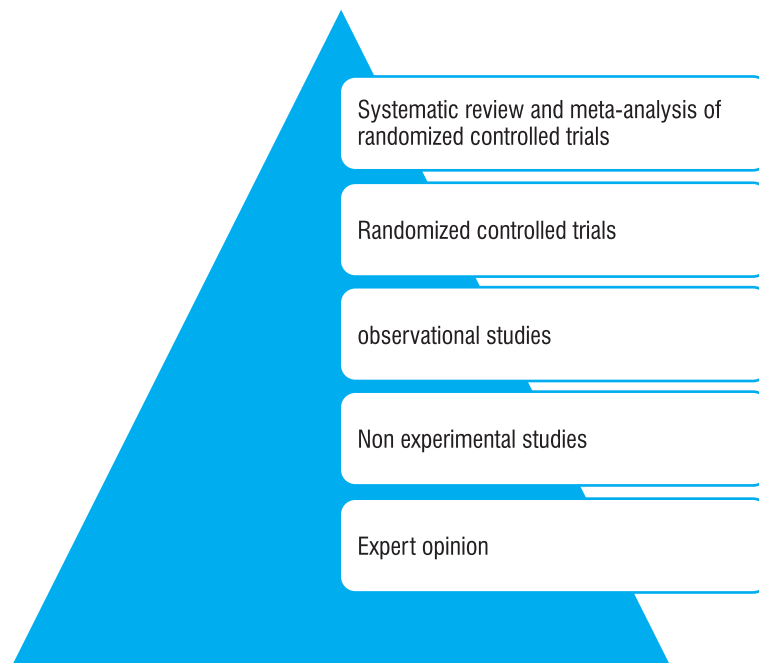
Central Council for Research in Homoeopathy, Ministry of AYUSH, Govt. of India, New Delhi, India

The spectrum of evidence in clinical research lies from anecdotal evidence in the form of expert opinions, case reports to systematic reviews and meta-analysis. Most of the published papers includes observational studies and randomized controlled trials which occupies broadly within the spectrum with case reports/series and reviews at the extreme.

A pyramid expresses the idea of hierarchy of clinical medical evidence as shown in figure 1. Systematic reviews and meta-analyses have been placed at the top of this

pyramid for several good reasons but they are treated as lens through which evidence is seen instead of part of generating evidence clinically which is confined to RCT, observational studies, case series and case reports.

The viability of homoeopathy depends not only in basic or fundamental research explaining the plausibility of its action but also its clinical output through clinical practice and clinical research. WHO<sup>1</sup>as defined the level of evidence broadly into three categories:



**FIGURE 1: HIERARCHY OF CLINICAL MEDICAL EVIDENCE**

Category A: Systematic reviews, Meta-analysis and Randomized controlled trials (RCT),

Category B: Observational studies and

Category C: Case reports, case series.

The various aspects of clinical research can be broadly divided into two types, viz., observational studies and experimental studies. The basic difference between observational and experimental studies is that the earlier studies on the effects of a risk factor, diagnostic tests, treatments or other interventions are investigated in a natural environment without any experimental

manipulation, whereas in an experimental study, the investigator administers an intervention to patients and the effect of this intervention on the course of events is documented<sup>2</sup>.

Different types of clinical research designs are used depending on the research question. Before proceeding for overview of clinical research in homoeopathy, a quick overview of study designs is desirable. The table below reflects the broad research designs which are used carrying out homoeopathic clinical trials. Nonetheless the designs are not restrictive, and any design can be applied based on the research question.

Type	Intention	Guidelines to be Referred
Systematic reviews/ meta-analysis	Systematic reviews, as the name implies, typically involve a detailed and comprehensive plan and search strategy derived a priori, with the goal of reducing bias by identifying, appraising, and synthesizing all relevant studies on a particular topic. Often, systematic reviews include a meta-analysis component which involves using statistical techniques to synthesize the data from several studies into a single quantitative estimate or summary effect size <sup>3</sup> .	PRISMA Statement ( <a href="http://www.prisma-statement.org/">http://www.prisma-statement.org/</a> ) PRISMA -P <a href="http://prisma-statement.org/Extensions/Protocols">http://prisma-statement.org/Extensions/Protocols</a>
Randomized controlled trials	Randomized controlled clinical trials (RCTs) are the gold standard for ascertaining the efficacy and safety of a treatment. RCTs can demonstrate the superiority of a new treatment over an existing standard treatment or a placebo. In clinical research RCTs are used to answer patient-related questions, and in the development of new drugs they form the basis for regulatory authorities' decisions on approval. Alongside meta-analyses, high-quality RCTs with a low risk of systematic error (bias) provide the highest level of evidence <sup>4</sup> .	Spirit Guidelines ( <a href="https://www.spirit-statement.org/">https://www.spirit-statement.org/</a> ) CONSORT statement <a href="http://www.consort-statement.org/">http://www.consort-statement.org/</a> RedHot for Homoeopathy ( <a href="https://www.equator-network.org/reporting-guidelines/reporting-data-on-homeopathic-treatments-redhot-a-supplement-to-consort/">https://www.equator-network.org/reporting-guidelines/reporting-data-on-homeopathic-treatments-redhot-a-supplement-to-consort/</a> )
Observational (cohorts/ case control studies)	Observational studies fall under the category of analytic study designs and are further sub-classified as observational or experimental study designs. The goal of analytic studies is to identify and evaluate causes or risk factors of diseases or health-related events. The differentiating characteristic between observational and experimental study designs is that in the latter, the presence or absence of undergoing an intervention defines the groups. By contrast, in an observational study, the investigator does not intervene and rather simply "observes" and assesses the strength of the relationship between an exposure and disease variable. <sup>5</sup>	STROBE statement ( <a href="https://www.strobe-statement.org/index.php?id=strobe-home">https://www.strobe-statement.org/index.php?id=strobe-home</a> ) Observational studies in homoeopathy. ( <a href="https://www.thieme-connect.com/products/ejournals/abstract/10.1055/s-0040-1708045">https://www.thieme-connect.com/products/ejournals/abstract/10.1055/s-0040-1708045</a> )
Case series/ Case reports	Case reports and case series or case study research are descriptive studies that are prepared for illustrating novel, unusual, or atypical features identified in patients in medical practice, and they potentially generate new research questions. They are empirical inquiries or investigations of a patient or a group of patients in a natural, real-world clinical setting. <sup>6</sup>	CARE Guidelines ( <a href="http://www.equator-network.org">www.equator-network.org</a> ) Hom CASE guidelines

Homoeopathy is a subject of discussion for its therapeutic utility since its discovery in 1796. It started with experience and landed into the debate for its new method of preparation of medicine. In the whirlwind of skepticism, it still continues to be a medicine of choice of many people across the globe. Researchers from different biomedical and science discipline are trying to prove and reprove its efficacy/ effectiveness in different disease conditions through clinical research and basic research. Homoeopathy shows historical<sup>7</sup>, observational<sup>8</sup>, and randomized clinical trial<sup>9</sup> evidence of good outcomes, greater safety, patient acceptance, accessibility, and cost-savings. Homoeopathy is often used 'to treat the patient, not the disease;' strengthening host defenses and resilience rather than killing microbes or blocking pathophysiological processes<sup>10</sup>. Mathie et al<sup>11</sup> from their systematic review concluded that "*Homoeopathic medicines prescribed on individualization basis may have small specific, treatment effects*".

It is beyond doubt that homoeopathic medicines are cost effective, easily palatable to all age groups and with minimal and self-limiting adverse effects<sup>12</sup> (such as initial aggravations, late aggravations and proving symptoms). However, the clinical effects though claimed to be successful are perceived to have weak scientific evidence due to various reasons.

Homoeopathy is practiced in different ways. The main types are individualized or classical Homoeopathy, clinical Homoeopathy and isopathy. In individualized or classical Homoeopathy typically, a single homeopathic medicine is selected on the basis of the total 'symptom picture' displayed by a patient, including mental, general and constitutional features. In clinical Homoeopathy, one or more homeopathic medicines are administered for standard clinical situations or conventional diagnoses – sometimes several homeopathic medicines are combined in a fixed (complex) formulation. Isopathy is the use of homeopathic dilutions of allergens or causative infectious or toxic agents<sup>13</sup>.

Amongst the many scientific issues raised by Homoeopathy<sup>13</sup>, one is "Do homeopathic medicines have beneficial effects in ill patients that are not attributable to placebo effects?"; "Is Homoeopathy safe". This can be addressed through clinical research. We shall now briefly see the evidence generated as per the hierarchy of research pyramid.

## Systematic review /meta-analysis of Homoeopathy as a whole

As mentioned above systematic reviews and meta-analyses of randomized controlled trials (RCTs) are considered the strongest form of research evidence, sometimes referred to as type 1 evidence. A number of systematic reviews and meta-analyses of Homoeopathy as a whole or for specific conditions or of particular homeopathic medicines have been published. These are discussed in separate chapter specific to systematic review and metanalysis.

The earliest or the first meta-analysis for homoeopathy titled, "Clinical trials of homoeopathy" by Kleijnen et al<sup>14</sup> published in 1991 in BMJ, wherein 107 controlled trials in 96 published reports were searched. The results showed a positive trend regardless of the quality of the trial or the variety of Homoeopathy used. The conclusion was at the moment the evidence of clinical trials is positive but not sufficient to draw definitive conclusions because most trials are of low methodological quality and because of the unknown role of publication bias. Thereafter, Linde et al<sup>15</sup> published in 'The Lancet' included 186 placebo-controlled studies of Homoeopathy, from which data for analysis could be extracted from 89. The overall mean odds ratio for these 89 clinical trials was 2.45 (95% confidence interval, 2.05–2.93) in favour of Homoeopathy. This means that the chances that Homoeopathy would be of benefit were approximately 2–3 times greater than placebo. The main conclusion was that the results 'were not compatible with the hypothesis that the effects of homoeopathy are completely due to placebo'.

In the last two decades, the most cited and referred systematic review was by Shang et al in 2005<sup>16</sup>, published in the Lancet. This review compared 110 placebo-controlled trials of Homoeopathy and 110 trials of conventional medicine. Homoeopathy and conventional medicine showed a similar positive treatment effect overall. Twenty-one Homoeopathy trials and nine in conventional medicine were judged 'of higher quality'. From these, the results of 14 unspecified 'large trials of higher quality' (eight Homoeopathy, six conventional medicine) were analysed. The authors concluded that there was 'weak evidence for a specific effect of homoeopathic remedies, but strong evidence for specific effects of conventional interventions. This finding is compatible with the notion that the clinical effects of homoeopathy are placebo effects.' Subsequently a reconstruction of this review done by Rutten et al<sup>17</sup> has found that the negative results were mainly due to a single trial on preventing muscle soreness in 400 long-distance runners, that its results were very sensitive to the definition

of 'larger' sample sizes, and there was great heterogeneity between the trials. It concluded that the results were less definite than purported, although it did demonstrate that the quality of trials of Homoeopathy was generally higher than that of matched trials of conventional medicine.

There after Mathie et. Al <sup>11,18,19,20</sup>. conducted three major broad systematic and meta-analysis reviews showcasing homoeopathy as a whole is highlighted at table 1. These reviews shows the strengths and weakness of different ways of prescribing Homoeopathy and their comparison with different approaches.

Systematic review and meta-analysis of randomized placebo-controlled trials of individualized homeopathic treatment <sup>11</sup> (2014) wherein thirty-two eligible RCTs studied 24 different medical conditions in total concluded that medicines prescribed in individualized Homoeopathy may have small, specific treatment effects.

Systematic review and meta-analysis<sup>19</sup> of randomized, double-blind, placebo-controlled trials of non-individualized homeopathic treatment (2017), in which forty-eight different clinical conditions were represented in 75 eligible RCTs, concluded that the quality of the body of evidence is low. Trials favoring Homoeopathy, was observed for five categories: allergy and asthma (N = 10); cardiovascular (N = 2); dermatology (N = 2); ear nose and throat (N = 3); gastroenterology (N = 2).

The Systematic Review and Meta-Analysis<sup>18</sup> of randomized (Other-than-placebo controlled) trials of individualised Homoeopathic Treatment (IHT)(2018) wherein only Eleven RCTs, representing 11 different medical conditions (acute otitis media, menopausal hot flushes, irritable bowel syndrome, cancer, vulvovaginal candidiasis, malaria, asthma, fibromyalgia, glue ear, low back pain, depression) were eligible for study which concluded that due to the low quality, the small number and the heterogeneity of studies, the current data preclude a decisive conclusion about the comparative effectiveness of IHT.

Sl. No.	Type	No. of studies screened	Records assessed for eligibility	Records included in qualitative synthesis	Records included in quantitative synthesis
1.	Randomized placebo-controlled trials of individualized homeopathic treatment (2014) <sup>11</sup>	489	489	263	32
2.	Randomized, double-blind, placebo-controlled trials of non-individualized homeopathic treatment (2017) <sup>19</sup>	454	359	72	51
3.	Controlled Trials of Individualized Homoeopathy Other-than-Placebo (2018) <sup>18</sup>	466	369	11	8

## Randomized Controlled trials

A review of clinical trials in Homoeopathy reported from 1975 to 2002 found 93 studies comparing Homoeopathy with placebo or other treatment (Mathie2003). Positive effects of Homoeopathy were found in 50. The evidence favored a positive treatment effect of Homoeopathy in: allergic rhinitis, childhood diarrhoea, fibromyalgia, influenza, pain, side-effects of radio-/chemotherapy, sprains and upper respiratory tract infection. Reviewing 12 systematic reviews of Homoeopathy for specific medical conditions, Jonas et al. (2003) reached similar conclusions: Homoeopathy may be effective for allergies, childhood diarrhoea, influenza and postoperative ileus,

but not for treatment of migraine, delayed-onset muscle soreness or prevention of influenza.

Single RCTs of Homoeopathy have been conducted in clinical areas, including asthma, life-threatening sepsis and stomatitis induced by cancer chemotherapy, chronic fatigue syndrome, premenstrual syndrome, postpartum bleeding, and Arnica for various clinical conditions. Most of these have yielded positive results.

Recent studies between 2014 to 2019 have added studies to the armamentarium of Homoeopathy. Irritable

bowel syndrome, a common disorder, labor pain, BPH, Lymphatic filariasis, Acute encephalitis syndrome, Insomnia, Sleep bruxism, Induced Hot flushes in cancer patients, Depression, Cocaine craving, Premenstrual disorders, and Dysmenorrhea, cancer, URTI, UTI etc..

### Observational studies

The study on Thrombocytopenia due to dengue fever reflected a significant increase platelet count in the add on homeopathy group compared to usual care alone. A replication of this study is desirable. Chronic obstructive pulmonary disease(COPD), a common respiratory problem is of importance due to its chronic with long term follow up over 2 years have shown the sustained effects of homeopathic medicine in simple and mucopurulent bronchitis, however quasi-experimental or comparative cohort studies can be a follow up approach. Joint pain, Supportive care for cancer , atopic dermatitis, anxiety and depression, Haemorrhoids, Respiratory tract infections, Anxiety and sleep disorders .

In France, Homoeopathy is widely used by family physicians. In this cohort, 8559 patients attending 825 family physician practices were followed up over time. Within the observational period patients were exposed to treatments by homeopathic physicians, conventional physicians and physicians practicing both methods (mixed therapies). After a follow-up period, the patient groups were analyzed and subgroups were compared according to a defined disease category, e.g., upper respiratory tract infections, musculoskeletal disease, sleep-, anxiety- and depressive disorders, anxiety and depression. Accordingly, clinical outcomes and the use of medications were compared. In most EPI3 evaluations so far, the patients of homeopathic physicians, mixed therapies and conventional physicians reported similar improvements, but homeopaths used much less-conventional medications than conventional physicians. In the case of the EPI3 cohort study, it is not possible to conclude that homeopathic drugs were responsible for the outcome. There may be other reasons that explain the outcomes. For example, patients chose their physician by preference. It could simply be possible that those patients who were more skeptical about conventional medication consulted homeopathic physicians, providing a care model based on less-conventional medication<sup>2</sup>.

### Case reports/series

*Case reports/series:* Psoriasis, Mycosis fungoids, Haemangioma , Glomerulonephritis , DUB, Pediatric cancer care, Cardiac pathologies, Chronic nephrolithiasis,

Acne, post operative sore throat, Tuberculosis and related diseases, Lacrimal gland tumor , and Schizoaffective disorder, pediatric oncology, haemangioma etc.

### Adverse effects

A systematic review and meta-analysis of randomized controlled trials<sup>21</sup> demonstrated that the proportion of patients experiencing adverse effects to be similar for patients randomized to homeopathic treatment compared to patients randomized to placebo and conventional medicine. More than two third of the adverse effects were classified as grade 1 (68%) and two third were classified as grade 2 (25%) and grade 3 (6%) according to the Common Terminology Criteria for Adverse Effects. Homoeopathic aggravation was classified as grade 1 (98%) and grade 3 (2%), suggesting that homeopathic aggravations were reported to be less severe than adverse effects. Re-calculation by Mathie et al<sup>21</sup> have shown, Homoeopathy had significantly more AEs than placebo, and significantly fewer AEs than conventional medicine. Another systematic review of case reports and case series by Posadzki et al<sup>12</sup> reviewed 38 primary reports of those, 30 pertained to direct AEs of homeopathic remedies; and eight were related to AEs caused by the substitution of conventional medicine with Homoeopathy. The total number of patients who experienced AEs of Homoeopathy amounted to 1159 and concluded that Homoeopathy has the potential to harm patients and consumers in both direct and indirect ways. However, this review was criticized. On the other hand, Tournier et al<sup>22</sup> and Walach et al<sup>23</sup> criticized the review for their methodological flaw and scientific rigour.

### Conclusion

Homoeopathy has been the topic of several major reports, which have invited controversies. The above findings clearly speak and caution all the homoeopaths that more rigorous research is the need of the hour. Some systematic reviews have shown specific treatment effects different from placebo<sup>11,18 24</sup> while some did not<sup>16</sup>. Well- designed clinical trials will help to add to the existing evidence. To conduct well designed trials, model validity designed by Mathie *et al*<sup>25</sup> can be adopted which addresses six domains:(I) the rationale for the choice of the particular homeopathic intervention; (II) the homeopathic principles reflected in the intervention; (III) the extent of homeopathic practitioner input; (IV) the nature of the main outcome measure; (V) the capability of the main outcome measure to detect change; (VI) the length of follow-up to the endpoint of the study.

This will enable to reduce the risk of bias which includes five domains (selection, performance, attrition, reporting, and other). In the canopy of RCTs, many other research designs which also add to evidence of Homoeopathy are overlooked such as quasi experimental studies, cohort studies with single arm; registries for evaluating patient outcome, case series and case reports. The clinical research section includes all the research from case report to RCTs to make the interested audience sensitized for carrying research homoeopathy.

The research to be carried out in the next two decades should be cautiously planned which will effect on the long term future of Homoeopathy<sup>6</sup>.

The clinical conditions on which future studies undertaken should:

- a) Show clearly to be effective on a given conditions with other information such as:
  - Indicating type of homoeopathy
  - Compared to placebo
  - Compared to best conventional treatment
  - As adjunctive treatment
- b) On individual patients through N of 1 trial or series of N of 1 trials.
- c) Systematic reviews and meta-analyses

### Future studies should focus on

- Observational and cohort studies to determine the general effects of Homoeopathy.
  - Combined with an analysis of large sets of prognostic factors on doctors and patients, among them personality traits, measures of expectancy, hope, self-involvement, consultation process.
  - Randomized comparison studies to determine effectiveness compared with alternative treatments.
  - Quasi-experimental comparison studies in natural, self-selected groups to find out about the importance of self-selection.
  - Combined with measures of cost effectiveness and safety.
  - Replication of positive outcomes of the studies in superiority trials of Homoeopathy over placebo
- The outcomes of the studies are assessed as per the evidence level in accordance with the parameters of evidence recommended by the World Health Organization<sup>1</sup> as mentioned below ***Grading and their recommendations:***

Grade	Recommendation
A (Evidence levels quality Ia, Ib)	Requires at least one randomized controlled trial as part of the body of literature of overall good and consistency addressing the specific recommendation.
B (Evidence levels IIa, IIb, III)	Requires availability of well-conducted clinical studies but no randomized clinical trials on the topic of recommendation.
C (Evidence level IV)	Requires evidence from expert committee reports or opinions and/or clinical experience of respected authorities. Indicates absence of directly applicable studies of good quality.

## Clinical Research

Studies with different levels of published during the year 2014-2019

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
2014	Zanasi A	Pulmonary Pharmacology and Therapeutics, 2014; 27(1): 102-108.	URTI and acute bronchitis	Homoeopathic medicine for acute cough in upper respiratory tract infections and acute bronchitis: a randomized, double-blind, placebo-controlled trial	RCT	80	Eighty patients were randomized to receive placebo (n = 40) or the homeopathic syrup (n = 40). In each group cough scores decreased over time, however, after 4 and 7 days of treatment, cough severity was significantly lower in the homeopathic group than in the placebo one (p < 0.001 and p = 0.023, respectively). Sputum collected from 53 patients reduced in its viscosity significantly decreased after 4 days of treatment (p < 0.001); however, viscosity was significantly lower in the homeopathic group (p = 0.018).	A
2014	Ghosh S	Homoeopathic Links 2014;27(1): 50-55	Leiomyoma of Uterus	Treatment of Symptomatic Leiomyoma of Uterus An Open Observational Pilot Study	OBS	45	Based on a study involving 45 recruited patients with symptomatic uterine fibroids, the authors conclude that individualized Homoeopathy can be regarded as effective in this condition; however, randomised controlled trials are worth investigating.	B
2014	T Kalampokas	Clin Exp Obstet Gynecol. 2014;41(2):158-9.	Infertility	Homoeopathy for infertility treatment: a case series	case series	5	Five cases of female infertility treated successfully with the use of homeopathic treatment in a large obstetrics-gynecology Hospital in Athens.	C
2014	Poruthukaren KJ	Clinical Trial J Evid Based Complementary Altern Med. 2014 Jan;19(1):31-5.	Hypertension	Clinical evaluation of Viscum album mother tincture as an antihypertensive: a pilot study	OBS	41	The drug was administered for 12 weeks at a dosage of 10 drops 3 times a day. Using paired t test, a significant drop in blood pressure (P < .0001) and serum triglyceride (P < .0001) was observed in the treatment group. This dual effect of Viscum album shows promise in optimizing therapy for primary hypertension.	B
2014	Saha S	Journal of Integrative Medicine 2014; 12(1): 7-12		Medicine prescription practices of homeopathic undergraduate students in West Bengal, India	OBS	328	Of these, 264 (80.5%) homeopathic undergraduate students admitted of prescribing medicines independently and most (40.5%) said that they did this 2-3 times a year. The most common reasons for this were 'urgency of the problem' (35.2%), 'previous experience with same kind	B

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
							of illness' (31.8%), and 'the problem too trivial to go to a doctor' (25.8%). About 63.4% of the students thought that it was alright to independently diagnose an illness while 51.2% thought that it was alright for them to prescribe medicines to others. Common conditions encountered were fever, indigestion, and injury. Students who prescribed medicines were more likely to belong to Calcutta Homoeopathic Medical College and Hospital (odds ratio = 5.8; 95% confidence interval 2.247–14.972). Prescription by students gradually increased with academic years of homeopathic schools. Many students thought it was alright for students to diagnose and treat illnesses.	
2014	Lert F	Homoeopathy . 2014 Jan;103(1):51-7.		Characteristics of patients consulting their regular primary care physician according to their prescribing preferences for Homoeopathy and complementary medicine	OBS	6379	A total of 6379 patients (participation rate 73.1%) recruited from 804 GP practices participated in this survey. Patients attending a GP-Ho were slightly more often female with higher education than in the GP-CM group and had markedly healthier lifestyle. They did not differ greatly in their comorbidities or quality of life but exhibited large differences in their beliefs in holistic medicine and natural treatments, and in their attitude toward participating to their own care. Similar but less striking observations were made in patients of the GP-Mx group.	B
2014	Gaertner K	Complement Ther Med . 2014 Apr;22(2):320-32.	Cancer	Additive Homoeopathy in cancer patients: Retrospective survival data from a homeopathic outpatient unit at the Medical University of Vienna	OBS	538	62.8% of them were women, and nearly 20% had breast cancer. From the 53.7% (n=287) who had undergone at least three homeopathic consultations within four years, 18.7% (n=54) fulfilled inclusion criteria for survival analysis. The surveyed neoplasms were glioblastoma, lung, cholangiocellular and pancreatic carcinomas, metastasized sarcoma, and renal cell carcinoma. Median overall survival was compared to expert expectations of survival outcomes by specific cancer type and was prolonged across observed cancer entities (p<0.001).	B

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
2014	Miglani A	Homoeopathy. 2014 Jul;103(3):203-7.	Acne vulgaris	Observational study of Arctium lappa in the treatment of acne vulgaris	OBS	34	Out of 34 human subjects, 32 completed the follow-up. Statistical significant results were seen in lesion counts, GAGS and Acne-QoL score (p value <0.001).	B
2014	Chand KS	Homoeopathy 2014; 103: 97-107	Multi-drug resistant pulmonary tuberculosis	Homoeopathic treatment in addition to standard care in multi-drug resistant pulmonary tuberculosis: a randomized, double blind, placebo controlled clinical trial	RCT	120	ITT analyses revealed sputum culture conversion from positive to negative in 23 (38.3%) in SR + H; 23 (38.3%) patients in SR + P group; (p = 0.269) and 27 (55.1); 21 (42.8%), p = 0.225 as PP analyses. The mean weight gain in SR + H group was 2.4 ± 4.9 and in SR + P was 0.8 ± 4.4; [p = 0.071], reduction in ESR in SR + H was -8.7 ± 13.2; SR + P was 3.9 ± 15.4 [p = 0.068]. The mean increase in hemoglobin was by 0.6 ± 1.7 in SR + H & 0.3 ± 2.3 [p = 0.440] in SR + P group at 95% confidence interval. Statistically significant improvement was seen in CXR in 37 (61.7%) in SR + H and 20 (33.3%) patients in SR + P group (p = 0.002). Subgroup analyses of culture positive patients showed statistically significant improvement in CXR (p = 0.0005), weight gain (p = 0.026), increase in hemoglobin (p = 0.017) and reduction in ESR (p = 0.025) with add on Homoeopathy. The cure rate was 11.4% more in SR + H group as compared to placebo group. Change in sputum culture conversion, was not statistically significant.	A
2014	Pannek J	Indian J Res Homoeopathy 2014 ; 8( 1): 31-36	Urinary tract infections	Usefulness of classical homoeopathy for the prevention of urinary tract infections in patients with neurogenic bladder dysfunction: A case series	case series	8	Eight patients were followed up for a median period of 15 months. Five patients remained free of UTI, whereas UTI frequency was reduced in three patients.	C

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
2014	Kundu T	Indian J Res Homoeopathy 2014; 8(1): 24-30	Rheumatoid arthritis	To evaluate the role of homoeopathic medicines as add-on therapy in patients with rheumatoid arthritis on NSAIDs: A retrospective study	OBS	10	Homoeopathic constitutional medicines were found to reduce the intensity of pain in patients with RA ( $t = 4.3733$ , $P < 0.01$ ) along with reduction in consumption of NSAIDs ( $t = 2.4$ , $P < 0.05$ ). The DAS reduced in all 10 patients ( $t = 2.67$ , $P < 0.01$ ). The QoL was also found to improve under homoeopathic medication ( $t = 4.044$ , $P < 0.01$ ) and no further deterioration joint/disability was observed in any of the 10 patients. Mean ESR improved to 19.5 from 38.1 ( $t = 2.235$ , $P < 0.05$ ). Out of 10, 3 (30%) patients were found to be seronegative after homoeopathic constitutional similimum.	B
2014	Rath P	Indian J Res Homoeopathy 2014 ;: 8(1): 37-41	Haemorrhoids	A case of haemorrhoids in a 12-year-old boy	Case report	1	The case reported here is that of an internal haemorrhoids in a 12-year-old child, who was treated successfully with homoeopathic medicine. The patient has been observed for more than 2 years without recurrence. Photographs were taken before and after treatment to record changes in the condition. Non-recurrence of complaint in the past two and half years suggests that a 'near permanent' cure is achievable through individualised homoeopathic treatment.	C
2014	Dhawale KM	Indian J Res Homoeopathy; 2014; 8( 2): 87-94	Learning disabilities	Use of homoeopathic remedies in the management of learning disabilities	RCT	67	The children under homoeopathic treatment with remedial education showed an early response to remedial inputs and a statistically significant change in the indicators of dyslexia and dysgraphia. There was also a significant change in the co-morbid behavioural condition notably Attention Deficit Hyperactivity Disorder (ADHD). 53.12% of children needed Calcarea salts. The other significant remedy indicated in 9.3% children was Medorrhinum, Argenticum nitricum, Calc-flour, and Natrum salts were indicated in 6.25% children.	A

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
2014	Chakraborty D	Indian J Res Homoeopathy 2014; 8(2): 100-106	Leprosy	Therapeutic effect of Mercurius solubilis on immune status of a borderline leprosy case	Case report	1	A Borderline Lepromatous (BL) leprosy case was treated with Mercurius solubilis, a homoeopathic medicine for two years. The clinical, immunological and histological assessment of the patient before and after treatment was recorded. The patient showed appreciable improvement in clinical signs and symptoms. Nodular lesions on both the ear lobes diminished remarkably. Regain of sensation to touch, pain and pressure were noted and their test responses were normal.	C
2014	Barvalia PM	Indian J Res Homoeopathy 2014 ; 8( 3): 147-159	Autism	Effectiveness of homoeopathic therapeutics in the management of childhood autism disorder	OBS	60	The study demonstrated significant improvement of autistic features with mean change in ATEC score (ATEC 1 -pre-treatment with ATEC 5 -post-treatment) was 15.12 and ATEC mean percent change was 19.03. A sharp decrease (34%) in ATEC scores, in the first quarter implied positive effect of homoeopathic medicines, prescribed, as per the homoeopathic principles.	B
2014	Nayak D	Indian J Res Homoeopathy 2014; 8( 4):224-230	Acute Alcohol withdrawal	Managing acute alcohol withdrawal with Homoeopathy: A prospective, observational, multicentre exploratory study	OBS	112	There was a significant decrease in CIWA-Ar mean scores and increase in quality of life score ( $P < 0.001$ ). The most common remedies used were Arsenicum album, Lycopodium clavatum, Belladonna, Nux vomica and Pulsatilla.	B
2014	Ghosh MS	Indian J Res Homoeopathy 2014 ; 8( 4): 231-235	Gallstone	A case of gallstone with prostatomegaly	Case report	1	This case of gallstone with prostatomegaly treated with homoeopathic medicines, reported here is such an example. After going through detailed case-taking and repertorization, initially Sulphur and later on Medorrhinum was prescribed based on symptom totality. The case has been cured in respect of both symptomatologically and pathologically as evident by follow up investigations.	C

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
2014	Miek C.Jong	Homoeopathy 2014; 103(01): 71	Teething	Effectiveness of complex homeopathic medicinal products in the treatment of children with painful teething	RCT	200	At (outpatient) paediatric clinics in Russia, 200 children with symptoms of painful teething were included in the study, 100 in the Dentokind group and another 100 children in the Viburcol group. Demographics and outcome data are currently being analysed. Results and conclusions will be therefore be presented at the conference.	A
2014	Jurcu R	Homoeopathy 2014; 103(01): 72	Anxiety and salivary cortisol	The influence of Aconitum Napellus versus placebo, on anxiety and salivary cortisol, in stress induced by intense and short term physical effort	RCT	30	Although the values for anxiety and salivary cortisol were slightly higher on C compared with P, differences between them were not significant. At all peri-stress times, anxiety and salivary cortisol values in C and P were higher than in AN, significant differences being: immediately pre-stress for anxiety; immediately pre-stress and immediately post-stress for salivary cortisol.	A
2014	Wilkens J	Homoeopathy 2014; 103(01): 73	Nervous complaints and exhaustion	Treatment of nervous complaints and exhaustion with the homeopathic medicinal product Manuia® - results of a cohort study	OBS	420	The sum score as well as the severity of each single symptom decreased significantly during the observations' period ( $p < 0.01$ , paired t-test). Illness severity measured by CGI decreased significantly ( $p < 0.01$ , McNemar test; CGI 4-7: 71.7% to 35.2%). Ability to work and to attend social and family life improved significantly ( $p < 0.01$ , McNemar test). In 77.1% ( $n = 324$ out of 420) of the patients quality of life was good, very good or excellent during control visit, compared to 15.8% ( $n = 66$ out of 420) at baseline. 92.4% of the patients rated their condition as improved, 64.1% as much or very much improved. Median duration until onset of action was 7 days. Tolerability was good or very good in 98.1% of all cases.	B
2014	Biolchini J	Homoeopathy 2014; 103(01): 80	Pulmonary tuberculosis	Homoeopathic medication in pulmonary tuberculosis treatment, clinical evolution, and drug-resistance: a randomized, double blind clinical Trial	RCT	50	Outcomes of the study include difference between the homeopathic medication and placebo in: clinical evolution of the disease, clinical evolution of patient miasmatic pattern, antibiotic resistance development, RHZE adverse effects, and tuberculosis resulting sequelae.	A

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
2014	Golden I	Journal of Evidence-Based Complementary & Alternative Medicine, 2014 Jul;19(3):155-160	Leptospirosis	A Re-evaluation of the Effectiveness of Homoeoprophylaxis Against Leptospirosis in Cuba in 2007 and 2008	OBS		New analyses of the timing and extent of vaccination and chemoprophylaxis in 2007 and 2008 and changes in leptospirosis notifications were presented.	B
2014	S. Nobel	Homoeopathy, 2014; 103(1): Page 92.	Sport related pain and stiffness	Clinical evaluation of the effects of Arnicare gel, a homeopathic preparation in sport related pain and stiffness. The efficacy and safety of a homeopathic arnica gel (Arnicare®) in the treatment of sports.	RCT	120	One hundred and twenty subjects (54 males, 66 females) were enrolled and randomized into two groups of 60. Subjects were mainly basketball players (85%) and the groups were comparable at baseline. The overall (baseline adjusted) level of stiffness during the 72 hours following the sports game was significantly less in the Arnicare group as compared to the placebo group (23.7mm versus 29.1mm, P=0.02). With regard to the overall level of pain there was a similar trend that did not reach statistical significance (24.9mm versus 27.9mm, P=0.17). Between group differences were most pronounced 12-36 hours post-exercise. Two subjects in the arnica group experienced mild side effects (slight tingling, itching) that did not lead to discontinuation of the treatment. Very few subjects used available analgesic in conjunction with Arnicare gel.	A
2014	Chauhan VK	Homoeopathy. 2014 Oct;103(4):224-31.	Subclinical hypothyroidism	Efficacy of homeopathic intervention in subclinical hypothyroidism with or without autoimmune thyroiditis in children: an exploratory randomized control study	RCT	194	The post treatment serum TSH (Group A and C) returned to normal limits in 85.94% of verum and 64.29% of controls (p < 0.006), while serum AntiTPOab titers (Group A and B) returned within normal limits in 70.27% of verum and 27.02% of controls (p < 0.05). Eight children (10.5%) progressed to overt hypothyroidism (OH) from control group.	A
2014	Danno K	Homoeopathy. 2014 Jul;103(3):165-71.	Malaria	China rubra for side-effects of quinine: a prospective, randomised study in pregnant women with malaria in Cotonou, Benin	RCT	211	211 women were recruited: 105 received quinine plus China rubra 7CH (China group) and 106 received quinine only (Standard group). A decrease in proportion of patients presenting with side-effects was observed in the China group from day 0 to day 6 of follow-up (53.9%–23.3%) whereas the proportion of patients with side-effects in the Standard group did not change	A

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
							significantly (85.9% on day 0 vs. 82.5% on day 6). Ninety-six (72.4%) patients in the China group and 103 (97.2%) in the Standard group reported at least one side-effect during follow-up ( $p < 0.0001$ ). The most frequently reported side-effects were tinnitus, dizziness and asthenia.	
2014	Freyer G	Homoeopathy 2014; 103 (4): 232-238	Cancer.	Open-label uncontrolled pilot study to evaluate complementary therapy with <i>Ruta graveolens</i> 9c in patients with advanced cancer.	OBS	31	Thirty-one patients were included (mean age: 64.3 years). Mean duration of treatment was 3.3 months (median: 2.1). QoL global health status improved significantly between baseline and week 8 ( $P < 0.001$ ) and week 16 ( $P = 0.035$ ), but was at the limit of significance ( $P = 0.057$ ) at the end of the study. There was no significant change in anxiety/depression or PS during treatment. <i>Ruta graveolens</i> 9c had no obvious effect on tumour progression. Median survival was 6.7 months [95%CI: 4.8–14.9]. <i>Ruta graveolens</i> 9c was well-tolerated.	B
2014	Bensouda G	PLoS ONE 9(3): e89990	URTI	Management of Upper Respiratory Tract Infections by Different Medical Practices, Including Homoeopathy, and Consumption of Antibiotics in Primary Care: The EPI3 Cohort Study in France 2007–2008	OBS	518	518 adults and children with URTI (79.3% rhinopharyngitis) were included (36.9% response rate comparable between groups). As opposed to GP-CM patients, patients in the GP-Ho group showed significantly lower consumption of antibiotics (Odds ratio (OR) = 0.43, 95% confidence interval (CI): 0.27–0.68) and antipyretic/anti-inflammatory drugs (OR = 0.54, 95% CI: 0.38–0.76) with similar evolution in related symptoms (OR = 1.16, 95% CI: 0.64–2.10).	B
2014	Laansma	Altern Integ Med 2014, 3:3	Premenstrual Disorders	Evaluation of Semi Standardized Individualized Homoeopathic Treatment of 77 Women with Premenstrual Disorders: Observational Study with 9 Months Follow-Up	OBS	77	The usefulness of the semi-standardized treatment protocol was confirmed. In 30 (57.5%) of the 52 analyzed women, PMS scores had dropped by $\geq 50\%$ . For the estimated mean changes in PMS scores, it made no difference if women had used one or more of the 11 algorithm-based or also other homeopathic medicines ( $p = 0.765$ ). A significant association was found between symptom severity at baseline and changes in mean PMS scores ( $p < 0.001$ ).	B

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
2014	Peckham E	Homoeopathy 2014; 103(3):172-177	Irritable bowel syndrome	Interim results of a randomised controlled trial of homeopathic treatment for irritable bowel syndrome	RCT	94	IBS severity, age and employment status found no statistically significant difference between the three arms. However, a post-hoc test comparing homeopathic treatment plus usual care to usual care alone found a statistically significant difference in favour of homeopathic treatment.	A
2014	Gaertner K	Complementary Therapies in Medicine 2014; 22(2): 320-332	Cancer	Additive Homoeopathy in cancer patients: Retrospective survival data from a homeopathic outpatient unit at the Medical University of Vienna	OBS	54	18.7% (n = 54) fulfilled inclusion criteria for survival analysis. The surveyed neoplasms were glioblastoma, lung, cholangiocellular and pancreatic carcinomas, metastasized sarcoma, and renal cell carcinoma. Median overall survival was compared to expert expectations of survival outcomes by specific cancer type and was prolonged across observed cancer entities (p < 0.001).	C
2014	Jacobs J	Global Pediatric Health. January 2014. doi: 10.1177/ 2333794 X14559395	Acute otitis media	Homoeopathic Ear Drops as an Adjunct in Reducing Antibiotic Usage in Children With Acute Otitis Media	RCT	210	The primary outcome was whether or not the antibiotic prescription given at the index visit was filled during a 12- to 15-day follow-up period. Results. Among 210 enrolled children, follow-up antibiotic data were collected on 206. During the 12- to 15-day follow-up period, fewer parents of children randomized to the homeopathic ear drops group filled the antibiotic prescription compared with those of children receiving standard therapy alone (26.9% and 41.2%, respectively, P = .032)	A
2015	Manchanda RK	Indian J Res Homoeopathy; 2015 ; 9 ( 1): 34-41	Acute Encephalitis Syndrome	Evaluation of homoeopathic medicines as add-on to institutional management protocol in Acute Encephalitis Syndrome: An exploratory observational comparative study.	OBS	151	151 children (121 in IMP + H and 30 in only IMP) diagnosed with AES (aged 6 months to 18 years) were enrolled. The results showed 12 (9.9%) death out of 121 children administered IMP + H whereas it was 13 (43%) out of 30 children on IMP alone. Proportional odds analysis with covariate adjustment showed added benefit of Homoeopathy in children with AES as compared to IMP alone (adjusted odds ratio, 0.17, 95%	B

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
							confidence interval 0.06-0.45, P = 0.0001). The most useful medicines are Belladonna, Stramonium, Arsenicum album, Helleborus, Bryonia alba, Sulphur, and Cuprum metallicum.	
2015	Gupta G	Indian J Res Homoeopathy 2015; 9 (1): 49-54	Acoustic/ vestibular schwannoma	An evidence-based case of acoustic/ vestibular schwannoma	Case report	1	The case illustrated here is a rare one of acoustic/ vestibular schwannoma a surgical conditions, treated with Lycopodium, which produced improvement on both subjective and objective parameters.	C
2015	Sharma B	Indian J Res Homoeopathy 2015; 9 (2): 69-78	Asthma	Homoeopathy for the management of Asthma - A review of Council's Clinical Research	OBS	20	Only 20 publications pertaining to Asthma were found and 10 were selected consisting of observational studies and drug oriented studies. The positive outcome in controlling acute episodes of asthma, reducing the frequency and intensity of subsequent episodes and weaning of bronchodilators and other allopathic drugs have been reported.	A
2015	S Abarna	Indian J Res Homoeopathy 2015; 9(2):: 96-101	Chronic diseases	Evaluating the usefulness of 50 millesimal potencies in the treatment of chronic diseases - A retrospective study	OBS	50	50 Millesimal potencies have the potential to give significant improvement (P = 0.01) in the treatment of chronic diseases. There were no cases reported with aggravation. The action of LM potency is not influenced (P = 0.97) by previously used Centesimal potency. Constitutional prescription has proved to have significant (P = 0.01) association with treatment outcome with LM potency, whereas Sector prescription (P = 0.12) does not. Irrespective of age, gender, and duration of illness, 50 Millesimal potencies act advantageously.	B
2015	Mahesh S	Indian J Res Homoeopathy 2015; 9 (2): 114-122	Gangrene	Gangrene: Five case studies of gangrene, preventing amputation through Homoeopathic therapy	case series	5	case reports clearly provide a rationale for the use of Homoeopathy in the treatment of gangrene.	C

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
2015	D Chakraborty	Indian J Res Homoeopathy; Year 2015 ; 9 (3): 158-166	Leprosy	A comparative study of homoeopathic medicine - Sulphur with the Multidrug therapy in the treatment of paucibacillary leprosy.	RCT	60	The study showed that MDT therapy (PB regimen) and homoeopathic medicine were found equally effective as histopathology of skin showed no granulomatous lesion. The most significant clinical sign observed in all cases treated with Sulphur was reappearance of normal skin colour and regain of loss of sensation of the skin lesion.	A
2015	PS Chakraborty	Indian J Res Homoeopathy; 2015; 9 (3): 167-175	Vitiligo	A multicentric observational study to evaluate the role of homoeopathic therapy in vitiligo	OBS	432	The changes in the mean VSS at intervals of every 6 months was found to be statistically significant. Homoeopathic treatment was found to be useful in relieving vitiligo in varying degrees in 126 patients, out of which 4 (2.94%) cases showed marked improvement, 15 (11.03%) cases showed moderate improvement, 77 (56.62%) cases showed mild improvement, and 30 patients although improved, fell in the category of not significant improvement group (below 25% improvement). Ten homoeopathic medicines were found useful in the study of which Sulphur (n = 27), Arsenicum album (n = 19), Phosphorus (n = 19), and Lycopodium clavatum (n = 10) were the most commonly indicated and useful medicines.	B
2015	KM Nisanth Nambisan	Indian J Res Homoeopathy 2015; 9 (3): 194-198	Heloma durum	Homoeopathic treatment of Heloma durum- Case Report	case series	2	Two cases of plantar heloma durums illustrated here were treated with same medicines with similar genetic make-up, that is, father and daughter. Father received the medicine after case taking whereas 15 years later, the daughter received homoeopathic treatment given to the father. Both tried other modes of treatment including invasive procedure before being successfully cured in a short span of time with homoeopathic treatment protocol. Here, the same treatment cured both father and daughter, which indicates that the same homoeopathic medicine is effective, in similar genetic make-up for a given disease (genetic similimum).	C

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
2015	Bhalerao RD	Indian J Res Homoeopathy 2015 ; 9 (4): 258-266	Dyslipidemia	Homoeopathy in the management of Dyslipidemia: A short review	RE-VIEW		Preclinical and clinical studies (case records to controlled trials) are included. Relevant research was categorized by study type and appraised according to study type and design. Four preclinical, three observational studies, and two case records were identified. From literary search, medicines commonly used in Materia Medica and drugs of Indian origin were noted. There are positive leads in managing patients suffering from dyslipidemia. However, more well-designed studies are warranted to generate effectiveness/efficacy of Homoeopathy.	A
2015	Wadhvani G	Indian J Res Homoeopathy 2015; 9(4): 267-273	Deep vein thrombosis with post-thrombotic syndrome	A case of deep vein thrombosis with postthrombotic syndrome cured by homoeopathic therapy	Case report	1	A 46-year-old woman consulted for right-sided deep vein thrombosis in external iliac, common femoral, superficial femoral and popliteal veins with extension along with postthrombotic syndrome. After homoeopathic consultation, she was prescribed Argentum nitricum in ascending LM potencies. Symptomatic relief was reported within 2 weeks of treatment, and gradually the quality of life improved after simultaneous reduction in pain due to other complaints of sciatica and osteoarthritis. Venous Doppler studies repeated a year later showed complete resolution of the medical condition with homoeopathic drug therapy alone. The physical examination also revealed a reduction in limb circumference.	C
2015	Frei H	Homoeopathy 2015; 104(2): 57-65	Multimorbidity	Homoeopathic treatment of multimorbid patients: a prospective outcome study with polarity analysis	OBS	50	43 patients (86%) completed the observation period, achieving an average improvement of 91% in their initial symptoms. Six patients dropped out, and one did not achieve an improvement of 80%, and was therefore also counted as a treatment failure. The cost of homeopathic treatment was 41% of projected equivalent conventional treatment.	B

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
2015	Bensouda G	Homoeopathy 2015; 104 (3): 170-175	Sleeping disorders	Utilization of psychotropic drugs by patients consulting for sleeping disorders in homeopathic and conventional primary care settings: the EPI3 cohort study	OBS	346	346 patients consulting for SD were included. Patients in the GP-Ho group experienced more often severe SD (41.3%) than patients in the GP-CM group (24.3%). Adjusted multivariate analyses showed that patients who chose to be managed by GP-Ho were less likely to use psychotropic drugs over 12 months as opposed to the GP-CM group, with Odds ratio (OR) = 0.25; 95% confidence interval (CI): 0.14 to 0.42. Patients in the GP-Mx group also used less psychotropic drugs but the result was not statistically significant (OR = 0.67; 95% CI: 0.39–1.16). Rates of clinical improvement of the SD did not differ between groups.	B
2015	Mehra P	International Journal of High Dilution Research 2015; 14(1):16-19	Hypertension	Usefulness of Homoeopathy in essential hypertension: an exploratory interventional trial.	OBS		Sixteen (53.33%) cases showed marked improvement, 8 (26.67%) moderate improvement, 3 (10%) no improvement and 3 (10%) dropped out. Arsenicum album, Natrum muraticum, Nux vomica, Causticum and Lycopodium clavatum were found to be useful in the management of essential hypertension. The difference in the systolic and diastolic blood pressure before and after treatment was statistically significant ( $p < 0.001$ ). Metabolic syndrome was present in 46.67% of the cases.	B
2015	Trompetter I	Forsch Komplementmed 2015;22:18-23	Allergic rhinitis	Homoeopathic Complex Remedy in the Treatment of Allergic Rhinitis: Results of a Prospective, Multicenter Observational Study	OBS	123	he majority of symptoms were shown to improve substantially and the patients' quality of life increased clearly. The overall symptom score decreased significantly from $10.3 \pm 4.7$ to $3.9 \pm 3.1$ points ( $p < 0.0001$ ), and reduction of impairment of quality of life from $5.7 \pm 2.3$ to $1.9 \pm 1.8$ score points was also significant ( $p < 0.0001$ ). Rating of efficacy of study medication was markedly better than efficacy rating of previous therapies ( $p = 0.0193$ ). Apart from one temporary allergic reaction, the treatment was well tolerated.	B

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
2015	Raj P	American Journal of Homoeopathic Medicine . Autumn2015, Vol. 108 Issue 3, p104-110. 7p	Lumbar spondylosis	Homoeopathic Treatment of Lumbar Spondylosis: An Observational Study	OBS	15	A total of 15 cases were selected based on the inclusion and exclusion criteria. Out of these, 4 cases were excluded due to lack of follow-up and 11 cases completed the study. Symptom severity at entry to study was high (mean VAS score 81, out of a possible 100). Symptoms had been present for 1 -11 years (mean 3.4 years). Mean VAS score at end of study dropped to 19, representing a mean improvement of 78% over baseline. All cases improved substantially, most within one month. No case took longer than 2 months to experience benefit.	B
2015	Saha S	Journal of Evidence-Based Complementary & Alternative Medicine. 2015;20(3):180-185.		Documentation of Prescriptions and Clinical Outcomes in a Homoeopathic Hospital Setting in West Bengal, India.	OBS	1972	A total of 1972 patients' follow-up generated data of 2905 appointments, of which 2272 (78.2%) were positive, 183 (6.3%) negative, and 450 (15.5%) showed no change. Strongly positive outcomes (scores of +2/+3) were recorded in osteoarthritis, piles, cough, dysfunctional uterine bleeding, chronic suppurative otitis media, and conjunctivitis.	B
2016	Villet S	Homoeopathy. 2016;105(1): 84-91.	Anxiety and sleep disorders	Open-label observational study of the homeopathic medicine Passiflora Compose for anxiety and sleep disorders.	OBS	401	A total of 639 patients (mean age: 46.3 ± 17.5 years; 78.6% female) were recruited by 98 GPs. Anxiety was present in 85.4% (HAM-A) and 93.3% (Spielberger State) at inclusion A total of 401 (62.7%) patients received PC alone and 167 (26.1%) PC + psychotropics. After 4 weeks, mean anxiety scores decreased by more than 7, 12 and 6 points (HAM-A, Spielberger State and Trait respectively), and SDS score by more than 4 points (JSS). Anxiety and/or SDS improved significantly in patients included on this study. PC could be an alternative to the use of psychotropic drugs.	A

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
2016	Siqueira	Homoeopathy. 2016;105(1):71-7.	Influenza and acute respiratory tract infections	Homoeopathic medicines for prevention of influenza and acute respiratory tract infections in children: blind, randomized, placebo-controlled clinical trial. Homoeopathy.	RCT	445	Out of the 600 children recruited, 445 (74.17%) completed the study (149: Homoeopathic complex; 151: Placebo; 145: InluBio). The number of flu and acute respiratory infection symptomatic episodes detected in this clinical trial was low; however, it was different between homeopathic groups and placebo ( $p < 0.001$ ). In the first year post-intervention, 46/151 (30.5%) of children in the placebo group developed 3 or more flu and acute respiratory infection episodes, while there was no episode in the group of 149 children who used Homoeopathic Complex, and only 1 episode in the group of 145 (1%) children who received InluBio.	A
2016	Zafar S	Homoeopathy. 2016;105(1): 66-70.	Labor pain	A randomized controlled trial comparing Pentazocine and Chamomilla recutita for labor pain relief.	RCT	99	Ninety-nine normal pregnant women were randomly assigned into three groups. Each group received one of the three trial drugs; Chamomile, Pentazocine or placebo. The efficacy of labor analgesia was assessed by using Visual Analogue Scale (VAS) for pain intensity. Indicators of maternal and child health were recorded as were adverse effects of the drugs. Mean pain scores in the three groups were calculated and compared. The difference in mean VAS scores in Pentazocine and Chamomilla recutita group as compared with placebo was not statistically significant. No significant adverse effects were noticed in any group except slight headache and dizziness in three partu + 15rients in Pentazocine group.	A
2016	Pandey V	Homoeopathy. 2016;105(2):202-8	Hay fever	Hay fever & Homoeopathy: a case series evaluation	OBS	8	The average Measure Yourself Medical Outcome Profile (MYMOP) scores for the eyes, nose, activity and wellbeing had improved significantly after two and four weeks of homeopathic treatment. The overall average MYMOP profile score at baseline was 3.83 (standard deviation, SD, 0.78). After 14 and 28 days of treatment the average	C

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
							score had fallen to 1.14 (SD, 0.36; P<0.001) and 1.06 (SD, 0.25; P<0.001) respectively. Individualized homeopathic treatment was associated with significant alleviation of hay fever symptoms, enabling the reduction in use of conventional treatment.	
2016	Fibert P	Homoeopathy. 2016;105(2):194-201.	ADHD	A comparative consecutive case series of 20 children with a diagnosis of ADHD receiving homeopathic treatment, compared with 10 children receiving usual care.	case series	30	Parents completed Conners' Parent Rating Scale, Revised Long Version (CPRS-R:L) every 4 months, from which DSMIV total scores were extracted; and Measure Your Own Medical Outcome Profile (MYMOP) every consultation. An interaction between time (baseline/4 months) and group (treatment/non-treatment) was found .756 F (1,28)=9.06, p=0.005. The intervention was associated with statistically significant improvements in treated children over the year: CPRS-R: L (t (18)=4.529, p≤0.000); MYMOP (t (18)=6.938, p≤0.000). Mean DSMIV total t scores decreased at each time point: baseline: 85 (SD 5.1); 4 months 76.2 (SD 10.9); and 12 months 71.5 (SD 12.77).	C
2016	Beghi GM	Multidiscip Respir Med. 2016;11:12.	Respiratory tract infections	Does homeopathic medicine have a preventive effect on respiratory tract infections? A real life observational study.	OBS	459	Out of 459 patients, 248 were treated with homeopathic medicine (specific extract of duck liver and heart) and 211 were not treated. All patients were followed-up for at least 1 year, and up to a maximum of 10 years. A significant reduction in the frequency of onset of RTIs was found in both the homeopathic medicine and untreated groups. The reduction in the mean number of RTI episodes during the period of observation vs. the year before inclusion in the study was significantly greater in the homeopathic-treated group than in untreated patients (-4.76 ± 1.45 vs. - 3.36 ± 1.30; p = 0.001). The beneficial effect of the homeopathic medicine was not significantly related to gender, age, smoking habits or concomitant respiratory diseases when compared to the effect observed in untreated patients.	A

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
2016	Morris M	Altern Ther Health Med. 2016;22(1): 48-56.	Low-back Pain	Physiotherapy and a Homoeopathic Complex for Chronic Low-back Pain Due to Osteoarthritis: A Randomized, Controlled Pilot Study	RCT	30	Intergroup analysis revealed that the treatment group significantly outperformed the control group with regard to pain, daily functioning, and ROM. No difference existed between the groups, however, in the need for conventional pain medication. The results suggest the homeopathic complex, together with physiotherapy, can significantly improve symptoms associated with CLBP due to OA.	A
2016	Oberai P	Indian J Res Homoeopathy 2016;10(2):108-118.	Schizophrenia	Homoeopathic management of Schizophrenia: A prospective, non-comparative, open-label observational study.	OBS	171	Significant difference ( $P = 0.0001$ , $P < 0.05$ ) in the mean scores of BPRS, using paired t test was observed at end of the study. Sulphur, Lycopodium, Natrum muriaticum, Pulsatilla and Phosphorus were found to be the most useful medicines in treating schizophrenic patients.	C
2016	Sumithran P	Indian J Res Homoeopathy 2016;10(2):142-9.	Urinary calculi.	A case of multiple urinary calculi.	Case report	1	A patient with urinary calculi of sizes 16 mm in the right renal pelvis and 9 mm in the right mid-ureter, presenting with complaints of pain in right iliac region extending to genitals and legs with dribbling urine and painful micturition. Patient had not undergone treatment before. Based on the presenting symptoms Nux vomica30C was prescribed, which proved to be effective in the dissolution and expulsion of both the stones.	C
2016	Oberai P	Indian J Res Homoeopathy 2016;10:24-35.	Uterine fibroids	A multicentric randomized clinical trial of homoeopathic medicines in fifty millesimal potencies vis-à-vis centesimal potencies on symptomatic uterine fibroids	RCT	209	Both LM and CH potencies were equally effective in reducing the symptoms (percentage change) due to uterine fibroid on VAS scale after 1 year of treatment ( $P > 0.05$ ). The health-related quality of life (HRQOL) and subdomains of UFSQOL also showed equal effectiveness in both the groups ( $P = 0.05$ ). No difference was observed in all the USG findings except for uterine volume ( $P = 0.03$ ). There was overall difference before and after homoeopathic treatment irrespective of assigned groups, i.e., LM or CH ( $P < 0.05$ ) in all the above parameters.	C

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
2016	Parveen S.	Indian J Res Homoeopathy 2016;10:75-82.	Atopic dermatitis	Homoeopathic treatment in a case of co-morbid atopic dermatitis and depressive disorder.	Case report	1	A 38-year-old male presented with a 6-month history of eczematous skin lesions with associated symptoms of depression in the background of chronic ongoing stress. A diagnosis of AD with comorbid depression was made. He initially did not show stable improvement on homoeopathic medicine selected on the basis of totality of symptoms and miasmatic background. On changing the medicine giving more priority to psychological symptoms, he gradually showed stable improvement on both the domain of symptoms and reached remission by 3 months. Remission maintained without any recurrence over the next 3½ years. Hence, the main lesson from this case is the demonstration of importance of mental symptoms over other physical symptoms in homoeopathic treatment.	C
2016	Grimaldi-Bensouda L	BMC Complement Altern Med. 2016;16:125.	Anxiety and depression	Homoeopathic medical practice for anxiety and depression in primary care: the EPI3 cohort study	OBS	710	Adjusted multivariate analyses showed that GP-Ho and GP-Mx patients were less likely to use psychotropic drugs over 12 months, with Odds ratio (OR) = 0.29; 95 % confidence interval (CI): 0.19 to 0.44, and OR = 0.62; 95 % CI: 0.41 to 0.94 respectively, compared to GP-CM patients. The rate of clinical improvement (HADS <9) was marginally superior for the GP-Ho group as compared to the GP-CM group (OR = 1.70; 95 % CI: 1.00 to 2.87), but not for the GP-Mx group (OR = 1.49; 95 % CI: 0.89 to 2.50). Patients with ADD, who chose to consult GPs prescribing Homoeopathy reported less use of psychotropic drugs, and were marginally more likely to experience clinical improvement, than patients managed with conventional care.	B
2016	Van Heerden HJ	Altern Ther Health Med. 2016;22 Suppl 1:8-13.	Binge Eating	Pilot Study on the Homoeopathic Treatment of Binge Eating in Males	OBS	10	The study found a statistically significant improvement with regard to the BES (P = .003) and the SAC (P = .006), with a large effect size, indicating that a decrease occurred in the severity and frequency of bingeing behavior during the study period.	B

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
2016	Miglani A	Focus on Alternative and Complementary Therapies 2014;19(4):191-197.	Acne vulgaris.	Prospective, non- randomised, open-label study of homeopathic Zingiber officinale (ginger) in the treatment of acne vulgaris.	OBS	31	Statistically significant ( $P < 0.001$ ) changes in lesion counts, GAGS scores and Acne-QoL scores were observed. Homoeopathic Z. officinale demonstrates encouraging results in the treatment of facial acne.	A
2016	Alizadeh Charandabi SM	Iran Red Crescent Med J. 2016 Aug 9;18(9):e30902.	Primary Dysmenorrhea	Effect of Homoeopathy on Pain Intensity and Quality Of Life of Students With Primary Dysmenorrhea: A Randomized Controlled Trial.	RCT	47	There was no significant difference between the groups for either pain intensity (adjusted difference: -0.44; 95% CI: -1.43 to 0.54) or any other outcomes. Compared with the baseline scores, statistically significant improvements were observed in pain intensity ( $P = 0.021$ ) and physical health ( $P = 0.020$ ) scores only in the homeopathic group; and in the mental health score in both groups ( $P = 0.014$ in the Homoeopathy group and $P = 0.010$ in the placebo group).	C
2016	Haque S	J Pharmacopuncture. 2016 Dec ; 19(4):358-361.	Loss of Lumbar Lordosis	Homoeopathy – A Safe, Much Less Expensive, Non-Invasive, Viable Alternative for the Treatment of Patients Suffering from Loss of Lumbar Lordosis	Case report	-	A relatively rare case of loss of lumbar lordosis with osteophytic lippings, disc desiccation, and protrusion, causing a narrowing of secondary spinal canal and a bilateral neural foramina, leading to vertebral column curvature with acute pain in an adolescent boy. The symptoms were effectively treated with different potencies of a single homeopathic drug, Calcarea phos. X-ray and magnetic resonance imaging (MRI) supported recovery and a change in the skeletal curvature that was accompanied by removal of pain and other acute symptoms of the ailment.	B
2016	Karp JC	Homoeopathy. 2016 Nov;105(4):299-308.	Early breast cancer	Treatment with Ruta graveolens 5CH and Rhus toxicodendron 9CH may reduce joint pain and stiffness linked to aromatase inhibitors in women with early breast cancer: results of a pilot observational study	OBS	40	40 patients were recruited, 20 in each group. Two-thirds of the patients had joint pain before starting AI treatment. There was a significant difference in the evolution of mean composite pain score between T0 and T3 in the two groups (-1.3 in group H vs. +3.4 in group C; $p = 0.0001$ ). The individual components of the pain score (frequency, intensity and number of sites of pain) also decreased significantly in group H. Nine patients in group	B

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
							C (45%) vs.1 (5%) in group H increased their analgesic consumption between T0 and T3 (p=0.0076). After 3 months of treatment, joint pain had a worse impact on sleep in patients in group C (35% vs. 0% of patients; p=0.0083). The differences observed in the evolution of morning and daytime stiffness between the two groups were smaller (p=0.053 and p=0.33, respectively), with the exception of time necessary for the disappearance of morning stiffness which was greater in group C (37.7±23.0 vs. 17.9±20.1 min; p=0.0173).	
2016	Danno K	Homoeopathy. 2016 ; 105(4) :289-298.	Cancer	Motivations of patients seeking supportive care for cancer from physicians prescribing homeopathic or conventional medicines: results of an observational cross-sectional study	OBS	644	Six hundred and forty four patients were included in the analysis: 399 consulted a GP-CM (n = 112) and 245 a GP-Ho (n = 73). Patients mainly consulted a GP-Ho to receive overall care (73.5% vs.64.9%; p = 0.024) and medicines to prevent anticancer treatment-related side-effects (63.7% vs. 41.4%; p < 0.0001). In contrast, patients consulted aGP-CM to receive psychological care (50.1% vs. 40.8%; p = 0.021) and more information regarding the oncologists' strategic decisions (p < 0.0001). There was a significantly greater prescription of psychotropic drugs by GP-CM (53.7% vs. 22.4%, p < 0.0001).	A
2016	Jacobs J	Complement Ther Med. 2016Dec;29:229-234.	Cold symptoms	A randomized controlled trial of a homeopathic syrup in the treatment of cold symptoms in young children.	RCT	154	There was no significant difference in improvement one hour after the dose for any symptom between the two groups. Analysis of twice daily data on the severity of cold symptoms compared to baseline values found that improvements in sneezing, cough and the composite cold score were significantly greater at both the first and second assessments among those receiving the cold syrup compared to placebo recipients.	A

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
2016	Vilhena EC	Altern Ther Health Med. 2016 Oct;22(S3):14-22.	Mental Disorders	Homoeopathic Treatment of Overweight and Obesity in Pregnant Women With Mental Disorders: A Double-blind, Controlled Clinical Trial	RCT	134 (72 + 62)	The mean variation between baseline BMI and BMI at week 40 of gestation was +4.95 kg/m <sup>2</sup> in the control group and +5.05 kg/m <sup>2</sup> in the Homoeopathy group. The difference between the 2 groups was not significant (P = .815; 95% confidence interval [CI], -0.916 to 0.722). APGAR 10 at 5 min (59.6% in Homoeopathy group and 36.4% among control) was statistically significant (P = .016). Homoeopathy does not appear to prevent excessive body mass gain in pregnant women who are overweight or obese and suspected of having a common mental disorder. Homoeopathy did not change the APGAR score to modified clinical attention at delivery room. However, the evidence observed at APGAR 10 at minute 5 suggests that Homoeopathy had a modulating effect on the vitality of newborns	B
2016	Das KD	Intercult Ethnopharmacol. 2016 Jun 25;5(4):335-342.	Hemorrhoids	Treatment of hemorrhoids with individualized Homoeopathy: An open observational pilot study.	OBS	52	Intention to treat population (n = 52) analyzed showed statistically significant reductions in mean bleeding (month 3: -21.8, 95% confidence interval [CI]: -30.3, -13.3, P: < 0.00001, d = 0.787; month 6: -25.5, 95% CI -35.4, -15.6, P: < 0.00001, d = 0.775), pain (month 3: -21.3, 95% CI -28.6, -14.0, P: < 0.00001, d = 0.851; month 6: -27.6, 95% CI -35.6, -19.6, P: < 0.00001, d = 1.003), heaviness visual analog scales (VASs) (month 3: -8.1, 95% CI -13.9, -2.3, P: = 0.008, d = 0.609; month 6: -12.1, 95% CI -19.1, -5.1, P: = 0.001, d = 0.693), and anosopic score (month 3: -0.4, 95% CI -0.6, -0.2, P: < 0.0001, d = 0.760; month 6: -0.5, 95% CI -0.7, -0.3, P: < 0.0001, d = 0.703) . Itching VASs reduced significantly only after 6 months (-8.1, 95% CI -14.6, -1.6, P: = 0.017, d = 0.586).	B
2016	Gleiss A	Complement Ther Med. 2016 Aug;27:65-7	Cancer	Re-analysis of survival data of cancer patients utilizing additive Homoeopathy.	OBS		For patients suffering from advanced stages of cancer and surviving the first 6 or 12 months after diagnosis, respectively, the results show that utilizing Homoeopathy gives a statistically significant (p<0.001) advantage over control patients regarding survival time	A

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
2016	Pedrero-Escalas MF	Int J Pediatr Otorhinolaryngol. 2016 Sep;88:217-23.	Otitis media with effusion	Hospital clinical trial: Homoeopathy (Agraphis nutans 5CH, Thuya occidentalis 5CH, Kalium muriaticum 9CH and Arsenicum iodatum 9CH) as adjuvant, in children with otitis media with effusion.	RCT	97	In the EG, 61.9% of individuals were cured (PNO went from negative in the 1st visit to positive in the 3rd visit) compared with 56.8% of patients treated with placebo. 4.8% of patients in the EG suffered a recurrence (positive PNO in the 2nd visit changed to negative in the 3rd visit) while 11.4% did in the PG. No significant difference was found. Adverse events were distributed similarly, except in the case of upper respiratory tract infections, which were less frequent in EG (3 vs. 13, p: 0.009). The homeopathic scheme used as adjuvant treatment cannot be claimed to be an effective treatment in children with OME.	A
2016	Van Haselen R	Glob Pediatr Health. 2016 Jul 4;3: 2333794 X 16654851.	Upper Respiratory Tract Infections	The Effectiveness and Safety of a Homoeopathic Medicinal Product in Pediatric Upper Respiratory Tract Infections With Fever: A Randomized Controlled Trial.	RCT	261	A total of 261 pediatric (<12 years) patients (130 IFC-group; 131 ST-group) were recruited in Germany and the Ukraine. The IFC-group used less symptomatic medication, symptoms resolved significantly earlier (P = .0001), had higher proportions of fever-free children from day 3 onwards, and the WURSS-assessed global disease severity was significantly less (P < .0001) during the entire URTI episode. One adverse event (vomiting) was possibly related to IFC. IFC as add-on treatment in pediatric URTI reduced global disease severity, shortened symptom resolution, and was safe in use.	B
2016	Rossi E	Homoeopathy. 2016 Aug;105(3):217-24.	Atopic diseases	Homoeopathic therapy in pediatric atopic diseases: short- and long-term results.	OBS	857	75.8% of atopic children had moderate or major improvement (67.1% with asthma as the primary disease; 84.2% rhinitis; 84.2% dermatitis). At re-evaluation after 5-10 years, complete remission of atopic symptoms was obtained in 70.1% of the children: 84.2% in dermatitis; 48.1% in allergic rhinitis; 71.4% in asthma. Children with two or three atopic diseases at the first visit were completely cured in 40% of cases. The results seem to confirm that homeopathic medicine produces positive therapeutic response in atopic children.	A

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
2016	Ho D	Dermatol Surg. 2016 Apr;42(4):445-63.	Post-Procedure Ecchymosis or Edem	Is There a Role for Arnica and Bromelain in Prevention of Post- Procedure Ecchymosis or Edema? A Systematic Review of the Literature.	RE-VIEW	-	This review contains clinical trials that evaluated prevention and/or treatment of post procedure ecchymosis or edema with oral arnica (11), topical arnica (2), and oral bromelain (7). No studies on topical bromelain were found. Clinical trials on arnica and bromelain have demonstrated mixed results. Some randomized controlled trials reported improvement post procedure with arnica (4/13) and bromelain (5/7). Based upon published studies, there is insufficient data to support use of arnica and bromelain post procedure.	B
2016	Shah R.	J Altern Complement Med. 2016 Mar;22(3):197-203.	Hepatitis C.	A Clinical Evaluation of a Hepatitis C Nosode in the Treatment of Hepatitis C.	OBS	24	In this clinical trial, the HCV nosode was administered to HCV-positive participants. From week 12 to week 24, the mean viral load decreased; the median viral load decreased by half, from 1,557,567.50 IU/mL to 789,265.50 IU/mL. However, at 24 weeks, the average viral load increased significantly ( $p = .2206$ ) in the participants completing the trial. Most participants in this study showed improvement in appetite and weight gain. The treatment using the nosode was found to be safe in the tested population.	A
2016	Chaiet SR	Ann Plast Surg. 2016 May;76(5):477-82.	Ecchymosis in Rhinoplasty Surgery.	Perioperative Arnica montana for Reduction of Ecchymosis in Rhinoplasty Surgery.	RCT	22 (13 + 9)	Compared with 13 subjects receiving placebo, 9 taking A. montana had 16.2%, 32.9%, and 20.4% less extent on postoperative days 2/3, 7, and 9/10, a statistically significant difference on day 7 ( $P = 0.097$ ). Color change initially showed 13.1% increase in intensity with A. montana but 10.9% and 36.3% decreases on days 7 and 9/10, a statistically significant difference on day 9/10 ( $P = 0.074$ ). One subject experienced mild itching and rash with the study drug that resolved during the study period. Arnica montana seems to accelerate postoperative healing, with quicker resolution of the extent and the intensity of ecchymosis after osteotomies in rhinoplasty surgery, which may dramatically affect patient satisfaction.	B

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
2016	Thompson E	Homoeopathy. 2016Nov;105(4): 309-317.	Long term conditions	A patient reported outcome measure in homeopathic clinical practice for long-term conditions.	OBS	198	Diagnostic categories were most commonly neoplasms (16.7%), psychological (13.9%) and genitourinary complaints (12.3%), with 66.7% suffering from these problems for at least one year. The three symptoms that bothered patients the most were pain, mental symptoms and tiredness/fatigue. A paired-samples t-test using an intention-to-treat analysis showed that the MYMOP2 profile score improved from 4.25 (IQR 3.50-5.00), with a mean change of 1.24 (95% CI 1.04, 1.44) from the first to the last consultation ( $p < 0.001$ ).	A
2016	Jong MC	Multidiscip Respir Med. 2016 May 16;11:19.	Upper respiratory tract infections	Effectiveness, safety and tolerability of a complex homeopathic medicinal product in the prevention of recurrent acute upper respiratory tract infections in children: a multicenter, open, comparative, randomized, controlled clinical trial.	RCT	200	The intention-to-treat analysis involved 200 children (CaSuli-4-02: N = 99, CONTROL: N = 101). At the end of study, CaSuli-4-02 had overall higher odds of getting lower complaints severity total score (Odds ratio: 1.99 (95 %-CI: 1.31-3.02), $p = 0.0012$ ) and showing symptom improvement (Odds ratio: 1.93 (95 %-CI: 1.25-3.00), $p = 0.0033$ ). Specifically, the complaint "appetite disorder" and the symptom "child's activities" significantly improved more in the CaSuli-4-02 group ( $p = 0.0135$ and $p = 0.0063$ , respectively). Both complex homeopathic products led to a comparable reduction of URTIs. In the CaSuli-4-02 group, significantly less URTI-related complaints and symptoms and higher treatment satisfaction and tolerability were detected.	A
2016	Manchanda RK	Indian J Res Homoeopathy 2016;10:172-81	Alcohol Dependence	A randomized comparative trial in the management of Alcohol Dependence: Individualized Homoeopathy versus standard Allopathic Treatment.	RCT	80	ITT analysis reflected 80% ( $n = 32$ ) of the patients in IH and 37.5% ( $n = 15$ ) of the patients in the SA responding to treatment with absolute difference was 42.5% (42.5 [95% confidence interval [CI]: 23.0, 61.6]) and estimated effect: 6.6 (95% C.I: 2.4, 18.2), $P = 0.0002$ . A significant difference favoring IH was also observed in three out of four domains of WHO QOL-BREF. Statistically significant difference was found in the number of drinking days (median difference: -24.00; CI: -39.0--8.0; $P = 0.001$ ) and number of drinks per drinking day (median difference: -6.3 [95% CI: -11.3--1.9]; $P = 0.004$ ), favoring IH. The results conclude that IH is not inferior to SA in the management of AD patients.	B

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
2016	Motiwala FF	Indian J Res Homoeopathy 2016;10:182-7	Knee Osteoarthritis	Effect of Homoeopathic treatment on Activity of Daily Living (ADL) in Knee Osteoarthritis: A prospective observational study.	OBS	131	Individualized homoeopathic medicines prescribed as per law of similia improved the mean ADL from 35.85 to 19.08 (p-0.0001). Mean pain on WOMAC Osteoarthritis Index survey form improved from 10.50 to 5.48 (p-0.0001). The mean pain score on NRS improved from 6.34 to 3.77 (p-0.0001) and the mean morning stiffness also improved from 4.55 to 2.18 (p-0.0001). Homoeopathic medicines have potential to improve the ADL of OA patients by reducing pain and stiffness and limiting progress of the disease without any adverse systemic effects and can safely be employed as a comprehensive health care therapeutics.	B
2016	Mittal R	Indian J Res Homoeopathy 2016;10:188-98	Nonerosive gastroesophageal reflux disease	An open- label pilot study to explore usefulness of Homoeopathic treatment in nonerosive gastroesophageal reflux disease.	OBS	34	Significant difference was found in pre- and post-treatment GERD symptom score ( $8.79 \pm 2.7$ vs. $0.76 \pm 1.8$ ; $P = 0.001$ ) and VAS for heartburn ( $47.47 \pm 19.6$ vs. $5.06 \pm 11.8$ ; $P = 0.001$ ). Statistically significant improvement was seen in three domains of WHO-QOL score, i.e. psychological health, social relationship, and environmental domain.	C
2016	Sathye SS.	Indian J Res Homoeopathy 2016; 10:206-10	Corneal abscess.	Evidence-based Homoeopathy: A case of corneal abscess.	Case report	-	A case reported was a female of 68 years of age suffering from symptoms of redness, dull pain, and foreign body sensation in the right eye and was diagnosed as corneal abscess. The homoeopathic medicine Hepar sulphuris 200C was prescribed on the basis of pathology. Abscess was reduced considerably within 5 days and it was absorbed completely in 21 days.	C
2016	Shaikh MI	Indian J Res Homoeopathy 2016;10:272-8	Warts	Case studies for treatment of warts with Homoeopathy.	case series	5	Five cases of warts were treated, two cases with centesimal potencies, and three cases treated with fifty millesimal potencies. Cases treated with fifty millesimal potencies responded more quickly than centesimal potencies without aggravating the complaints and without applying any external medicines.	C

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
2016	Leupen A	Homœopathic Links 2016; 29(03): 224-225	Panaritium	I Feel Like a Robot—a Case of Teucrium marum.	Case report	1	The patient is a 38-year-old man, had infections around his finger nails (panaritium), which started 2 months previously, was very painful, as though a needle had been stuck in his fingers. Another problem is a lack of feelings: he is not even depressed; it is just that nothing seems to touch him. 'It just leaves me cold and apathetic, I feel like a robot. Improved with Teucrium marum.	A
2016	Bensouda G	BMC Complement Altern Med 16, 125 (2016)	Anxiety and depression	Homoeopathic medical practice for anxiety and depression in primary care: the EPI3 cohort study	OBS	1562	Of 1562 eligible patients consulting for ADDs, 710 (45.5 %) agreed to participate. Adjusted multivariate analyses showed that GP-Ho and GP-Mx patients were less likely to use psychotropic drugs over 12 months, with Odds ratio (OR) = 0.29; 95 % confidence interval (CI): 0.19 to 0.44, and OR = 0.62; 95 % CI: 0.41 to 0.94 respectively, compared to GP-CM patients. The rate of clinical improvement (HADS <9) was marginally superior for the GP-Ho group as compared to the GP-CM group (OR = 1.70; 95 % CI: 1.00 to 2.87), but not for the GP-Mx group (OR = 1.49; 95 % CI: 0.89 to 2.50).	B
2017	Macías-Cortés ED	Homoeopathy. 2017 Feb;106(1):3-10.	Depression	Is metabolic dysregulation associated with antidepressant response in depressed women in climacteric treated with individualized homeopathic medicines or fluoxetine? The HOMDEP-MENOP Study.	RCT	133	Overall combined prevalence (obesity and overweight) was 86.5%; 52.3% had hypertriglyceridemia; 44.7% hypercholesterolemia; 46.7% insulin resistance; and 16% subclinical hypothyroidism. There was no statistically significant association between dyslipidemia, overweight, or insulin resistance and non-response in the Homoeopathy group.	A
2017	Teixeira MZ	Eur J Obstet Gynecol Reprod Biol. 2017Apr;211 : 48-55.	Endometriosis-associated pelvic pain	Potentized estrogen in homeopathic treatment of endometriosis-associated pelvic pain: A 24-week, randomized, double-blind, placebo-controlled study.	RCT	50	The EAPP global score (VAS: range 0 to 50) decreased by 12.82 (P<0.001) in the group treated with potentized estrogen from baseline to week 24. Group that used potentized estrogen also exhibited partial score (VAS: range 0 to 10) reduction in three EAPP modalities: dysmenorrhea (3.28; P<0.001),	C

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
							non-cyclic pelvic pain (2.71; P=0.009), and cyclic bowel pain (3.40; P<0.001). Placebo group did not show any significant changes. These results demonstrate superiority of potentized estrogen over placebo. Few adverse events were associated with potentized estrogen.	
2017	Abreu P	Rev Esp Med Nucl ImagenMol. 2017 Mar - Apr;36(2):110-112.	Lymphoma.	Homoeopathic mistletoe adverse reaction mimics nodal involvement in (18)F-FDG PET/CT performed for evaluation of response to chemotherapy in lymphoma.	Case report	1	A patient with Hodgkin's lymphoma, scanned with (18) F-FDG PET/CT for evaluation of response after chemotherapy, who was self-administering mistletoe as a homeopathic medicine product. A review of the published scientific data on the effects of mistletoe is also presented.	C
2017	Kumar RTS	Indian J Res Homoeopathy, 2017, 11(4), 257-261	Mucositis	A case of radiation-induced mucositis	Case report	1	This case report suggests that homoeopathic intervention may be the treatment for mucositis in cancer patients undergoing radiation treatment.	B
2017	Parveen S.	Indian J Res Homoeopathy 2017;11:64-73	Heel pain with or without Calcaneal Spur	A retrospective study of homoeopathic treatment in patients with heel pain with or without Calcaneal Spur	OBS	90	92 patients, 70 women and 22 men, had undergone lateral X-ray of ankle for nontraumatic heel pain, of which 76 (82.6%) patients had CS. Extent of CS was found to be higher in case of females, older age, overweight, and profession of housemaid or manual labor. Homoeopathic treatment showed positive response in nearly 75% of the CS patients.	C
2017	Pal PP	Indian J Res Homoeopathy 2017; 11:74-8	Ulcerative Colitis	Homoeopathic treatment of ulcerative Colitis: A case report.	Case report	1	Hydrastis was given in low potency, and gradually, the potency was raised as per the response of the medicine upon patient. Within 3–4 months of homoeopathic treatment, the patient started improving and continues to be free from his complains at the time of last follow-up visit in OPD.	C
2017	Samuels N	Integr Cancer Ther. 2018 Jun;17(2):486-492.	Oncology	Feasibility of Homoeopathic Treatment for Symptom Reduction in an Integrative Oncology Service.	OBS	124	124 patient (34 males, 90 females) were examined, of which two-thirds reported acquiring and self-administering the homeopathic remedy as prescribed, and nearly three-quarters reporting a beneficial effect. Adherence	A

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
							to the homeopathic treatment regimen was greatest among patients attending a second visit, as opposed to having only telephone/e-mail follow-up ( $P < .005$ ). Patients reporting chemotherapy-induced peripheral neuropathy were also more likely to report a beneficial effect ( $P = .004$ ), as were female patients reporting hot flashes ( $P = .005$ ) and those referred by an oncologist ( $P = .046$ ).	
2017	Palm J	Complement Ther Clin P ract. 2017 Aug;28:181-191.	Tonsillitis	Effectiveness of an add-on treatment with the homeopathic medication SilAtr0-5-90 in recurrent tonsillitis: An international, pragmatic, randomized, controlled clinical trial.	RCT	256	The risk of getting an ATI was significantly lower (hazard ratio: 0.45, proportional means model, $p = 0.0002$ , ITT) with SilAtr0-5-90 compared to control. Tonsillitis-specific symptoms were significantly reduced ( $p < 0.0001$ , ITT) and the need of antibiotics to treat acute throat infections ( $p = 0.0008$ ; ITT) decreased. 3 non-serious adverse drug reactions were reported for SilAtr0-5-90.	C
2017	Chand KS	Homoeopathy. 2017 Nov;106(4):214-222.	Tubercular disease	Case reports on integrated management of tubercular disease.	Case report	3	The addition of Homoeopathy to ATT is patient friendly, cost effective and appears to reduce the duration of treatment.	C
2017	Mahesh S	Complement M ed Res. 2017 Oct 30.	Embryonal Carcinoma with Immature Teratoma	Embryonal Carcinoma with Immature Teratoma: A Homoeopathic Case Report.	Case report	1	This is the case of a 3-year-old Indian girl diagnosed with embryonal carcinoma with immature teratoma (after surgery), treated and followed up for over 6 years. She was treated on the basis of the principles of classical Homoeopathy and has stayed free of cancer for 6 years now. The cancer marker expression levels dropped while the girl developed severe skin eruptions, which is in accordance with the laws of classical homeopathic treatment.	C
2017	Kwiatkowski L	Altern Ther Health Med. 2017 Jul; 23(4):56-61.	Overgrowth of Small Intestinal Bacteria	Integrative Treatment of Chronic Abdominal Bloating and Pain Associated With Overgrowth of Small Intestinal Bacteria: A Case Report.	Case report	1	The patient's abdominal pain and bloating resolved with the treatment of the SIBO, although her underlying constipation, which was likely associated with other factors, remained.	C

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
2017	Hoover TA	American Journal of Homoeopathic Medicine 2017; 110(2): 31-34.	Lone paroxysmal atrial fibrillation	60 year old male with lone paroxysmal atrial fibrillation: A homeopathic medicine case report.	Case report	1	To approach the case homeopathically the symptom of atrial fibrillation was evaluated within the global context of the patient rather than isolated and treated as an independent variable of health. Rapid response to homeopathically prepared spigelia anthelmia demonstrated a high probability that the clinical outcome was causally related to the homeopathic therapeutic intervention.	C
2017	Sorrentino	J Intercult Ethnopharmacol. 2017 Jan 3;6(1):1-8.	Post-operative bleeding and seroma production	Is there a role for Homoeopathy in breast cancer surgery? A first randomized clinical trial on treatment with Arnica montana to reduce post-operative seroma and bleeding in patients undergoing total mastectomy	RCT	53	The per-protocol analysis revealed a lower mean volume of blood and serum collected in drainages with A. montana (-94.40 ml; 95% confidence interval [CI]: 22.48-211.28; P = 0.11). A regression model including treatment, volume collected in the drainage on the day of surgery, and patient weight showed a statistically significant difference in favor of A. montana (-106.28 ml; 95% CI: 9.45-203.11; P = 0.03).	C
2017	Saltzman	American Journal of Homoeopathic Medicine 2017; 110(2): 26-30.	Autism	Case of autism with a 20 year follow up: A homeopathic medicine case report.	Case report	1	A 22 month old autistic male responded rapidly and permanently to a single dose of a homeopathic medicine within 24 hours the veil lifted and his autistic behaviors completely resolved over the next few months as his language and development accelerated patient was seen again recently at age 22 with an acute onset of anxiety. The same homeopathic medicine was prescribed with resolution of symptoms. A. montana 1000 K could reduce post-operative blood and seroma collection in women undergoing unilateral total mastectomy.	C
2017	Andre S	American Journal of Homoeopathic Medicine 2017; 110(3): 32-35	Aspergillus pneumonia	Case of refractory aspergillus pneumonia: A homeopathic medicine case report.	Case report	1	Aspergillosis is the name given to a wide variety of diseases caused by infection by fungi of the genus Aspergillus. Allopathic treatment involves the use of antifungals for a prolonged period of time, due to the increasing resistance of these organisms to drug treatment. Homoeopathic medicine offers an effective and safe therapeutic intervention for the complete resolution of this illness as described in the following case of a 54-year-old male with drug resistant pulmonary aspergillosis.	C

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
2017	Nossaman	American Journal of Homoeopathic Medicine 2017; 110(3): 36-41	Pneumonia	Five Cases of Pneumonia Cured With Homoeopathy	case series	5	five cases of “atypical or walking pneumonia” treated with homeopathic medicines. In each case, the patient (or in the case of a child, the parent) expressed the desire to have this form of treatment, with the proviso that allopathic treatment could be instituted in the event of a significant worsening of the condition. Keywords: individualized treatment; pneumonia, homeopathic treatment of; Bryonia, Calcarea carbonica, Natrum muriaticum, Opium, Pyrogenium.	C
2017	Saltzman	American Journal of Homoeopathic Medicine 2017; 110(3): 41-43	Pneumonia	A Case of Mycoplasma Pneumonia	Case report	1	A nine-year-old male with Mycoplasma pneumonia that spread rapidly throughout his class was treated with homeopathic medicine that resulted in the rapid and complete resolution of the condition. The use of Homoeopathy in lieu of antibiotics to treat this common condition is highly significant in light of the growing epidemic of antimicrobial resistance.	C
2017	Lendwe	American Journal of Homoeopathic Medicine 2017; 110(3): 44-47	Pneumonia	A Case of Koch’s Pneumonia with Pleural Effusion	Case report	1	This is the case of a 45 year old male with an acute case of Koch’s pneumonia with pleural effusion which completely resolved with the correct homeopathic medicine prescribed according to the Law of Similars. Radiographic evidence is provided.	C
2017	Wadhvani G	American Journal of Homoeopathic Medicine 2017; 110(3): 19-23.	Mumps	Ten cases of mumps treated at a primary health care center in India.	case series	10	The Delhi Government Homoeopathic Dispensary, a primary health care center in Aali Village, New Delhi, witnessed a sporadic surge in cases of mumps during the months of May and June 2015. The cases were treated successfully using different homeopathic medicines prescribed according to the Law of Similar.	C
2017	Anderson DJ	Homœopathic Links 2017; 30(03): 160-163		Refining the Translation of Accurate perceptions into an Accurate Prescription: A Case of Beaucarnea recurvata.	Case report	1	The author describes the challenge the homeopath has in making an accurate translation of a well-perceived and well-taken case into an accurate prescription. Using a case spanning 25 years	C

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
							of mostly non-helpful prescriptions, he describes how utilizing the seven parameters of Jan Scholten's analytical framework of perceiving and conceptualizing human suffering and the Plant kingdom guided him to an accurate and highly effective remedy.	
2017	Scholten J.	Homœopathic Links 2017; 30(03): 164-165		A Case of Simaruba Cedron.	Case report	1	The case shows strong aspects of the Silver series, Phase 5 and Phase 6. Stage 9 is the information that comes from the case	C
2017	Marty B.	Homœopathic Links 2017; 30(03): 166-172		Resolving the Rift between High Culture and Instinct: <i>Bergenia ciliata</i> .	Case report	1	The case of a 34-year-old mother and naturopath progresses in a deeper way after applying Jan Scholten's plant system to arrive at <i>Bergenia ciliata</i> . The patient is able to integrate and solve her conflict between her intuitive and rational sides, which for her parallels her struggle to be herself in high mainstream society.	C
2017	Deborah C	Homœopathic Links 2017; 30(03): 173-174	Depression and burn out	I would Like to be a Healthy Egoist': A Case of <i>Ceratostigma willmottiana</i> .	Case report	1	This is the case of a woman suffering from depression and burnout, dating back to a childhood where she felt that she had to put all her own desires and ambitions aside due to the family situation: a drunken father and a mother who cared for him but had little time for her children. It was only with the help of the Plant theory that a suitable remedy was found.	C
2017	Wadhvani G	Homœopathic Links 2017; 30(03): 179-182	Secondary Infertility	Bursting the Bubble: A Case of Secondary Infertility.	Case report	1	A single dose of indicated homeopathic remedy helped her conceive during the following month. In contrast with the fertility specialists, homeopathic treatment addresses the entire underlying bio-psycho-social dimension under a single roof.	C
2017	Sally W.	Homœopathic Links 2017; 30(03): 175-178	Autism	Apiaceae and Autism.	Case report	2	This article discusses the use of remedies from the Apiaceae order of plants in cases pertaining to autism.	C
2017	Wandile	Homœopathic Links 2017; 30(03): 189-194	Migraine	Migraine and the Scope of Homoeopathy.	RE-VIEW		More research and clinical trials with improved trial designs are warranted. Publications of large numbers of homeopathic case studies worldwide, long-term	C

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
							observational studies of treated migraine patients having no further migraine recurrences are needed to see the role of Homoeopathy for the complete cure.	
2017	Sathye SS	Indian J Res Homoeopathy, 2017, 11(4), 249-256	Myopia	Effect of homoeopathic preparation of Ruta graveolens on the progression of childhood myopia before, during and after cessation of treatment: A retrospective study	OBS	10	Mean AMPR before treatment was $-1.10 D (\pm 0.53)$ . After Ruta treatment, there was a significant reduction of $-0.27 D (\pm 0.32)$ in AMPR ( $t = -4.13$ , $P = 0.003$ ). After stopping the treatment for an average of 10 months, mean AMPR was $-0.46 D (\pm 0.49)$ , but this change was insignificant ( $t = 1.21$ , $P = 0.26$ ).	B
2017	Akhil B G.	Indian J Res Homoeopathy 2017;11:177-83	Atopic respiratory complaints	An observational study on usefulness of Bromium 30C in atopic respiratory complaints by assessing serum immunoglobulin E levels.	OBS	30	ANOVA for repeated measures showed $P = 0.000$ , which is highly significant. Pairwise comparison of serum IgE levels in before and during, during and after treatment groups showed $P = 0.007$ , which is highly significant. Pairwise comparison of serum IgE levels in during and after treatment group showed $P = 0.016$ , which is significant.	B
2017	Wadhwa B.	Indian J Res Homoeopathy 2017;11:196-202	Fibroadenosis	A case report of fibroadenosis alleviated with Homoeopathy.	Case report		Fibroadenosis in 31-year-old female who was treated successfully with individualised homoeopathic medicine within 6 months with no recurrence. Phytolacca was prescribed as a constitutional remedy on the basis of totality of symptoms and after repertorisation. Investigatory procedures such as mammography and ultrasonography were done before and after to record resolution of cysts. The patient has been observed for more than 1 year without recurrence which can be considered as near permanent cure through individualised homoeopathic treatment.	B
2017	Aaron To	Homoeopathy 2017; 106(2): 79-86	Diabetes	Individualized homeopathic treatment in addition to conventional treatment in	OBS	27	Compared with the conventional treatment only group, the Homoeopathy group had higher baseline FPG ( $p = 0.044$ ), and more patients had a long ( $>20$ years) duration of diabetes	B

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
				type II diabetic patients in Hong Kong – a retrospective cohort study			( $p = 0.006$ ), and a history of cardiac events ( $p = 0.022$ ). The mean difference in FPG in the Homoeopathy group was significantly greater than in the control after 12 months: $-2.24$ mmol/L (95% confidence interval [CI]: $-3.47$ to $-1.01$ ) vs $0.16$ mmol/L (95% CI: $-1.72$ to $2.04$ ), $p = 0.001$ . The mean difference in glycated haemoglobin (HbA1c) was also significantly greater, $-1.11\%$ (95% CI: $-2.17$ to $-0.05$ ) vs $0.08\%$ (95% CI: $-1.37$ to $1.53$ ), $p = 0.046$ . Poorer baseline glycaemic control was associated with better outcome ( $r = -0.750$ , $p < 0.001$ ), but not the duration of diabetes ( $r = 0.058$ , $p = 0.772$ ).	
2017	Mahesh S	Am J Case Rep. 2017; 18: 1276–1283	Vitiligo	Homoeopathic Treatment of Vitiligo: A Report of Fourteen Cases	Case series	14	In 14 patients with vitiligo treated with individualized Homoeopathy, the best results were achieved in the patients who were treated in the early stages of the disease. We believe that Homoeopathy may be effective in the early stages of vitiligo, but large controlled clinical studies are needed in this area.	C
2017	Ostermann JK	Plos ONE 2017	Cost analysis	A retrospective cost-analysis of additional homeopathic treatment in Germany: Long-term economic outcomes	OBS	21939	Data from 21,939 patients in the Homoeopathy group (67.4% females) and 21,861 patients in the control group (67.2% females) were analysed. The costs of the two groups converged over time, cost differences remained over the full 33 months. For all diagnoses, Homoeopathy patients generated higher costs than control patients	B
2018	Samuels N	Integr Cancer Ther. 2018 Jun;17(2):486-492.	Oncology	Feasibility of Homoeopathic Treatment for Symptom Reduction in an Integrative Oncology Service.	OBS	124	The files of 124 patients (34 males, 90 females) were examined, of which two-thirds reported acquiring and self-administering the homeopathic remedy as prescribed, and nearly three-quarters reporting a beneficial effect. Adherence to the homeopathic treatment regimen was greatest among patients attending a second visit, as opposed to having only telephone/e- mail follow-up ( $P < .005$ ). An association was found between a perceived beneficial effect of treatment	A

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
							with attending a follow-up visit (P = .04), female gender (P = .02), younger age (P = .048), diagnosis of breast cancer (P = .014), and current radiation treatment (vs chemotherapy; P = .003). Patients reporting chemotherapy-induced peripheral neuropathy were also more likely to report a beneficial effect (P = .004), as were female patients reporting hot flashes (P = .005) and those referred by an oncologist (P = .046). No adverse effects were attributed to the homeopathic treatment.	
2018	Adler UC	Integr M ed. 2018 May;16(3):178-184.	Cocaine craving	Double-blind evaluation of Homoeopathy on cocaine craving: A randomized controlled pilot study.	RCT	104	The mean percentage of cocaine-using days in the Homoeopathy group was 18.1% (standard deviation (SD): 22.3%), compared to 29.8% (SD: 30.6%) in the placebo group (P < 0.01). Analysis of the Minnesota Cocaine Craving Scale scores showed no between-group differences in the intensity of cravings, but results significantly favored Homoeopathy over placebo in the proportion of weeks without craving episodes and the patients' appraisal of treatment efficacy for reduction of cravings. Analysis of 12-Item Short-Form Health Survey scores found no significant differences. Few adverse events were reported: 0.57 adverse events/patient in the Homoeopathy group compared to 0.69 adverse events/patient in the placebo group (P = 0.41). A psychosocial rehabilitation setting improved recruitment but was not sufficient to decrease dropout frequency among Brazilian cocaine treatment seekers. Psychosocial rehabilitation plus homeopathic Q-potencies of opium and E. coca were.	A
2018	Raak C	Trials. 2018 Apr 25; 19(1):253.	Post-operative Pain Outcome after monosegmental Spinal microdiscectomy	Hypericum perforatum to improve post-operative Pain Outcome after monosegmental Spinal microdiscectomy (HYP OS):	RCT	100	study is the first trial of classical Homoeopathy that will evaluate the efficacy of homeopathic H. perforatum after monosegmental spinal microdiscectomy. We intend to clarify the potential of homeopathic H. perforatum to reduce surgery-associated pain. Trial registration: German	C

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
				A study protocol for a randomised, double-blind, placebo-controlled trial.			Clinical Trials Register, ID: DRKS00007913 . Registered on 17 October 2014. EudraCT - Nr: 2013-001383-31.	
2018	Yoko U.T	Journal of Alternative and Complementary Medicine 2018, 24(2):187-92p.	Dysbiotic	Case Study of Homoeopathic Bowel Nosode Remedies for Dysbiotic Japanese Patients	OBS	28	Patient number of each grade was +4 (N = 2), +3 (N = 4), +2 (N = 7), +1 (N = 3), 0 (N = 7), with no negative grades. Of the 23 patients analyzed, 69.6% showed some type of improvement, and no harmful effects from taking bowel nosodes were observed; 26% of patients showed major improvement or were "cured." The results suggest that the homeopathic bowel nosodes are a useful method for controlling gastrointestinal disturbances.	A
2018	Brulé D	Homoeopathy . 2018 Aug;107(3):196-201	Fatigue	An N-of-1 Feasibility Study of Homoeopathic Treatment for Fatigue in Patients Receiving Chemotherapy	n-of-1 trial	1	Adequate recruitment was not feasible in this setting. The n-of-1 study design is feasible in this population from the perspective of the ability to complete the trial. No conclusion on the efficacy of Homoeopathy for this individual can be made. It is unclear as to whether multiple treatments of chemotherapy would be an appropriate clinical situation in which to apply the n-of-1 trial methodology.	A
2018	Hotta LM	Homoeopathy 2018; 107(2):	Perennial Asthma	Homoeopathy for Perennial Asthma in Adolescents: Pilot Feasibility Study Testing a Randomised Withdrawal Design.	RCT	40	Effectiveness measures for the Homoeopathy and placebo groups respectively were median number of days of good clinical control: 84 versus 30 (p = 0.18); median number of days of fenoterol use per patient: 3 versus 5 (p = 0.41); visits to an emergency room: 1 versus 6 (p = 0.35); percentage of exclusion due to partly controlled asthma: 36.8% versus 71.4% (p = 0.05). Few Adverse Events were reported.	A
2018	Payrhuber D	Homoeopathy 2018; 107(04): 280-291	Cancer	Reports of Five Cancer Patients with Unusual Course.	Case report	5	The appropriate homeopathic remedy, reflecting the scholten approach, seemed to have beneficial impact on the disease process of the five individuals presented.	C

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
2018	Chabanov D	J Evid Based Integr M ed. 2018 Jan-Dec;	Juvenile Rheumatoid Arthritis	Levels of Health Theory with the Example of a Case of Juvenile Rheumatoid Arthritis	Case report	-	A new method for determining the group and level of health is shown in a case of juvenile rheumatoid arthritis of a generalized form in an 11-year-old girl, treated with classical Homoeopathy. The follow-up of the case is 18 years. The method allows the physician to assess the organism dynamics as a whole during the pathology development.	A
2018	Macias Cortés EDC	Homoeopathy. 2018 Jun 5.	Depression	Response to Individualized Homoeopathic Treatment for Depression in Climacteric Women with History of Domestic Violence, Marital Dissatisfaction or Sexual Abuse: Results from the HOM DEP-MENOP Study.	RCT	133	Homoeopathy versus placebo had a statistically significant association with response to depression treatment after adjusting for sexual abuse (or [95% ci]: 11.07 [3.22 to 37.96]), domestic violence (or [95% ci]: 10.30 [3.24 to 32.76]) and marital dissatisfaction (or [95% ci]: 8.61 [2.85 to 25.99]). Individualized homeopathic treatment is associated with response to depression treatment in climacteric women with high levels of domestic violence, sexual abuse or marital dissatisfaction.	A
2018	Oberai P	Homoeopathy. 2018 Jun	Acute Encephalitis Syndrome	Effectiveness of Homoeopathic Medicines as Add-on to Institutional Management Protocol for Acute Encephalitis Syndrome in Children: An Open-Label Randomized Placebo-Controlled Trial.	RCT	612	The primary outcome, GOS, differed significantly between h and c groups. there was 14.8% death/neuro-vegetative state in the h group compared to 29.8% in the c group. relative risk was 0.49 (95% confidence interval [ci]: 0.36 to 0.68), with absolute risk reduction of 15.0% (95% ci: 8.6 to 21.6%). number needed to treat to prevent one additional death/neuro-vegetative state was 6.6 (95% ci: 4.6 to 11.6). proportional-odds analysis also revealed a greater effect in the h group: odds ratio, 0.40 (95% ci: 0.27 to 0.60). the most frequently used medicines were belladonna (n = 116), stramonium (n = 33), arsenicum album (n = 25), sulfur (n = 18), opium (n = 17), and nux vomica (n = 10). Adjunctive homeopathic medicines may improve clinical outcomes associated with aes.	A

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
2018	Klein-Laansma CT	J Altern Complement Med. 2018 Mar; 22.	Premenstrual Disorders	Semi-Individualized Homoeopathy Add-On Versus Usual Care Only for Premenstrual Disorders: A Randomized, Controlled Feasibility Study.	RCT	60	In the Netherlands and Sweden, 60 women were randomized (UC + HT: 28; UC: 32), data of 47/46 women were analyzed (ITT/PP). After 4 months, relative mean change of DRSP scores in the UC + HT group was significantly better than in the UC group (p = 0.03). With respect to recruitment and different legal status, it does not seem feasible to perform a larger, international, pragmatic randomized trial on (semi-) individualized Homoeopathy for PMS/PMDD.	C
2018	Mahesh S	Complement Med Res. 2018; 25(2):117-121.	Embryonal Carcinoma with Immature Teratoma	Embryonal Carcinoma with Immature Teratoma: A Homoeopathic Case Report	Case report	-	A 3-year-old girl child with EC and immature teratoma underwent surgical removal of the tumor in the ovary, after which the family, when given chemotherapy as the next option of treatment, refused and opted for homeopathic treatment. This case report still demonstrates the potential that Homoeopathy has as a treatment modality for serious pathologies. There have been other case reports where the pathological state was very advanced and yet homeopathic treatment was successful [12]. This is probably because the patients, despite their advanced pathologies, were still in a better condition of health. In such cases, homeopathic medicines can elicit favorable reactions from the immune system [9, 11]. The follow-up has lasted for over 6 years, during which time the dramatic skin eruptions also responded well to Homoeopathy, leaving the girl in an overall healthier state	C
2018	Grise DE	Altern Ther Health M ed. 2018 Mar; 24(2):50-56.	Schizoaffective Disorder	Remission of Schizoaffective Disorder Using Homoeopathic Medicine: 2 Case Reports.	Case report	2	The 2 current case reports demonstrate a successful integrative approach to the treatment of schizoaffective disorder. They illustrate the value of individualized homeopathic prescriptions with proper case management in the successful treatment of that disorder.	C

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
2018	Nwabudike LC.	Complement Med Res. 2018;25(1):52-55.	Acne	Case Reports of Acne and Homoeopathy.	Case report	2	Homoeopathic medicines may be useful as stand-alone treatment of patients with severe acne vulgaris. A case series suggested a remission rate of more than 80% using individualized homeopathic treatment. The treatment remained efficacious long after cessation and is not accompanied by significant side-effects.	A
2018	Antonelli	Health Soc Care Community. 2019;27:824–847	Homoeopathic care	Reinterpreting homoeopathy in the light of placebo effects to manage patients who seek homoeopathic care: A systematic review	RE-VIEW	17	The efficacy of homoeopathy can be considered comparable to placebo. Open-label placebo treatments can be effective in some conditions. Homoeopathy can be reinterpreted in the light of placebo effects as a placebo treatment to manage patients who seek homoeopathic care and to reconcile them with mainstream medicine in a sustainable way.	A
2018	Rossi E	OBM Integrative and Complementary Medicine 2018;3(3):018;	Breast cancer	Homoeopathy and Complementary Integrative Medicine, Dietary and Lifestyle Advices to Reduce Adverse-Effects of Anti-Cancer Therapy: A Cohort Study with Breast Cancer Patients	OBS	204	The most frequently treated symptoms were the adverse effects due to anti-cancer therapies (84.3%), such as endocrine therapy (36.3%), chemotherapy (33.3%), radiotherapy (9.8%), and surgery (4.9%). The treated symptoms caused by cancer were 25.5% and symptoms caused by comorbidities were 21.6%. A comparison of clinical conditions before and after treatment revealed a significant amelioration of the following symptoms: hot flashes ( $p < 0.01$ ), nausea ( $p < 0.01$ ), fatigue ( $p < 0.01$ ), anxiety ( $p < 0.05$ ), depression ( $p < 0.01$ ), insomnia ( $p < 0.01$ ), mucositis ( $p < 0.01$ ), and joint pain ( $p < 0.01$ ).	B
2018	Laansma CT	The Journal of Alternative and Complementary Medicine. Jul 2018.684-693	Pre menstrual disorders	Semi-Individualized Homoeopathy Add-On Versus Usual Care Only for Premenstrual Disorders: A Randomized, Controlled Feasibility Study	RCT		60 women were randomized (UC + HT: 28; UC: 32), data of 47/46 women were analyzed (ITT/PP). After 4 months, relative mean change of DRSP scores in the UC + HT group was significantly better than in the UC group ( $p = 0.03$ ).	A

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
2018	Vob HW	Drug Res (Stuttg) 2018; 68(08): 444-449	Dry cough	Efficacy and tolerability of a complex homeopathic drug in children suffering from dry cough-A double-blind, placebo-controlled, clinical trial	RCT	180	The Cough Assessment Score showed an improvement of $5.2 \pm 2.6$ points for children treated with verum and $3.2 \pm 2.6$ points in the placebo group ( $p < 0.0001$ ). The difference of the least square means of the improvements was $1.9 \pm 0.4$ . The effect size of Cohen's $d$ was $d = 0.77$ . In all secondary parameters the patients in the verum group showed higher rates of improvement and remission than those in the placebo group. In 15 patients (verum: $n = 6$ ; placebo: $n = 9$ ) 18 adverse drug reactions of mild or moderate intensity were observed.	A
2018	Laansma CT	Complement Med Res 2018;25:173-182	Premenstrual disorders	Evaluation of a Prognostic Homoeopathic Questionnaire for Women with Premenstrual Disorders	OBS	145	A positive prognostic value ( $LR \geq 1.5$ ) was found in 34 keynote symptoms with a prevalence of 10–40%, with 10 symptoms already being connected to the corresponding homeopathic medicine in the algorithm. For example, the symptom 'common cold of the nose before menstruation' indicated Magnesium carbonicum with $LR = 7.47$ (confidence interval (CI) 3.90–14.28). (2) Pearson's correlations for the reliability evaluation varied from 0.69 to 0.84	B
2018	Denisova	Am J Case Rep. 2018; 19: 1474–1479.		Obesity, Dysfunctional Uterine Bleeding, and Autonomic Dystonia	Case report	1	A 39-year-old Russian female who developed multiple problems after severe emotional stress was treated with individualized classical homeopathic therapy. Obesity, dysfunctional uterine bleeding, and dysautonomia were pathologies that showed improvement.	C
2018	Lamba CD	Homœopathic Links 2018; 31(04): 254-258	Idiopathic trigeminal neuralgia	Idiopathic Trigeminal Neuralgia: A Case Report	Case report	1	a 51-year-old woman diagnosed with idiopathic trigeminal neuralgia (ITN) presented with complaints of pain over right side of the face with redness of the eyes and excessive lachrymation since 5 years with weekly acute episodes of shooting pain. Chelidonium was chiefly prescribed followed by few doses of Spigelia as per indications which provided adequate pain relief.	C

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
							The complaints flared up following stressful circumstances for which Pulsatilla was prescribed after detailed case taking. The frequency, duration and intensity of pain reduced after homeopathic treatment. The need for conventional medicine was also reduced. This suggests positive role of individualised homeopathy in the treatment of ITN.	
2018	Erkan E	The European Research Journal 2018		The efficacy of homeopathic Arnica montana 200 CH on dental surgical treatments: a double-blind, placebo-controlled study	RCT	79	Arnica montana did not appear to significantly prevent post-operative swelling and pain when compared to the placebo ( $p < 0.05$ ).	A
2018	Gupta G	Homœopathic Links 2018; 31(03): 209-219	Benign Prostatic Hyperplasia.	Homoeopathic Treatment of Benign Prostatic Hyperplasia: A Case Series	OBS	5	Baseline and post-treatment parameters were assessed, which showed significant improvement in post-treatment values along with relief of symptoms in all five patients.	C
2018	Kundu T	Complementary Medicine Research 2018;25(5):306-312	Haemophilia	Homoeopathic Medicine Reduces Pain and Hemarthrosis in Moderate and Severe Hemophilia: A Multicentric Study	OBS	343	1,679 episodes of hemarthrosis in major joints were encountered between December 2007 and March 2014, in 343 patients. In 1,580 of the 1,679 hemarthrosis episodes (94.1%), bleeding/inflammation was arrested and pain relieved with homeopathic medication. Additional factor concentrate was required in 99 patients (4.48%). The mean pain score improved from $6.88 \pm 2.118$ to $1.5 \pm 0.34$ over 6-24 h following the homeopathic medicines ( $p < 0.0001$ ). The swellings were also substantially reduced ( $p < 0.001$ ). The number of joint bleeds per month was reduced significantly under the influence of therapy ( $p < 0.0001$ ), showing the long-term disease-modifying effect of the treatment.	B
2018	Fibert P	Homoeopathy 2018; 107(S 01): 55-78	ADHD	Preliminary Feasibility and Clinical Results of a Pilot Study of Treatment by Homeopaths for	RCT	124	Assessment of 6-month outcomes will be conducted in March 2017. One hundred and fifty participants were recruited to the cohort between September 2015 and 2016, of whom 124	A

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
				Children with ADHD using the Trials within Cohorts (TwiCs) Design			were eligible for the pilot study. Measurement of outcomes was feasible, although non-return of measures was a feature. Delivery of the interventions face to face and online was feasible and provided flexibility for this population.	
2018	Gadde P	Indian J Res Homoeopathy 2018;12(3)	Diabetic foot ulcer	Integrative management of diabetic foot ulcer with Homoeopathy and standard care	Case report	1	A case of chronic DFU, which has been refractory to the conventional management, treated satisfactorily with Homoeopathy. It has been observed that, with homoeopathic treatment, apart from healing of the ulcer, the general health of the patient has also improved.	C
2018	Sahoo A R	World Journal of Pharmaceutical Research 2018; 7 (13): 185-200.	UTI	A REVIEW ON RESEARCH EVIDENCES IN HOMOEOPATHY FOR URINARY TRACT INFECTIONS	RE-VIEW	14	Although positive effects of homoeopathic medicines on UTI cases or on E. coli, in in vitro or animal models were observed, yet the number and grade of evidences were poor, as no randomized control trial could be identified. Randomized control trials on homoeopathic treatment of UTI in humans, rigorous in vitro studies and animal experimentations are suggested to ascertain the effects of homoeopathic medicines on E. coli.	A
2018	Sahoo A R	Ra Journal of Applied Research 2018; 4(7)	UTI	Homoeopathic Medicine 'Cantharis 30CH' Substituted Antibiotic: A Case Report of Infantile Urinary Tract Infection.	Case report	1	The case report that a well-selected homoeopathic similimum, in right potency and dosage can cure awful cases of E.coli infections even in infants and can replace antibiotics and save the little ones from the adverse effects of antibiotics.	C
2018	Vikseen P	European Journal of Integrative Medicine 2018; 22:22-36	Depression	Homoeopathy in the treatment of depression: a systematic review	RE-VIEW	18	Limited evidence from two placebo-controlled double-blinded trials suggests HMPs might be comparable to antidepressants and superior to placebo in depression, and patients treated by homeopaths report improvement in depression. Overall, the evidence gives a potentially promising risk benefit ratio. There is a need for additional high quality studies	A

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
2018	Mahesh S	J Med Life. 2018 Jan-Mar; 11(1): 75–82.	Dengue	Could Homoeopathy Become An Alternative Therapy In Dengue Fever? An example Of 10 Case Studies		10	We present a retrospective case series of 10 Indian patients who were diagnosed with dengue fever and treated exclusively with homeopathic remedies at Bangalore, India. This case series demonstrates with evidence of laboratory reports that even when the platelets dropped considerably there was good result without resorting to any other means.	C
2018	Gaertner K	Complementary Therapies in Medicine 2018; 41: 267-270	Cancer	Complementary individual Homoeopathy in paediatric cancer care: A case series from a University Hospital, Switzerland	case series	4	four characteristic patient histories, in which iHOM was used in addition to standard treatment for mucositis, permissive tissue infection, insomnia and affective dysfunctions. All four patients clinically improved in an immediate temporal relationship to the additional treatment.	C
2018	Achstetter K.	Complement Med Res 2018;25:383-390	General	Use of Self-Medication with Homoeopathy in Germany: Results of an Online Questionnaire Survey	OBS	665	A total of 665 users who responded to the questionnaire were included. Most of the respondents were women (92%) in their mid-forties with high educational status. In total, 43% of the participants reported a household member working in the health sector. Books (65%) and Internet (47%) were the most common sources of information. Consultations in pharmacies - with a mean duration of 10 min - were likely to be used (60%). Homoeopathic drugs were mainly used in the potency D12 (55%), for a duration of 5 days, 3 times daily, with 5 globules. Homoeopathic drugs were mainly used due to good therapeutic experiences in the past (82%). Indications for use were acute diseases (91%), particularly colds (86%), as well as chronic diseases (51%) and prevention (47%). The selection of a homeopathic drug took the participants 25 min on average.	B
2018	Diaz-Saez G	Homoeopathy 2018; 107(S 01): 55-78	Respiratory and ENT	Review of Effectiveness Studies of Homoeopathy for Respiratory and ENT Complaints	RE-VIEW	10	The observational studies of better quality point out that Homoeopathy could be useful in the approach to respiratory and ENT ailments. Additionally, this strategy seems to reduce the use of conventional drugs and antibiotics in particular, as recommended by the clinical practice guidelines.	A

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
2018	Fixen A	Homoeopathy 2018; 107(2): 99-114	URTI	Homoeopathy in the Age of Antimicrobial Resistance: Is It a Viable Treatment for Upper Respiratory Tract Infections?	RE-VIEW	24	A growing body of evidenced-based research suggests that Homoeopathy can be used to prevent and treat upper respiratory tract infections . Results for Homoeopathy treatment were positive overall, with faster resolution, reduced use of antibiotics and possible prophylactic and longer-term benefits.	A
2018	Pathak R	Clinical and Experimental Homoeopathy May 2018; 5(2):27-29	Cholelithiasis	A cured case of cholelithiasis with homeopathic medicines	Case report	1	A 26 year old, female patient presented with pain in upper abdomen and Ultrasonography report showed gall bladder stone of 2.8mm. Nux v 30C followed by 1M was given. Patient reported gradual relief of symptoms and her two follow up ultrasounds showed no gall bladder stones. The case shows that the Homoeopathic medicine, chosen on the basis of individualization, helps in the treatment of seemingly untreatable cases like gall bladder stones	C
2018	Tapakis L	Homoeopathy 2018; 107(S 01): 55-78	Panic attacks	Analysis of Cases with Panic Attacks Treated with Classical Homoeopathy	OBS	191	The most commonly prescribed remedies were Aconitum, Phosphorus, Arsenicum album, Stramonium and Natrum muriaticum. The remedies with the best reported results were Arsenicum album, Argentum nitricum, Natrum muriaticum, Kali arsenicosum, Phosphorus, Stramonium, and Aconitum. The prescribed remedies' success rate ranged from 45 to 70%. The most frequent symptoms that accompany panic attacks—as derived from the used rubrics—are mental symptoms with prevailing “anxiety about health” and “fear of death.”	B
2018	Jimenez JI	Homoeopathy 2018; 107(S 01): 55-78		Use of Homoeopathic Medicines in a Public Primary Care Setting	OBS		63.4% of the patients had used Homoeopathy at least once, which was independent of gender and age. Of them, 55.6% were treated for chronic conditions. Homoeopathy was the only prescription in 46.7% of cases (main in 8.9% and adjuvant in 44.4%). Most frequently treated complaints were musculoskeletal (28.9%), respiratory (17.8%), psychic (16.7%), cardiovascular (7.8%), and cutaneous (6.7%).	B

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
							The clinical outcome was favorable (improved or cured) in 57.8% of cases, 60% of the acute and 56% of the chronic cases. No adverse reactions were recorded.	
2019	Andrade DCDS	Homoeopathy 2019 Feb 8.	Hot Flashes in Menopausal Women	Efficacy of a Homoeopathic Medicine of Capsicum frutescens L. (Solanaceae) in the Treatment of Hot Flashes in Menopausal Women: A Phase-2 Randomized Controlled Trial.	RCT	40	The effect of Malagueta on the primary outcome, the intensity of hot flashes, assessed by MYMOP, was superior to that of placebo over the 4 weeks of treatment, with worsening in both groups after treatment was interrupted (after week 4, $p < 0.001$ in ordinal logistic regression). The odds ratio for treatment response (reduction of at least three MYMOP categories) was 2.78 (95% confidence interval, 0.77 to 10.05). Treatment with Malagueta, compared with placebo, also reduced the intensity of the secondary symptoms ( $p = 0.001$ ) and improved level of activity ( $p = 0.025$ ) and well-being ( $p = 0.008$ ).	B
2019	Conde Diez S	Respir Med. 2019 Jan; 146:96-105.	COPD	Impact of a homeopathic medication on upper respiratory tract infections in COPD patients: Results of an observational, prospective study (EPOXILO).	OBS	219	There was a significant reduction in mean number of URTIs during the follow-up period in OG compared to CG ( $0.514 \pm 0.722$ vs. $1.037 \pm 1.519$ , respectively; $p = 0.014$ ). Logistic regression analysis showed a 3.3-times higher probability of suffering $\geq 2$ URTI episodes in CG ( $p = 0.003$ , $n = 72$ ). OG patients having $\geq 1$ URTI also had a significant reduction in mean URTI duration per episode ( $3.57 \pm 2.44$ days OG vs. $5.22 \pm 4.17$ days CG; $p = 0.012$ ). There was no significant difference in mean number of exacerbations, mean duration of exacerbations, or QoL between OG and CG. There was a greater decrease in proportion of patients using corticosteroids for exacerbations between baseline and visit 2 in OG compared to CG (22.1% vs. 7.5% fewer respectively, $p = 0.005$ ). Exacerbator phenotype patients had a significant decrease in number of URTIs ( $0.54 \pm 0.72$ vs. $1.31 \pm 1.81$ ; $p = 0.011$ ), and fewer COPD exacerbations ( $0.9 \pm 1.3$ vs. $1.5 \pm 1.7$ ; $p = 0.037$ ) in OG vs. CG, respectively.	A

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
2019	Michael J	Complementary Therapies in Medicine Volume 43, April 2019, Pages 53-59	Insomnia	Efficacy of individualized homeopathic treatment of insomnia: Double-blind, randomized, placebo-controlled clinical trial.	RCT	60	Five patients dropped out (verum: 2, control: 3). Intention to treat sample (n = 60) was analyzed. Trial arms were comparable at baseline. In the verum group, except sleep diary item 3 (P = 0.371), rest of the outcomes improved significantly (all P < 0.01). In the control group, there were significant improvements in diary item 6 and ISI score (P < 0.01) and just significant improvement in item 5 (P = 0.018). Group differences were significant for items 4, 5 and 6 (P < 0.01) and just significant (P = 0.014) for ISI score with moderate to large effect sizes; but non-significant (P > 0.01) for rest of the outcomes.	A
2019	Cláudia Tavares-Silva	Phytomedicine, 18 February 2019, 152869	Sleep bruxism	Homoeopathic medicine of <i>Melissa officinalis</i> combined or not with <i>Phytolacca decandra</i> in the treatment of possible sleep bruxism in children: a crossover randomized triple-blinded controlled clinical	RCT	52	Significant reduction of SB was observed in VAS after the use of Placebo (-1.72 ± 0.29), MO (-2.36 ± 0.36), PD (-1.44 ± 0.28) and MO+PD (-2.21 ± 0.30) compared to baseline (4.91 ± 1.87). MO showed better results compared to PD (p = 0.018) and Placebo (p = 0.050), and similar result compared to MO+PD (p = 0.724). The sleep diary results and TAS results were not influenced by any of the treatments. No side effects were observed after treatments.	C
2019	Yde C	Homoeopathy 2019 Feb;108(1):24-32	Cancer	Reasons for Use of and Experiences with Homoeopathic Treatment as an Adjunct to Usual Cancer Care: Results of a Small Qualitative Study	OBS	5	Five patients, diagnosed with cancer, were interviewed. On the basis of qualitative interviews five themes emerged: concerns and hopes, obstacles and support, internal health locus of control, whole person approach, and improved well-being.	C
2019	Mahesh S	J Med Life 2019 Jan-Mar;12(1):49-55	ANCA Negative Rapidly Progressive Necrotising Crescentic Glomerulonephritis with Severe Renal Insufficiency	Individualised Homoeopathic Therapy in ANCA Negative Rapidly Progressive Necrotising Crescentic Glomerulonephritis with Severe Renal Insufficiency - A Case Report.	Case report		A 60-year-old Indian woman was treated with classical Homoeopathy for ANCA-negative RPGN, and after one year of treatment, serum creatinine and other parameters indicating renal injury dropped steadily despite the withdrawal of immunosuppressive drugs; renal dialysis, which was conducted twice a week initially, was made	A

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
							rarer and stopped after one year. Classical Homoeopathy may be considered a potential therapeutic modality in severe pathologies.	
2019	Sultana N	Homoeopathy. 2019 Nov;108(4):240-247.	Temperament	Importance of Temperament in Individualized Homoeopathic Prescription: Evaluation by an Open, Randomized, Pilot Trial.	RCT	50	The two groups were comparable at baseline. Over 3 months of intervention, there was significant improvement ( $p < 0.01$ ) in each group. Though improvement in the EQ-5D-5L score was greater in the temperament (+) group (mean difference, 2.4; 95% confidence interval [CI], 0.2 to 4.5), the change did not achieve the threshold for statistical significance ( $p = 0.029$ ). Improvement in VAS score was significantly greater in the temperament (+) group than in temperament (-) patients (mean difference, 15.2; 95% CI, 4.9 to 25.4; $p = 0.004$ ).	A
2019	Fibert P	Eur J Pediatr. 2019 Apr 24	ADHD	Rethinking ADHD intervention trials: feasibility testing of two treatments and a methodology	RCT	125	Results according to carers assessments at 6 months were as follows: $t = 1.08$ , $p = .28$ (-1.48, 4.81) SMD .425 (hom); $t = 1.71$ , $p = .09$ (-.347, 5.89), SMD = .388 (NT). Teachers' responses were too few and unstable. No serious treatment adverse events occurred.	A
2019	Mourão L	Braz Dent J. 2019 Mar-Apr;30(2):139-145	Periodontal Treatment in Type II Diabetic Patients	Homoeopathy and Periodontal Treatment in Type II Diabetic Patients: a 1-Year Randomized Clinical Trial	RCT	80	Both groups showed significant improvement throughout the study, for most of the parameters studied, but TG presented significant gain of CAL at 1 and 12 months compared to CG. Mean glucose and glycated hemoglobin significantly decreased in both groups after 6 and 12 months. However, there was a significantly further reduction of these parameters in TG, as compared to CG. Homoeopathy as supplement of NSPT may further improve health condition, including glycemic control, in DMII patients with CP.	A
2019	Raak C	Complement Ther Med . 2019 Aug;45:136-141.	Infantile colic	Effectiveness of a homeopathic complex medicine in infantile colic : A randomized multicenter study	RCT	125	The differences in total complaints and objective symptoms scores between baseline and day 10, estimated from the ANCOVA model, were found to be highly significant ( $p < 0.0001$ ; ITT) in favor of	A

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
							Enterokind, both for complaints ( $\Delta = -2.38$ ; 95% confidence interval (CI): [-2.87; -1.89]) and for objective symptoms ( $\Delta = -2.07$ ; 95% CI: [-2.65; -1.49]). 1 adverse event (AE), vomiting, occurred under Enterokind and was rated to be unlikely related to it; 4 AEs occurred under Simethicone. All AEs were non-serious.	
2019	Pramanick J	Advances in Integrative Medicine, Available online 11 June 2019	Post-stroke hemiparesis	An open label randomized pragmatic non-inferiority pilot trial comparing the effectiveness of Curare 30cH against individualized homeopathic medicines in post-stroke hemiparesis	RCT	50	Five subjects dropped out (Curare: 3, IH: 2). Groups were comparable at baseline (all $P > 0.01$ ). In both groups, both the outcomes improved significantly after 3 and 6 months. Non-inferiority was demonstrated by Curare 30cH against IH, both over 3 months (mean difference = 0.04, lower 95% confidence limit -0.195, $t = 7.429$ , $P < 0.001$ ) and 6 months (mean difference = -0.2, lower 95% CI 0.474, $t = 4.899$ , $P < 0.001$ ). No adverse events were reported from either group. safe, still, being a pilot trial, no definite conclusion could be drawn. Further exploration of both efficacy and effectiveness of either of the therapies is necessary by adequately powered trials and independent replications.	C
2019	Dutta A	Homoeopathic Links 2019; 32(01): 023-026	Endometrial Polyp	Homoeopathic Treatment of Large Endometrial Polyp: A Case Report	Case report		A 27-year-old woman presented with severe menstrual and intermenstrual bleeding along with severe pain abdomen during menstruation. After relevant investigation, it was diagnosed as a case of large endometrial polyp. On the basis of presenting symptoms, the patient was treated with succession of remedies. After a considerable period of treatment, complete disappearance of the polyp was found. Rationale of this case report is to show better prognosis of a case of uterine polyp with homoeopathic intervention.	C
2019	Helmond W.V	Homoeopathic Links 2019; 32(01): 027-030	PCOS	A Case of PCOS Treated with Homoeopathy	Case report		This article presents a case of a young woman with polycystic ovary syndrome (PCOS) who has set her mind on having a child. Then after finally the woman becomes pregnant, there is the question 'is this what I really want?'	C

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
2019	Sahoo A R	Journal of Drug Delivery and Therapeutics, 8(6), 1-7.	Urinary Stones	Treatment of Urinary Stones with Constitutional Homoeopathic Medicines—Two Evidence-Based Case Reports	Case report	2	Two cases of ureteric calculi are presented here, who were prescribed on the basis of constitutional symptoms and got good results.	B
2019	Nayak D	Homoeopathy. 2019 Aug;108(3):150-157	Thrombocytopenia Due to Dengue:	Effect of Adjuvant Homoeopathy with Usual Care in Management of Thrombocytopenia Due to Dengue: A Comparative Cohort Study.	OBS	283	There was a statistically significantly greater rise in platelet count on day 1 of follow-up in the H+UC group compared with UC alone (mean difference = 12,337; 95% confidence interval [CI], 5,421 to 19,252; $p = 0.001$ ). This trend persisted until day 5 (mean difference = 14,809; 95% CI, 1,615 to 28,004; $p = 0.02$ ). The time taken to reach a platelet count of 100,000/mm <sup>3</sup> was nearly 2 days earlier in the H+UC group compared with UC alone (H+UC: 3.44 days $\pm$ standard error of the mean [SEM] 0.18; 95% CI, 3.08 to 3.80; UC: 5.28 days $\pm$ SEM 0.29; 95% CI, 4.71 to 5.86; $p < 0.001$ ).	A
2019	Yakir M	Homoeopathy. 2019 Aug 21	Premenstrual Syndrome	A Placebo-Controlled Double-Blind Randomized Trial with Individualized Homoeopathic Treatment Using a Symptom Cluster Approach in Women with Premenstrual Syndrome	RCT	105	Forty-three women in the active medicine group and 53 in the placebo group received the allocated intervention with at least one follow-up measurement and their data were analyzed. Significantly greater improvement of mean PM scores was measured in the active medicine group (0.443 [standard deviation, SD, 0.32] to 0.287 [SD, 0.20]) compared to placebo (0.426 [SD, 0.34] to 0.340 [SD, 0.39]); $p = 0.043$ .	C
2019	Nwabudike LC	ExpTher Med. 2019 Aug;108(2):943-948	Lichen planus	Case series of an alternative therapy for generalised lichen planus: Four case studies	case series	4	Results suggest that recalcitrant, long-standing, generalized LP, with mucosal involvement may respond to individualized Homoeopathy. Randomised controlled trials also support the potential role of Homoeopathy in the therapy of LP	C
2019	Nwabudike LC	Homoeopathy 2019 Nov;108(4):277-284.	Mycosis Fungoides	Homoeopathy as Therapy for Mycosis Fungoides: Case Reports of Three Patients.	Case report	3	All cases remitted following homeopathic treatment and remained in remission. Side effects were not reported in these cases.	A

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
2019	Nahar L	J Complement Integr Med . 2019 Jun 14;16(4):	Irritable bowel syndrome	An open-label randomized pragmatic non-inferiority pilot trial to compare the effectiveness of Dysentery compound with individualized homeopathic medicines in irritable bowel syndrome	RCT	60	Groups were comparable at baseline (all $p > 0.01$ ). Though intra-group changes were higher favoring IH over DC, group differences were statistically non-significant (all $p > 0.01$ ). Non-inferiority was not demonstrated by DC against IH over 3 months (mean difference = -3.3, SE = 5.2, lower 95% confidence limit -11.9, $t = -0.453$ , $p = 0.674$ ). No adverse events were reported from either group.	C
2019	Gaertner K	Homoeopathy. 2019 Sep 10.	Burning Mouth Syndrome	A Case Report of Burning Mouth Syndrome Treated with Individualised Homoeopathy.	Case report		Over an observation period of 4 years, an increasingly beneficial result from iHOM was noted for oral dysaesthesia and pains as well as for the concomitant symptoms.	C
2019	Gupta G	Homœopathic Links 2019; 32( 02): 064-076	Psoriasis	Psoriasis: Best Case Series	case series	5	Psoriasis is a chronic, non-contagious, autoimmune disease. A case series of five patients successfully treated by homoeopathy is presented herewith to acquaint the homoeopathic professionals about the effectiveness of single individualised constitutional homoeopathic medicine in the treatment of psoriasis.	B
2019	Gupta G	Homœopathic Links 2019; 32( 02): 064-076	Benign Prostatic Hyperplasia.	Clinical Evaluation of Homoeopathic Medicines in Benign Prostatic Hyperplasia.	OBS	30	Marked amelioration of symptoms and reduction in size of prostate gland in BPH subjects were observed after homoeopathic treatment when analysed by AUA score and ultrasonography. There was marked reduction in various symptoms of BPH like nocturia, straining, incomplete sensation after urination, interrupted flow of urination with dribbling of urine and urgency significantly from $21.60 \pm 4.64$ units to $12.23 \pm 3.68$ , that is, 57% reduction in symptoms of obstruction of bladder problem. The reduction was statistically significant ( $p = 0.001$ ). However, transabdominal pelvic ultrasonic scan did not show statistically significant results.	C

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
2019	Bala R	Homoeopathic Links 2019; 32( 02): 105-111	Hyperuricemia	Case Report on Hyperuricemia Presenting as One-Sided Disease	Case report		The case is a one-sided disease, that is, disease in which symptoms are very few, which got cleared up with antisyctic drugs. Thuja and Medorrhinum prescribed in the beginning of the case on the guidelines for one-sided diseases mentioned in Organon of Medicine and later responded very well to Bryonia alba in higher potencies to lower the level of serum uric acid significantly along with long-lasting improvement in signs and symptoms of the patient.	C
2019	Macias	Homœopathic Links 2019; 32( 02): 118-122	Abscess	Case Report of an Abscess in a Bitch Healed with Alternative Medicine.	Case report		This can explain the failure of antibiotics prescribed by another practitioner. The combination of acupuncture, Homoeopathy, and phytotherapy solved the problem satisfactorily in one month. This integrative approach is based on the complementation between Chinese traditional medicine and homeopathic medicine.	A
2019	Bawaskar R	Homœopathic Links 2019; 32( 01): 010-017	Dengue Fever	A Review of Homoeopathic Research in the Prevention and Treatment of Dengue Fever	REVIEW		A literary search through various databases helped identify a few significant studies as one double-blind placebo-controlled trial, one comparative clinical study, one case study and two community-based studies. The community-based studies showed positive results for the role of homoeopathic medicines as a prophylactic medicine. The double-blind placebo-controlled trial showed no difference in outcome between the two groups. The comparative clinical study showed that the homoeopathic combination appeared to be a more potent treatment against dengue fever when compare with standard maintenance therapy. The case study shows favourable results, but the sample size is only of 10 cases.	C
2019	Rath P	Homoeopathic Links 2019; 32(01): 031-035	Dengue	Case Series of Dengue Treated with Homoeopathic Intervention.	case series	4	Four dengue infected patients were treated successfully by homoeopathic medicine Eupatorium perfoliatum without any complication.	B

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
2019	Nath A	Indian J Res Homoeopathy 2019; 13(2):81-90	Post-caesarean backache	The role of homoeopathic treatment in women suffering from post-caesarean backache: An open observational clinical trial	OBS	50	Five subjects dropped out and 45 completed the trial. Intention-to-treat sample (n = 50) was analysed. There were statistically significant reductions in pain rating index percentage score (median 83.3 (IQR 66.7 to 100) vs. median 66.7 (IQR 33.3 to 71.1), P < 0.001); visual analogue scale score (median 7.0 (IQR 6.0 to 8.0) vs. median 6.0 (IQR 4.8 to 7.0), P < 0.001); present pain index score (median 3.0 (IQR 2.0 to 3.0) vs. median 2.0 (IQR 2.0 to 3.0), P = 0.019) and ODQ% score (median 44.0 (IQR 39.5 to 50.0) vs. median 39.0 (IQR 31.9 to 44.0), P < 0.001) over 3 months of treatment. Natrum muriaticum (n = 11, 22%); Staphysagria (n = 8, 16%); Bryonia alba and Rhus toxicodendron (n = 6 each, 12%) and Pulsatilla nigricans (n = 4, 8%) were prescribed frequently.	C
2019	Pal P.	Indian J Res Homoeopathy 2019; 13(1):48-54	Lacrimal gland tumour	Resolution of lacrimal gland tumour by Homoeopathic medicines - A case report	Case report		A female patient named IB, aged 35 years, came with bilateral firm swelling of the lacrimal gland. She started treatment under modern medicine doctors; however, when she was advised for biopsy, for histopathological examination, she preferred to go for Homoeopathy. The swelling was developing gradually for 2 months – painless, no fluctuation, no fixity to skin and underlying structures. After thorough case-taking followed by repertorisation, Calcarea carbonica 1M, two doses were prescribed. The patient reported after 2 months with zero Outcome in Relation to Impact on Daily Living instrument score. Further modification was done in repertorisation, and now Silicea 1M, two doses was prescribed. Treatment continued for 4 more months and no new medicine or further repetition was required.	C
2019	Shaikh I	Indian J Res Homoeopathy 2019; 13(1):55-61	Infantile haemangioma	Role of homoeopathic medicine in the treatment of infantile haemangioma	Case report	2	Two children with infantile haemangioma were treated with homoeopathic medicines, selected on the basis of their totality of symptoms and repertorisation. Each child was followed up every 2–4 weeks' interval, and photographs were	C

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
							taken to assess/compare the vascularity, height (thickness), pliability and pigmentation according to the Vancouver Scar Scale chart. In the 1st case, the score reduced from 9 to 1 in about 10 months of follow-up and showed 88.8% improvement. In the 2nd case, the score reduced from 9 to 0 in about 10 months of follow-up and showed 100% improvement.	
2019	Ranjit Sonny	Indian J Res Homoeopathy 2019 ; 13( 2 ): 125-130	Lumbar spondylosis	Case of lumbar spondylosis treated with Homoeopathic medicine Calcarea fluorica	Case report	1	This case report describes patient with symptoms of recurrent pain in low back for the last 10 years. X-ray of the lumbosacral (L.S.) spine showed features of osteophyte confirming the diagnosis of lumbar spondylosis. After careful case-taking, homoeopathic medicine Calcarea fluorica in different potencies was prescribed as per homoeopathic principles with ever-increasing improvement. Pain in the low back gradually diminished. Ultimately, the patient got rid of all the symptoms with general improvement. After that, he was on placebo for 5 months. X-ray of the L.S spine done after treatment revealed no feature of lumbar spondylosis along with remission of osteophyte.	C
2019	Mahesh S	Clin Case Rep. 2019 Jun 25;7(8):1499-1507.	Psoriasis	Psoriasis cases of same diagnosis but different phenotypes-Management through individualized homeopathic therapy.	case series	6	This case series demonstrates that classical Homoeopathy may have a solution to psoriasis and its complications which goes beyond skin clearance and achieves general well-being. The variety in clinical phenotypes and their response to treatment may be explained on the basis of the theory of "Levels of Health."	B
2019	Yasri S	J Spinal Cord Med. 2019 Jan 9:1	Urinary tract infections	Classical Homoeopathy for the prophylaxis of recurrent urinary tract infections.	OBS	35	Ten patients were in the control group; 25 patients received adjunctive homeopathic treatment. The median number of self-reported UTI in the Homoeopathy group decreased significantly, whereas it remained unchanged in the control group. The domain incontinence impact of the KHQ improved significantly (P = 0.035), whereas the general QoL did not change. The satisfaction with homeopathic care was high.	B

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
2019	Shivadikar A	Indian J Res Homoeopathy 2019;13(4):251:255	Alopecia areata	Evidence- based homoeopathy: Case report of alopecia areata in an 11 year old boy	Case report	1	This is the case of an 11 years old boy with alopecia areata. The case presented here is documented from Dermatology clinic at Regional Research Institute of Homoeopathy at Gudivada, Andhra Pradesh. The patient was treated with individualised homoeopathic medicine over a period of 3 years. There was significant improvement with homoeopathic treatment, with complete disappearance of bald patches without any recurrence.	C
2019	Pannek J	The Journal of Spinal Cord Medicine 2019; 42(4):453-459	Urinary tract infections	Usefulness of classical Homoeopathy for the prophylaxis of recurrent urinary tract infections in individuals with chronic neurogenic lower urinary tract dysfunction	OBS	10+25	Ten patients were in the control group; 25 patients received adjunctive homeopathic treatment. The median number of self-reported UTI in the Homoeopathy group decreased significantly, whereas it remained unchanged in the control group. The domain incontinence impact of the KHQ improved significantly (P = 0.035), whereas the general QoL did not change. The satisfaction with homeopathic care was high. Adjunctive homeopathic treatment lead to a significant decrease of UTI in SCI patients. Therefore, classical Homoeopathy could be considered in SCI patients with recurrent UTI	B
2019	Tsintzas D	Clin Case Rep. 2019 Dec; 7(12): 2526–2533.	Heterotrophic ossification	Heterotopic ossification in a 7-year-old female patient treated with individualized Homoeopathy: A case report	Case report	1	Classical Homoeopathy can be included among the treatment options for congenital heterotopic ossification.	C
2019	Teut M	La Revue d'Homéopathie 2019;10(4):e47-e52		Antibiotic use in clinical studies on Homoeopathy – a systematic review	RE-VIEW	20	Including a homeopathic treatment strategy, particularly for respiratory tract infections, may be an effective way to further reduce antibiotic use in primary care. However, more high quality research on efficacy and effectiveness of Homoeopathy is needed.	A

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
2019	Taneja D	Homoeopathy 2019;108:2-11.	Primary teething	An Assessment of a Public Health Initiative of Homoeopathy for Primary Teething	OBS	11426	Amongst those who enrolled at 6-7 months, a larger proportion of children were approaching expected teething in successive months as compared with children enrolled at 12 months, thus indicating that teething delays, if any, were overcome during this period. Incidence of diarrhoea and URTI showed decrease in the months after enrolment. Children responded favourably to the medicines given by ASHAs at the time of diarrhoea/URTI episodes, and ASHAs expressed satisfaction with the programme.	B
2019	Shukla P	Homoeopathic Links 2019; 32(03): 131-140	Adverse Effects of Radiotherapy and Chemotherapy	A Systematic Review of Controlled Trials of Homoeopathy in Adverse Effects of Radiotherapy and Chemotherapy in Cancer	RE-VIEW		Eight trials were eligible. Few trials were positive, especially those testing complex formulations. Methodological quality was diverse; five trials had 'Unclear' risk of bias. Model validity was compromised. Proof supporting individualised Homoeopathy remained inconclusive.	A
2019	Kundu N	Homoeopathic Links 2019; 32(04): 216-223	Rheumatoid arthritis	Homoeopathic Treatment of Rheumatoid Arthritis: An Open, Observational Trial	OBS	50	Individualised homeopathic medicines seemed to produce promising treatment effects by reducing DAS28 and RADAI scores significantly over 4 months.	B
2019	Sharma B	International Journal of Homoeopathic Sciences 2018; 2(4): 28-30	Atopic dermatitis	Management of atopic dermatitis with Homoeopathy-a clinical study	OBS	40	Follow ups were regularly done at 15 days and a constant relief in symptoms was seen within 6 weeks amongst 75% of the patients. After shifting on to the placebo the satisfaction percentage was still high as 65%; 26 subjects receiving placebo. However, after the end of the study, 32 out of the 40 patients had no symptoms whatsoever.	B
2019	Gupta N	Homoeopathic Links 2019; 32(02): 082-087	Benign Prostatic Hyperplasia.	Clinical Evaluation of Homoeopathic Medicines in Benign Prostatic Hyperplasia	OBS	30	Marked amelioration of symptoms and reduction in size of prostate gland in BPH subjects were observed after homoeopathic treatment when analysed by AUA score and ultrasonography. There was marked reduction in various symptoms of BPH like nocturia, straining, incomplete sensation after urination, interrupted flow	B

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
							of urination with dribbling of urine and urgency significantly from $21.60 \pm 4.64$ units to $12.23 \pm 3.68$ , that is, $\square 57\%$ reduction in symptoms of obstruction of bladder problem. The reduction was statistically significant ( $p = 0.001$ ).	
2019	Frye J	AJHM 2019;Summer: 30-32	Chikungunya	Individualized Homoeopathy Reduces Symptoms of Chronic Chikungunya in Haiti: A Pilot Data-Collection Project	OBS	67	Individualized homeopathic treatment was given to patients , over 25 years old in Haiti. with chronic Chikungunya viral infection. Data gathered from the treatment and follow up from 67 patients was analyzed. Follow-up evaluations of each patient were based on a Visual Analog Scale (VAS) (0-10) for level of current pain and a Quality of Life (QOL) scale (0-3) for the effect of pain on daily activities and completed at baseline and at each follow up. Analysis demonstrated QOL scores changing from 2.27 (+/- 0.62) to 1.46 (+/- 0.77), $p < 0.001$ .	B
2019	Gupta J	Indian J Res Homoeopathy 2019; 13(4):219-228	Menopause	Homoeopathic medicine – Sepia for the management of menopausal symptoms: A multicentric, randomised, double-blind placebo-controlled clinical trial	RCT	88	Eighty-eight patients were considered for primary outcome analysis. The primary outcome measure, i.e., total score of GCS, when compared after 6 months, was reduced from $30.23 \pm 8.1$ to $7.86 \pm 4.6$ in Sepia group (improvement of 73.9%) and from $30.05 \pm 8.9$ to $12.73 \pm 8.3$ in placebo group (improvement of 57.63%) ( $P = 0.001$ ). There was a statistically significant difference between both the groups, when compared after 6 months ( $P = 0.001$ ). With respect to secondary outcome, the total UQOL score was $59.09 \pm 7.74$ for Sepia group and $57.39 \pm 7.80$ for placebo group at baseline, and $62.43 \pm 7.71$ for Sepia group and $63.48 \pm 7.53$ for placebo group after treatment indicating slight difference in quality of life after 6 months.	A
2019	Heudel	Supportive Care in Cancer 2019; 27, 1879–1889	Hot Flashes	Does a homeopathic medicine reduce hot flushes induced by adjuvant endocrine therapy	RCT	299	Median 4w-HFS absolute variation (A, $-2.9$ ; P, $-2.5$ points, $p = 0.756$ ) and relative decrease (A, $-17\%$ ; P, $-15\%$ , $p = 0.629$ ) were not statistically different. However, 4w-HFS decreased for 46 (75%) in A	A

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
				in localized breast cancer patients? A multicenter randomized placebo-controlled phase III trial			vs 48 (68%) patients in P arm. 4w-QoL was stable or improved for respectively 43 (72%) vs 51 (74%) patients ( $p = 0.470$ ). Actheane® could be a promising option, providing an interesting support for better adherence to ET, thereby reducing the risk of recurrence with a good tolerance profile.	
2019	Gupta J	International Journal of High Dilution Research 2019; 18(3-4):47-62	Chronic bronchitis	Management of early years of simple and mucopurulent chronic bronchitis with pre-defined homeopathic medicines – a Prospective Observational Study with 2-Years Follow-Up	OBS	532	532 patients were analyzed based on the intention to treat principle using last observation carry forward method. Mean CBS score reduced from $29.86 \pm 4.5$ at baseline to $12.33 \pm 7.6$ at completion of 2 years. Repeated measures ANOVA, at time points 0 (baseline), 3, 6, 9, 12, 15, 18, 21 and 24 months, showed significant reduction in CBS scores [Wilk's Lambda 0.104, $F=564$ , $df 524$ ; $p=00001$ ]. The FEV1 and FEV1/FVC was maintained within normal limits. 86% prescriptions included Lycopodium, Arsenicum album, Pulsatilla, Phosphorus, Stannum metallicum, Calcarea carbonica, Silicea, Bryonia alba	B
2019	Diez	Respiratory Medicine 2019; 146: 96-105	URTI	Impact of a homeopathic medication on upper respiratory tract infections in COPD patients: Results of an observational, prospective study (EPOXILO)	OBS	219	Homoeopathic medication use during the influenza-exposure period may have a beneficial impact at reducing URTIs' number and duration in COPD patients and at reducing the number of COPD exacerbations in patients with the exacerbator phenotype.	B
2019	Vancova	BMC Public Health 19, 1648 (2019).	Chronically ill	Investigating the sociodemographic profile and health-related outcomes of chronically ill homeopathic patients: results from an observational multi-centered study in Bulgaria	OBS	211	key message is that the future of the successful chronic disease management is in the integration of the conventional and CAM-modalities and these processes should be facilitated through public health regulations, education and research.	B

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
2019	Bellavite	J Altern Complement Integr Med 2019, 5: 068	URTI	Homoeopathic Treatments of Upper Respiratory and Otorhinolaryngologic Infections: A Review of Randomized and Observational Studies	RE-VIEW	40	Homoeopathic formulations in upper respiratory tract and otorhinolaryngological infections are likely effective and the individualized approach in non severe otitis is possibly effective. Homoeopathic treatments may help when use of antibiotics is not indicated. Due to the heterogeneity of approaches and of drugs used, additional studies will be required to evaluate the possible integration of Homoeopathy into the standard of care for the treatment of respiratory and otorhinolaryngologic ailments.	A
2019	Pinilla J	PLoS ONE 14(5): e0216707.	Health care utilization	Differences in healthcare utilisation between users and non-users of homeopathic products in Spain: Results from three waves of the National Health Survey (2011-2017)	OBS		Differences in the use of healthcare resources between users and non-users of homeopathic products have not been found to be statistically significant in Spain. It has been shown that most homeopathic products are used as a complement to treatment with conventional medicine. Nevertheless, our results highlight some warning signs which should raise the attention of healthcare authorities. The use of these therapies in patients with malignant tumours and the rejection of vaccines are warning signs of a possible health hazard in the long term.	B
2019	Shukla I	Homoeopathic Links 2019; 32(03): 145-151	Tobacco dependence	A Prospective Observational Study on the Therapeutic Effect of Plantago Major in Reducing Craving for Tobacco	OBS	30	It was noted that out of 30 cases, 27(90%) cases showed change in Tobacco dependence, 3(10%) cases didn't show any change. To assess this change in tobacco dependence fagerstrom test score of patients before and after treatment were taken into consideration. The statistical analysis was done using the paired t test. Significance was accepted at p value < 0.05 to assess differences before and after taking medicine. Baseline Mean $\pm$ SD FTND was $6.93 \pm 1.41$ which improved to $5.33 \pm 1.32$ after treatment.	B
2019	Sharma B	International Journal of Homoeopathic Sciences 2019; 3(3): 32-34	Hemorrhoids	To evaluate the role of individualized homeopathic treatment in	OBS	50	Homoeopathy was the treatment of choice for Hemorrhoids. Sulphur after 3 months cure reduction of bleeding in 34(68%) patients, reduction of pain in	B

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
				haemorrhoids: An observational study			24(48%) patients, reduction of heaviness in 18(36%) patients, reduction of heaviness in 22(44%) patients and reduction of itching in 25(50%) patients.	
2019	Qutubuddin	Advances in Integrative Medicine 2019; 6(2): 58-65	Bronchial asthma	Efficacy of individualized Homoeopathy in bronchial asthma in adults: Double-blind, randomized, placebo-controlled, clinical trial in the context of usual care	RCT	140	Eighteen patients dropped out (verum: 8, control: 10). Intention to treat sample (n = 140) was analyzed. The two trial arms were comparable at baseline. Group differences over 3 and 6 months showed significant differences in improvement in UC + IH compared to UC + P (P < 0.01) with moderate to large effect sizes (Cohen's d) for both primary and secondary outcome measures. UC + IH produced significantly better effect than UC + P in this trial, indicating Homoeopathy seemed superior to placebo.	A
2019	Frass	OBM Integrative and Complementary Medicine 2019;4(2):006	Polycythemia vera	Unexpected Long Survival of a Patient with Polycythemia Vera	Case report	1	This case reports of a 71-year-old patient with polycythemia vera (PCV). Homoeopathic treatment began 15 years after his diagnosis at the age of 51. The frequency of phlebotomies was lowered significantly after the start of the homeopathic treatment; the patient survived another 16 years without chemotherapy, which he had rejected despite appropriate education. For someone with PCV who denied chemotherapy, this patient had a long survival time of more than 30 years, essentially enjoying good health and high quality of life. The most important homeopathic medicine in his regimen was phosphorus.	C
2019	Payrhuber D	OBM Integrative and Complementary Medicine 2019 ;4 (2)	Cancer	Cancer and the Display of Lymph Nodes Using Potentized Remedies (Derivates of Iodine and Carbo Animalis)	Case report	4	In such cases we may find syndrome shifts. For example, symptoms shift from vital to less vital organs, from inside outside and from up downwards; early symptoms of the patient may flare up and subside again. By such treatments we may observe the dissolution of tumours and/or lymph nodes and reconstitution of an earlier and better state of health, or even cure of the patient in particular cases.	c

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
2019	Bhalaero R	Indian J Res Homoeopathy 2019;13(3):139-149	Urolithiasis	Lycopodium clavatum for the management of urolithiasis: A randomised double blind placebo controlled trial	RCT	135	There was no statistical significance between the groups ( $P = 0.31$ ) in reference to the number of cases in which stones expelled during the trial. The mean size of single stone expelled was $9.4 \pm 4.9$ and $13.9 \pm 2.2$ in Verum and Placebo groups, respectively ( $P = 0.12$ ). There was also no significant difference in the mean size of mean size of multiple stones; in Verum group ( $10.1 \pm 5.3$ ) and Placebo group ( $16.1 \pm 9.1$ ) ( $P = 0.11$ ). For assessment of pain and dysuria, Visual Analogue Scale was used, and a statistically significant difference was found between the groups ( $P = 0.039$ ) for pain, and positive trend for Homoeopathy was noted for dysuria. A verified symptom syndrome of Lycopodium clavatum has been observed.	A
2019	Johnson	Muller J Med Sci Res 2019;10:47-50	Allergic rhinitis	Exploring the anti-allergic property of potentized sodium chloride using nasal eosinophil count as a criterion	OBS	15	: Pre and posttreatment nasal eosinophil counts were statistically analyzed using the paired ttest. The difference in mean eosinophil count (0.06333) was statistically significant, where $P < 0.0000085$ . From the study conducted, the eosinophil count was recorded before and after treatment. Out of 15 participants, two had moderate eosinophilia and 13 had mild eosinophilia before treatment. There was no eosinophilia in any of the patients in the 2nd week after NM intake	B
2019	Shah J	International Journal of Medical Research & Health Sciences, 2019, 8(5): 103-107	Rheumatoid disorders	The Role of Rhus toxicodendron: A Homoeopathic Remedy in its Various Attenuations on Patients with Rheumatic Disorders	OBS	91	Out of the 91 patients, 78 patients improved in varying degrees with marked improvement seen in 34 patients, moderate in 27 patients and mild in 17 patients. No improvement was seen in 13 patients.	B
2019	Mohan GR	Homoeopathic Links 2019; 32(04): 224-229	Depression	Evaluation of Homoeopathic Treatment Approach in Depressive Disorders of Hyderabad Urban Population	OBS	175	Out of 207 enrolled patients, 32 cases were dropout, while total 175 cases were analysed. The significant difference ( $p = 0.0001$ , $p < 0.05$ ) in the mean scores of HAM-D using paired t-test was observed at the end of the study;	B

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
				of Age Group 15–30 Years: A Prospective, Non-comparative, Open-Label Observational Study			marked improvement was seen in 39 cases; moderate improvement was seen in 76; mild improvement was seen in 34 cases; no improvement was seen in 26 cases. Remedies such as Ignatia, Nat mur, Nux vomica, Staphysagria, Arsenicum album and Lycopodium were found to have a positive role.	
2019	Gupta J	IndianJ Integrative Med.2019; 1(1)-14-18.	Distress during Climacteric years	Analysis of the Efficacy of Sepia officinalis in the Management of Distress during Climacteric Years (DDCY).	OBS	53	The mean symptom score at the base line was 13.68 (4.27) and at the end of treatment was 2.81 (2.63), which is statistically significant ( $P < 0.05$ ). Out of 53 patients who completed their follow up, 37 patients showed marked improvement, 14 patients showed moderate improvement and 2 patients showed mild improvement. Forty (40) patients were investigated for FSH both at entry and completion, the FSH value reduced in 24 cases	B
2019	Agarwal R	Homœopathic Links 2019; 32(03): 152-158	Gastroesophageal reflux disease	Usefulness of Robinia pseudoacacia in the Treatment of Gastroesophageal Reflux Disease	OBS	30	All enrolled cases completed the follow-up of 6 months. Out of the 30 cases, 1 case was cured, 26 showed a good improvement and 3 did not respond to the treatment. Overall, statistically significant difference was found in pre- and post-treatment GERDQ scores ( $p < 0.001$ ).	B
2019	Uttamchandani	International Journal of Health Sciences and Research 2019;9(1):316-320	Dermatophyte infection	Homoeopathy an Alternative Therapy for Dermatophyte Infections	Case report	1	In the present case studies homeopathic medicine Rhus toxicodendron (30C, 200C), Arsenic album 30C and Apis mellifica (30C, 200C) had shown the antifungal activity against the dermatophytes infection. The results confirmed in this case report study needs to be extrapolated on phase 1 clinical trial with more considerable evidence and understanding the mechanism of action of ultra-diluted medicines.	c
2019	Banerjee A	Bengal Journal of Otolaryngology and Head Neck Surgery, 2019; 27(1): 51-59	Nasal polyp	An Open-Label Observational Trial to Evaluate the Possible Effects of Individualized Homoeopathic	OBS	44	Forty four patients were enrolled; 4 dropped out. Skiagrams revealed complete regressions of polyps in 23 (58%) cases. Statistically significant improvements were observed in both the subjective patient-rated	B

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
				Medicines in Symptomatic Nasal Polyp			outcomes – mean reduction of SNOT-20 scores by 19.9 [sd 15.5; 95% CI 15.5 to 24.2; P < 0.001], EQ-5D-5L questionnaire score by 0.9 [sd 2.6; 95% CI 0.1 to 1.7; P = 0.029]; and EQ-5D-5L VAS by 14.4 [sd 4.7; 95% CI 12.9 to 15.9; P < 0.001].	
2019	Saha S	Indian J Res Homoeopathy 2019; 13 ( 4): 236-243	Gout	An open-label prospective observational trial for assessing the effect of homoeopathic medicines in patients suffering from gout	OBS	32	The mean age of patients was 47.6 years; the male: female ratio was 5:3. Both serum uric acid level (mg/dl) ( $7.6 \pm 1.4$ vs. $6.0 \pm 1.5$ ; mean reduction: 1.6, 95% confidence interval [CI] = 1.1, 2.1, P < 0.001, Student's t-test) and GAG2 total score ( $45.0 \pm 9.1$ vs. $21.0 \pm 14.0$ ; mean reduction: 24.0, 95% CI 19.1, 29.0, P < 0.001, Student's t-test) reduced significantly over 3 months. MYMOP2 scores obtained longitudinally at four different time points also revealed statistically significant reductions (P < 0.001, one-way repeated measures ANOVA). The most frequently indicated medicine was Benzoicum acidum.	B
2019	Chakma A	Indian J Res Homoeopathy 2019; 13 ( 4): 224-250	Hepatic haemangioma	Homoeopathic treatment of hepatic haemangioma with ovarian cyst	Case report	1	This case was treated with individualized homoeopathy for a period of 5 months at the outpatient department (OPD) of Regional Research Institute for Homoeopathy, Agartala. Homoeopathic medicine Pulsatilla, was given to the patient on the basis of individualistic approach. The patient not only improved in her presenting complaints but also there was change in diagnostic parameters. Post treatment outcome corroborated with follow up laboratory investigations that showed significant changes. Ultrasonography revealed no obvious abnormality after homoeopathic treatment with improvement in pelvic congestion syndrome.	C

Year	First author	Reference	Clinical condition	Title	Study design	Sample size	Outcome	WHO grading
2019	Choudhary H	Homœopathic Links 2019; 32(04): 256-261	Bronchial asthma	Management of Sub-Acute Exacerbation of Bronchial Asthma with <i>Blatta orientalis</i> : A Case Report	Case report	1	The case of a 32-year-old woman with bronchial asthma is reported here who was treated with <i>Blatta orientalis</i> 30C. All investigations and pulmonary function tests (spirometry) indicated the diagnosis to be bronchial asthma with moderate obstruction of small airways. After case taking, <i>Blatta orientalis</i> 30C was prescribed, following which, after 6 months of treatment, patient felt better in all aspects with reduction in the number of asthma attacks and marked improvement in Elizabeth Juniper's Asthma Control Questionnaire Score and other investigations.	C
2019	Ponnan HB	Homœopathic Links 2019; 32(04): 251-255	Adenomyosis	Adenomyosis in a Perimenopausal Woman Treated by Potentized Poison Hemlock—A Case Report	Case report	1	A case of adenomyosis in a 41-year-old female who presented with continuous heavy bleeding and severe pelvic pain was successfully treated with homoeopathy medicine, <i>Conium maculatum</i> , which is commonly called as poison hemlock. The medicine prescribed on totality alleviated not only symptoms of the patient but also resolved adenomyosis completely.	C
2019	Dogra S	Homœopathic Links 2019; 32(04): 230-234	Molluscum contagiosum	Response of Molluscum Contagiosum to Homoeopathic Treatment: Report of Three Cases	Case report	3	This is a report of three cases suffering from MC for a variable period, treated with individualised homoeopathic treatment. The rationale of this report reflects the effective management of such cases with homoeopathy.	C
2019	Sharma R	Homœopathic Links 2019; 32(04): 235-250	UTI	Use of Morgan Repertory in UTI: A Case Series	Case report	7	Seven patients were followed up for a period of 2 years. Six patients were free of urinary tract infection (UTI), whereas UTI symptoms were reduced in one patient.	C

\*\*Abbreviation

RCT- Randomized Controlled Trial

OBS- Observational Study

- 1 World Health Organization. General Guidelines for Methodologies on Research and Evaluation of Traditional Medicine [Internet]. 2000 [cited 2020 Sep 24]. Available from: [https://apps.who.int/iris/bitstream/handle/10665/66783/WHO\\_EDM\\_TRM\\_2000.1.pdf](https://apps.who.int/iris/bitstream/handle/10665/66783/WHO_EDM_TRM_2000.1.pdf)
- 2 Teut M, Walach H, Varanasi R, Manchanda RK, Oberai P, Thompson E, et al. Recommendations for Designing, Conducting and Reporting Observational Studies in Homoeopathy. *Homoeopathy*. 2020;109(3):114–25.
- 7 Shinde VH. Homoeopathy in pandemic Spanish flu 1918. *Indian J Res Homoeopath*. 2020;14(2):152–9.
- 8 Witt CM, Ludtke R, Willich SN. Homoeopathic treatment of patients with chronic sinusitis: A prospective observational study with 8 years follow-up. *BMC Ear Nose Throat Disord*. 2009 Jul;9:7.
- 9 Jacobs J, Springer DA, Crothers D. Homoeopathic treatment of acute otitis media in children: a preliminary randomized placebo-controlled trial. *Pediatr Infect Dis J*. 2001;20(2):177–83.
- 10 Fisher P. Why Homoeopathy Matters to U.S. Healthcare. *AJHM*. 2017;110(3):9–12.
- 11 Mathie RT, Lloyd SM, Legg LA, Clausen J, Moss S, Davidson JRTT, et al. Randomised placebo-controlled trials of individualised homeopathic treatment : systematic review and meta-analysis. *Syst Rev*. 2014;3(1):1–16.
- 12 Posadzki P, Alotaibi A, Ernst E. Adverse effects of Homoeopathy: A systematic review of published case reports and case series. *Int J Clin Pract*. 2012 Dec;66(12):1178–88.
- 13 Fisher P, Mathie RT, Walach H, Jonas WB. Scientific Research in Homoeopathy. In: Lewith GT, Walach H, Jonas WB, editors. *Clinical Research in Complementary Therapies*. 2nd ed. London: Churchill Livingstone; 2011. p. 429
- 14 Kleijnen J, Knipschild P, Ter Riet G. Clinical trials of homoeopathy. *Br Med J [Internet]*. 1991 [cited 2020 Sep 23];302(6772):316–23. Available from: <https://pubmed.ncbi.nlm.nih.gov/1825800/>
- 15 Linde K, Clausius N, Ramirez G, Melchart D, Eitel F, Hedges L V., et al. Are the clinical effects of homoeopathy placebo effects? A meta-analysis of placebo-controlled trials. *Lancet [Internet]*. 1997 Sep 20 [cited 2020 Sep 23];350(9081):834–43. Available from: <https://pubmed.ncbi.nlm.nih.gov/9310601>
- 16 Shang A, Huwiler-Muntener K, Nartey L, Juni P, Dorig S, Sterne JAC, et al. Are the clinical effects of homoeopathy placebo effects? Comparative study of placebo-controlled trials of homoeopathy and allopathy. *Lancet (London, England)*. 2005 Aug;366(9487):726–32.
- 17 Rutten ALB, Stolper CF. The 2005 meta-analysis of Homoeopathy: the importance of post-publication data. *Homoeopathy*. 2008 Oct;97(4):169–77.
- 18 Mathie RT, Ulbrich-Zürni S, Viksveen P, Roberts ER, Baitson ES, Legg LA, et al. Systematic Review and Meta-Analysis of Randomised, Other-than-Placebo Controlled, Trials of Individualised Homoeopathic Treatment. *Homoeopathy*. 2018;107(4):229–43.
- 19 Mathie RT, Ramparsad N, Legg LA, Clausen J, Moss S, Davidson JRT, et al. Randomised, double-blind, placebo-controlled trials of non-individualised homeopathic treatment: Systematic review and meta-analysis. *Syst Rev*. 2017 Mar 24;6(63).
- 20 Mathie RT, Fok YYY, Viksveen P, To AKL, Davidson JRT. Systematic Review and Meta-Analysis of Randomised, Other-than-Placebo Controlled, Trials of Non-Individualised Homoeopathic Treatment. Vol. 108, *Homoeopathy*. Georg Thieme Verlag; 2019. p. 88–101.
- 21 Mathie RT, Roberts ER, Rutten ALB (Lex. Adverse effects of Homoeopathy: we clearly need more details. *Complement Ther Med [Internet]*. 2016 Dec 1 [cited 2020 Sep 22]: 29:235. Available from: <https://pubmed.ncbi.nlm.nih.gov/27912952/>
- 22 Tournier A, Roberts ER, Viksveen P, Posadzki P, Ernst E, Tournier A, et al. Adverse effects of Homoeopathy: A systematic review of published case reports and case series - Response by Posadzki and Ernst [Internet]. Vol. 67, *International Journal of Clinical Practice*. Blackwell Publishing Ltd; 2013 [cited 2020 Sep 22]. p. 389. Available from: [/pmc/articles/PMC3644880/?report=abstract](https://pubmed.ncbi.nlm.nih.gov/27912952/)
- 23 Walach H, Lewith G, Jonas W. Can you kill your enemy by giving Homoeopathy? Lack of rigour and lack of logic in the systematic review by Edzard Ernst and colleagues on adverse effects of Homoeopathy. Vol. 67, *International Journal of Clinical Practice*. 2013. p. 385–6.
- 24 Cucherat M, Haugh MC, Gooch M, Boissel JP. Evidence of clinical efficacy of Homoeopathy. A meta-analysis of clinical trials. *Eur J Clin Pharmacol [Internet]*. 2000 [cited 2020 Sep 24];56(1):27–33. Available from: <https://pubmed.ncbi.nlm.nih.gov/10853874/>
- 25 Mathie RT, Roniger H, Van Wassenhoven M, Frye J, Jacobs J, Oberbaum M, et al. Method for appraising model validity of randomised controlled trials of homeopathic treatment: Multi-rater concordance study. *BMC Med Res Methodol*. 2012;12.

## Chapter-8

# Homoeopathic Pathogenetic Trials (Drug Proving)

**Pritha Mehra**

Research Officer (H)

Central Council for Research in Homoeopathy, Ministry of AYUSH, Govt. of India, New Delhi, India

Homoeopathy is a medical practice aiming at strengthening the natural homeostasis of the body and stimulating the immune system. Homoeopathy acts following the law of similars; that means the patient presenting with a set of symptoms is treated with a drug substance/medicine which can cause similar symptoms in a healthy person ('similia similibus curentur'). For example, onion can be the cause of a watery discharge of the nose and eyes. A homeopathic medicinal product (HMP) prepared from onion, namely *Allium cepa*, can treat patients who have these symptoms during coryza or allergic rhinitis accompanied with irritating watery discharge from the nose.

The law of similars must be respected during homeopathic clinical and fundamental studies. Twenty years ago, a new paradigm allowing explanation of the homeopathic effects was proposed. It is the paradigm of the "Corporeal signifiers". Prof. Bastide & Lagache proposed an epistemological approach to Homoeopathy which means that the theoretical knowledge with regard to the methodology, validity and scope may be used to establish the rationale or justify the belief about the action of high dilutions of the homoeopathic medicines.<sup>1</sup> It explains why the law of similars must be respected in research protocols on Homoeopathy; the tested medicine must be significant for the research subject (cell, plant, animal or human). Theoretically we understand that the disease produced by the medicinal substance is stronger than the natural disease thus while carrying out Drug proving trial, also known as Homoeopathic Pathogenetic Trial (HPT),

it is expected that the provers (healthy volunteers will respond and produce symptoms/signs. However, it is very well understood that every individual responds differently to a stimulus. Thus, the sensitivity and susceptibility of the prover for the testing substance will also vary. Therefore, some -unsusceptible- provers may not display any symptoms.

A database of basic research experiments on Homoeopathy is regularly updated and available on websites.<sup>2</sup>

## Homoeopathic Pathogenetic Trials (HPTs) / Drug Proving

Hahnemann conducted repeated experimental drug studies on himself and the sixty-four volunteers whose names are listed in his *Materia Medica Pura*. In total he investigated 101 remedies over a period of about half a century, establishing the method which has come to be known as 'Proving' (as an inaccurate English translation of the original German term "Prüfung"). Proving is also referred to as 'Homoeopathic Pathogenetic Trials' (HPTs)<sup>3</sup> His immediate followers, Hering, Stapf and others, carried out their own provings, but continued to turn to Hahnemann for advice, as is shown by their correspondence. The first generations of homeopaths continued this tradition. During the 19<sup>th</sup> century provings multiplied in Germany, France, England and above all in the United States, under the powerful influence of Hering. In Austria, from 1842 onwards, the Homoeopathic Society of Vienna undertook numerous re-provings, as well as provings on new substances, including *Argentum nitricum*, *Kalium bichromicum* and *Coccus cacti*.

In France, Petroz, and the amazing Benoit Mure, with his Brazilian pathogeneses, stand out.<sup>4</sup> Fortier-Bernoville has described the proving scene in America in the last century as the 'zenith of proving'. He informs in his paper that in America, the method became very refined and proving on the healthy continued on a large scale. In the homeopathic colleges, young people voluntarily intoxicated themselves and remained for days or sometimes several weeks in their rooms, or even took to their beds. They noted all the symptoms they experienced. When comparing the symptoms reported it was possible to rank them according to their frequency.<sup>5</sup>

Historically, HPTs have been methodologically innovative. The first double-blind placebo controlled homeopathic 'proving' was conducted in 1835, and was one of the first double-blind placebo controlled trials in the history of medicine.<sup>6</sup> In 1895 the suggestion of including a pre-observation 'run-in' period, to prepare the volunteer for the proving, was made,<sup>7</sup> and one of the earliest multi-centre double-blind clinical trials was an HPT of *Belladonna* conducted by Bellows that was published in 1906.<sup>8</sup> Modern provings are conducted in the same spirit. However, early in the 20<sup>th</sup> century, Hughes<sup>9</sup> critically analysed Hahnemann's conclusions. A modern analysis of Hahnemann's guidelines found many flaws, which could not have been anticipated by Hahnemann, all likely to lead to an over-estimation of pathogenetic effects.<sup>3</sup>

A review of HPTs published in the UK included 45 studies, and showed a great variability in terms of the medicines tested, methodology, volunteers, sample size and outcome.<sup>10</sup>

The first systematic review of HPTs published between 1945 and 1995 by Dantas et al<sup>11</sup> found that the homeopathic pathogenetic trials (HPTs) were generally of low methodological quality. There is a high incidence of pathogenetic effects in publications and volunteers, but this could be attributable to design flaws. Homeopathic medicines, tested in HPTs, appear safe. Dantas et al concluded through their review that the evidence for the occurrence of pathogenetic effects in HPTs is contaminated. The central question whether specific homeopathic medicines in high dilutions can provoke specific effects in healthy volunteers could not be conclusively answered due to the methodological weaknesses of the identified provings.

Homeopathic practitioners expect useful information from HPTs. Yet we do not even know the pattern of

symptoms produced in HPTs. Do they occur in most volunteers or only in a minority? To resolve this, it would suffice to conduct randomized trials with good intra-individual placebo control, with clear criteria for inclusion/exclusion and attribution of causality. However, if only a small minority of volunteers manifest proving symptoms (and the better designed studies suggest that this is the case) then new designs are required, perhaps drawing on experience for the detection of type II, or idiosyncratic, adverse drug reactions, with much larger samples and more qualitative detail of the reported symptoms. Alternatively, one could screen to find apparently sensitive volunteers and then conduct series of randomized, double blind, placebo-controlled trials with multiple cross-over in these volunteers using different dilutions and exploring not only the occurrence of symptoms but also the quality (i.e. the characteristic nature) of the symptoms. One possible objection to this procedure is that sensitive volunteers may progressively lose their sensitivity in the course of such a procedure. In any case, new HPTs should be conducted by competent investigators and the trials should include a definition of a healthy volunteer and an assessment of health status at baseline.<sup>10</sup> The population should be described, the methods should minimize bias, suggestion and the incorrect attribution of spontaneous or unrelated changes to the medicine, clear instructions for volunteers and supervisors, sensitive and valid outcomes measurements, and of course the proving should conform to modern ethical standards for human experimentation as defined by WMA Declaration of Helsinki - Ethical Principles for Medical Research Involving Human Subjects.<sup>12</sup> As adopted by the World Medical Association in 1964, amendment 64th WMA General Assembly, Fortaleza, Brazil, October 2013 as well as the ICH-GCP Guideline on clinical trials in human subjects.<sup>13</sup> Qualitative as well as quantitative evaluation may be required if we are to understand what happens to healthy volunteers taking homeopathic medicines compared to placebo. The use of an exclusive quantitative statistical analysis probably leads to an underestimation of pathogenetic effects but on the other hand inadequate use of control and failure to use placebo symptoms as a comparator within each individual, is likely to lead to false-positive results. 'Rare, strange and peculiar' or idiosyncratic symptoms are believed to be of crucial importance in homeopathic prescribing, yet they occur in only a few or no volunteers in small HPTs. The Homeopathic Pharmacopoeia Convention of the United States (HPCUS) Proving Guideline<sup>14</sup> refers to such idiosyncratic symptoms as 'characteristic symptoms'. Qualitative criteria to discriminate verum from placebo effects in HPTs need to be further validated. In HPTs

of traditional parallel group design such idiosyncratic effects would be drowned in statistical 'noise' arising from spontaneous, incidental or irrelevant sources. We need methods to detect them. The answers to these problems are not yet clear, and the lessons that can be learnt from traditional trials are few. These are important areas for further methodological development.

As already mentioned, the systematic review carried out by Dantas et al inferred that it was not possible to answer to the main questions posed in HPTs: do homeopathic medicines in high dilution, cause specific proving symptoms in healthy volunteers? If they do, how can we discriminate the effects due to the substance tested from non-specific effects? But if high-quality research shows that they can produce specific effects, we will need to refine the methodology of HPTs in order to clearly identify effects attributable to the substance tested.<sup>11</sup> However, over the recent years, the proving process has evolved and grown into a multi-faceted mode of investigation. Many good quality HPTs have yielded significant information regarding the above questions. Möllinger and Walach were able to demonstrate differences between verum and placebo in two placebo-controlled proving experiments (Möllinger H, Schneider R, Löffel M, Walach H. A double-blind, randomized, homeopathic pathogenetic trial with healthy persons: Comparing two high potencies. *Forschende Komplementärmedizin und Klassische Naturheilkunde*. 2004;11(5):274-280.) (Möllinger H, Schneider R, Walach H. Homeopathic pathogenetic trials produce specific symptoms different from placebo. *Forschende Komplementärmedizin*. 2009;16(2):105-110.) (Walach H, Köster H, Hennig T, Haag G. The effects of homeopathic belladonna 30CH in healthy volunteers - A randomized, double-blind experiment. *Journal of Psychosomatic Research*. 2001;50(3):155-160.) (Walach H, Möllinger H, Sherr J, Schneider R. Homeopathic pathogenetic trials produce more specific than non-specific symptoms: Results from two double-blind placebo controlled trials. *Journal of Psychopharmacology*. 2008;22(5):543-552.). An early attempt to demonstrate specific proving effects of homeopathic mercury were unsuccessful (Vickers AJ, Van Haselen R, Heger M. Can homeopathically prepared mercury cause symptoms in healthy volunteers? A randomized, double-blind placebo-controlled trial. *Journal of Alternative and Complementary Medicine*. 2001;7(2):141-148.), and a randomized, placebo controlled proving by Teut et al of Okoubaka aubrevillei was also unable to demonstrate a difference with placebo symptoms (Teut M, Dahler J, Hirschberg U, Luedtke R, Albrecht H, Witt CM. Homeopathic drug proving of

Okoubaka aubrevillei: A randomised placebo-controlled trial. *Trials*. 2013;14(1).) A recent HPT by Dominici et al demonstrated the nonequivalence between homeopathic medicines in high dilution and placebo and contributed to the improvement of proving methodology and evaluation. The authors have sought more confirmatory studies.<sup>15</sup> Another HPT was able to link the effect of homeopathic medicines *Coffea cruda* and *Nux vomica* in 30c potencies to short-term nonlinear dynamic parameters of slow wave sleep EEG in healthy young adults, concluding that MSE may provide a more sensitive NDS analytic method than D2 for evaluating homeopathic remedy effects on human sleep EEG patterns.<sup>16</sup>

The most important tool to emerge from review by Dantas et al is the Methodological Quality Index (MQI) used to assess the quality of published HPTs, the MQI could also be used as a checklist to improve the methodology of HPTs at the design stage. The four components on which the MQI is based on aspects such as randomization, inclusion and exclusion criteria, blinding and criteria for selection of pathogenetic effects, with values ranging from 1 to 4 for each component, giving a range from minimum score of 4 to maximum to 16. These factors are very important to improve methodology of HPTs.<sup>11</sup> On the flipside, though, Quirk and Sherr raise a number of important and controversial issues concerning the systematic review of Homeopathic Pathogenetic Trials by Dantas et al.<sup>17</sup> However, since this review was designed, new ideas and data have emerged. One hypothesis suggests that a nonlocal model should be applied to Homeopathy as a whole. If such nonlocal models are validated it might be doubtful whether blinded placebo controls actually act as an adequate filter for noise, as specific symptoms have to be expected in the control groups as well. We have seen such effects in more recent homeopathic pathogenetic trials and this has raised doubts as to whether placebo controls can actually control properly for what they are supposed to control within homeopathic pathogenetic trials.<sup>18</sup> Perhaps another review of the HPTs of the last two decade would be potentially contributory as they are expected to fall in the evolved methodologies suggested in the review by Dantas et al.

Keeping this in view, Central Council for Research in Homeopathy (CCRH), under Ministry of AYUSH, Government of India signed a MoU with Royal London Hospital of Integrated Medicine (RLHIM) to take up the systematic review and meta-analysis of the HPTs published in next two decades. As a preliminary step the team at CCRH has drafted a scoping review wherein an up-

to-date and comprehensive systematic categorization of the international Homoeopathic Drug Proving literature published in English language since 1996 till 2018 have been included and the manuscript is under consideration for publication.

During the last decade, significant advances have been made in further improving the quality of Provings. This is reflected in leading standards such as the LMHI/ECH harmonized guideline on the conducted of provings and the Proving Guideline of the HPCUS.

In moving forward and evaluating the usefulness of provings, it can be thus concluded, we should combine innovative research strategies that respect both Homoeopathy and qualitative research as well as the more well-known tools of quantitative research.<sup>19,20,21</sup>

At LMHI Congresses new, or confirmation of previous, provings were presented.

### **In May 2008 the following provings were presented (see Proceedings):**

**Hydrogenium peroxidatum – H2O2.** Dominici G. Double-blind, randomized, placebo controlled design; 16 provers revealing several symptoms clinically verified on human and animals.

**Latrodectus Mactans Tredecimguttatus.** AFADH – Fayeton S. Open design; 8 provers revealing groups of symptoms clinically verified.

**Potentilla Anserina.** Jansen JP. Multi-centric, prospective, double-blind design; 10 provers revealing 27 groups of symptoms.

**Plutonium's Peaceful Brother: Neptunium muriaticum.** Lustig D. Placebo-controlled design; 19 provers revealing 315 symptoms distributed into 12 groups of characteristic symptoms.

**Brazilian Pathogeneses: Helleborus Niger.** Marim M. Third confirmation, multicentric international design; 4 groups of symptoms are regularly recorded.

**Sutherlandia Frutescens.** Ross A, Webster H, van der Hulst N. Double-blind, placebo-controlled design; 24 provers revealing 15 symptoms correlated with the traditional use of the plant (restorative tonic in HIV patients).

**Erythrina Lysistemon (African Coral Tree).** Ross A, de Beer E. Triple-blind, placebo-controlled design; 32 provers revealing 25 symptoms.

**Lobelia Cardinalis.** Scheepers L. Open design; 7 provers revealing 293 symptoms.

**Galium Aparine.** Scheepers L. Open design; 8 provers revealing 18 groups of symptoms.

**Ytterbium Nitricum.** Vicol M, Cristescu LM, Ivanciu NV, Dobre ML, Sumbasacu M, Oprea AM, Goiceanu DM, Dragusanu O, Binder-Hampel A, Stanciu AM, Struza CM. Open design; 13 provers revealing 32 symptoms.

**Hecla Lava.** Multicentric international design.

**In May 2010 (LMHI Congress) the following proving was presented (see Proceedings):**

**Protea cynaroides.** Botha I. Double-blind design; 70 provers (60 verum, 10 placebo) revealing 4 Mind stages and many specific symptoms.

At the same congress the same team answered the question: “Are provings reproducible?”

To answer this question the group of the Durban University (South Africa) (Botha I.) did a comparative survey between groups using different proving methodologies (C4 trituration, Sherr and Dream proving methodology) for a same homeopathic medicine. These results are also in the Proceedings of the 2010 LMHI Congress. The end result was the formulation of 1373 rubrics utilized for analysis purposes, resulting in 881 verified rubrics of *Protea cynaroides*. The null hypothesis “there is no difference in the symptoms experienced between two consecutive years (symptoms are reproducible)”  $p > 0.05$  has been confirmed and is the highest in the group using C4 methodology. The C4 and Sherr methodologies are the most reproducible based on rubric presence.

### **In May 2010 European Parliament Strasbourg Congress on Homoeopathy (see Proceeding):**

**Morpho Menelaus Occidentalis.** Renoux H. A double blind design (7,9,15,30CH, 200K, placebo) pathogenetic trial. 30 provers, 16 supervisors.

**In December 2011 (LMHI Congress) the following provings were presented (see proceedings):**

**Strychnos henningsii.** Ross A.H.A. A triple-blind proving design (30CH, placebo) using also blood testing and clinical measurements to assess the effects.

**Malus communis.** Jansen JP. A multi-center, prospective, double blind proving design (12K, 30K and 200K). Eriodyction californicum. Scheepers L. Double blind proving design (30K)

Bacopa monnieri (Brahmi). Gupta V. Double blind placebo controlled proving design.

### Proving: Publications in International Journals 2008

**Argemone mexicana.** Dey NR, Das KC, Rai Y. Multicentric double-blind design, 38 provers (6C, 30C, 200C). Indian Journal of Research in Homoeopathy. January-March 2008; Vol2, no.1:13- 18.

**Cephalandra Indica.** Dey NR, Das KC, Rai Y. Multicentric double-blind design, 17 provers (6C, 30C, 200C). Indian Journal of Research in Homoeopathy. April-June 2008; Vol2, no. 2:20-24.

**Ficus religiosa.** Dey NR, Das KC, Rai Y, Siddiqui VA, Singh R. Multi-centric double blind design, 24 provers (30C, 200C). Indian Journal of Research in Homoeopathy. July-September 2008; Vol2, no. 3:10-14.

**Paraffin.** Rajpal, Siddiqui VS, Dey NR, Das KC, Rai Y, Singh VK. Multi-centric double-blind design, 43 provers (6C, 30C, 200C). Indian Journal of Research in Homoeopathy. October-December 2008; Vol2, no. 4:20-25.

### Proving: Publications in International Journals 2009

**Pothos foetidus.** Shaw R, Vikram Singh, Siddiqui VA, Rajpal, Vinay Singh Kr, Hari Singh, Mal PC, Bhakat AK. A multicentric double blind design, 25 provers (6C, 30C, 200C). Indian Journal of Research in Homoeopathy. January-March 2009; Vol3, no. 1:18-22.

**Aconitum napellus.** Piltan D, Rist L, Simões-Wüst P, Saller R. Test of a homeopathic dilution of Aconitum napellus. A clinical, randomized, double-blind, controlled crossover study in healthy volunteers. Proving shows significant distinction between Aconitum C30 and placebo. Forschende Komplementärmedizin, 2009; 16:168-73.

**Saraca indica.** Nayak C, Siddiqui VA, Rajpal, Vinay Singh Kr, Hari Singh, Ramender Pal, et al. A multicentric double

blind Homoeopathic Pathogenetic Trial, 42 provers (6C, 30C). Indian Journal of Research in Homoeopathy. April-June 2009; Vol3, no.2: 32-37.

**Cuscuta reflexa.** Shaw R, Siddiqui VA, Rajpal, Vinay Singh Kr, Dey NR. A multicentric double blind Homoeopathic Pathogenetic Trial, 13 provers (6C, 30C, 200C). Indian Journal of Research in Homoeopathy. July- September 2009; Vol 3, no.3:7-13.

**Mimosa humilis.** Nayak C, Vikram Singh, Siddiqui VA, Rajpal, Prakash S, Yogender Rai, Dey NR. A multicentric double blind Homoeopathic Pathogenetic Trial, 16 provers (6C, 30C). Indian Journal of Research in Homoeopathy. October-December 2009; Vol 3, no.4:16-20.

### Proving: Publications in International Journals 2010

**Skookum chuck.** Siddiqui VA, Yogender Rai, Prakash S, Dey NR. A multicentric double blind Homoeopathic Pathogenetic Trial, 30 provers (6C, 30C, 200C). Indian Journal of Research in Homoeopathy. January-March 2010; Vol 4, no. 1:8-14.

**Carica papaya.** Rajpal, Anil Khurana, Siddiqui VA, Singh V.K., Dutta B.N., Shakti Dey, Jayant R.D. A multicentric double blind Homoeopathic Pathogenetic Trial, 26 provers (6C, 30C, 200C). Indian Journal of Research in Homoeopathy. April-June 2010; Vol 4, no.2:7- 12.

**Azadirachta indica.** Rajpal, Anil Khurana, Vinay Kumar Singh, Reeta Bagai, Chaudhari CP, Jayant RD. A multicentric double blind Homoeopathic Pathogenetic Trial, 27 provers (6C, 30C, 200C). Indian Journal of Research in Homoeopathy. July-September 2010; Vol 4, no.3:10-16.

**Ocimum sanctum.** Rajpal, Vinay Kumar Singh, Roy RK, Chaudhari CP, Mal OC, Bhakat AK. A multicentric double blind Homoeopathic Pathogenetic Trial, 28 provers (6C, 30C, 200C). Indian Journal of Research in Homoeopathy. October-December 2010; Vol 4, no.4:1-6.

### Proving: Publications in International Journals 2011

**Amoora rohituka.** Rajpal, Vinay Kr Singh, AK Majumdar, PK Chandra, Goutam Rakshit, PS Sivadas. A multicentric double blind homoeopathic pathogenetic trial, 53 provers (6C, 30C). Indian Journal of Research in Homoeopathy. January- March 2011; Vol 5, no.1:6-14.

**Andrographis paniculate.** Rajpal, Vinay Kr Singh, BN Dutta, S Das, PC Mal, AK Bhakat, RK Roy, CP Chaudhary. A multicentric, randomized, double-blind homoeopathic pathogenetic trial, 39 provers (6C, 30C). Indian Journal of Research in Homoeopathy. April- June 2011; Vol 5, no.2;9-14.

**Asclepias currasavica.** Rajpal, Vinay Kr Singh, VA Siddiqui, C Nayak, AK Majunder, DB Sardar, PS Sivasdas, K Banoth. A multicentric, randomized, double-blind homoeopathic pathogenetic trial, 67 provers (6C, 30C). Indian Journal of Research in Homoeopathy. July-September 2011; Vol 5, no.3;6-14.

**Bacopa monnieri.** Rajpal, Vinay Kr. Singh, V.A. Siddiqui, C. Nayak, P.C. Mal, D. B. Sarkar. A multicentric, randomized, double-blind homeopathic pathogenetic trial, 32 provers (6C, 30C, 200C). Indian Journal of Research in Homoeopathy. October-December 2011; Vol 5, no.4;22-27.

### Proving: 67th LMHI Congress 2012

**Lava kilauea** – Pele's Hair. Christina Ari presented preliminary results of a multicentric blinded proving in two separate groups (13 and 17 participants) and concluded that this remedy is to be regarded after heavy traumatic disturbances.

**HIV Nosode.** Rajesh Shah presented a double blind placebo controlled drug proving in 22 volunteers.

### Proving: Publications in International Journals 2012

**Plumbum metallicum.** Signorini and Pichler presented the complete 2000 trial with a synthesis of and a comparison with the original 1828 trial. They used 30CH dilution in a multicentric setting and found 37 new symptoms above the confirmation of already well known symptoms. Indian Journal of Research in Homoeopathy. January-June 2012. Vol 6; no. 1 & 2:32- 46.

**Buxus sempervirens.** Rajpal, Vinay Kr. Singh, Siddiqui V. A., Nayak C, Majumdar A. K., Chandra P. K., Dey S.K. A multi-centric, double- blind randomized, homeopathic trial, 40 provers (6C and 30C) producing 160 different symptoms (new and confirmed). Indian Journal of Research in Homoeopathy. July-September 2012. Vol6; no. 3:1-9.

**Caesalpinia bonducella.** Rajpal, Vinay Kr. Singh, VA Siddiqui, C Nayak, AK Majumdar, PK Chandra, JP Singh,

SD Pathak, G Rakshit. A multicentric, double-blind randomized, homoeopathic pathogenetic trial, 50 provers (6C and 30C) producing 25 different symptoms. Indian Journal of Research in Homoeopathy. October -December 2012. Vol6; no. 4:8-15.

### 2013 Onwards New publications

1. Shah R. Hepatitis C Nosode: The preparation and homeopathic pathogenetic trial. Homoeopathy 2013; 102: 207-14.
2. Rakshit G, Singh JP, Pathak SD, Banoth CK, Chandra PK, Rajpal, et al. A multi-centric double-blind randomized homoeopathic pathogenetic trial of *Gymnema sylvestre*. Ind J Res Hom. 2013;7(1):9-21.
3. Shah R. Hydroquinone: homoeopathic pathogenetic trial. Ind J Res Hom. 2013;7(2):47-61.
4. Rakshit G, Vichitra AK, Rajpal, Choudhury SK, Singh VK. A multi-centric double-blind homoeopathic pathogenetic trial of Cyclosporin. Ind J Res Hom. 2013;7(3):109-15.
5. Teut M, Dahler J, Hirschberg U, Luedtke R, Albrecht H, Witt CM. Homoeopathic drug proving of *Okoubaka aubrevillei*: a randomised placebo-controlled trial. Trials 2013; 14: 96.
6. Jansen JP, Jong M, Hildingsson I, Jong MC. A minimum protocol for randomised homeopathic drug proving as basis for further research. Forsch Komplementmed. 2014;21(4):232-8. doi: 10.1159/000366042.
7. Walach H, Teut M. Scientific proving of ultra high dilutions on humans. Homoeopathy. 2015;104(4):322-7. doi: 10.1016/j.homp.2015.08.008.
8. Shah R. HIV Nosode: The Homoeopathic Pathogenetic Trial. Forsch Komplementmed. 2015;22(3):156-62. doi: 10.1159/000435845. Source: <http://www.ncbi.nlm.nih.gov/pubmed/26335635>
9. Mohanty N, Choudhury SK, Jena SK. A double- blind, placebo-controlled Homoeopathic Pathogenetic Trial of Nanocurcumin 6X. Indian J Res Homoeopathy 2015;9:176-87. doi:10.4103/0974-7168.166381. Source: <http://www.ijrh.org/article.asp?issn=0974-7168>
10. Rakshit G, Vichitra A K, Chandra P K, Rajpal, Singh VK, Choudhury S K. A multi-centric double blind

- homoeopathic pathogenetic trial of *Hygrophila spinosa*. *Indian J Res Homoeopathy* 2014;8:9-18. doi: 10.4103/0974-7168.129672. Source: <http://www.ijrh.org/article.asp?issn=0974-7168>
11. Central Council for Research in Homoeopathy. Homoeopathic Drug Proving: Randomised double blind placebo-controlled trial. *Indian J Res Homoeopathy* 2015;9:3-11.
12. Manchanda RK, Khurana A, Pal R, Arya BS, Vichitra AK, Mohanan P G, Mehra P, Sharma S, Singh VK. A multicentric, double-blind randomized, homoeopathic pathogenetic trial of *Allium sativum*. *Indian J Res Homoeopathy* 2016; 10:6-23. doi: 10.4103/0974-7168.179152. Source: <http://www.ijrh.org/article.asp?issn=0974-7168>
13. Mehra P, Khurana A, Mittal R, Arya BS, Rajpal, Manchanda RK, et al. Homoeopathic pathogenetic trial of *Withania somnifera*: A multicentric, double-blind, randomised, placebo-controlled trial. *Indian J Res Homoeopathy* 2017; 11:97-108. doi: 10.4103/ijrh.ijrh\_87\_16.
14. Rakshit G, Vichitra AK, Singh R, Sahoo AR, Choudhury SK, Singh VK. Homoeopathic drug proving of *Magnolia grandiflora*: A randomised double blind placebo-controlled trial. *Indian J Res Homoeopathy* 2019;13:22-36. doi:10.4103/ijrh.ijrh\_42\_18
- 
- 1 Bastide M. & Lagache A. *Revue Intern. Systématique*, 1995;9 :237-249 + *Altern Ther Health Med*. 1997;3:35-9.
- 2 Van Wijk R, Albrecht H. Proving and therapeutic experiments in the HomBReX basic Homoeopathy research database. *Homoeopathy*.2007;96:252-257. (<https://www.carstens-stiftung.de/databases/-/hombrex/search>)
- 3 Dantas F. How can we get more reliable information from homoeopathic pathogenetic trials. *Br Hom J*. 1996;85:230-236.
- 4 Demarque D., The development of proving methods since Hahnemann; *The British Homoeopathic Journal*; April 1987. Vol. 76. pp. 71-75
- 5 Fortier-Bernoville: Propagateur de l'Homeopathie. February 1934.
- 6 Stolberg M. Die Homöopathie auf dem Prüfstein. Der erste Doppelblindversuch der Medizingeschichte im Jahr 1835. *Münchener Medizinische Wochenschrift* 1996; 138:
- 7 The Medical Investigation Club of Baltimore. *A Pathogenetic Materia Medica*. Philadelphia: Boericke & Tafel, 1895.
- 8 Bellows HP. The Test Drug-Proving of the O. O. & L. Society: A Re-proving of Belladonna Being an Experimental Study of the reactions to newly marketed drugs in general practice in England: analysis of 48 cohort studies. *Br J Clin Pharmacol* 1998; 46: 505–511.
- 9 Hughes R. *A Manual of Pharmacodynamics*, 6th edn. London: Leath and Ross, 1912.
- 10 Dantas F, Fisher P. A systematic review of homoeopathic pathogenetic trials ('provings') published in the United Kingdom from 1945 to 1995. in: Ernst E, Hahn EG editors. *Homoeopathy: A Critical Appraisal*. London: Butterworth- Heinemann, 1998. p.
- 11 Dantas et al; A systematic review of the quality of homeopathic pathogenetic trials published from 1945 to 1995; *Homoeopathy* (2007) 96, 4–16
- 12 World Medical Association. World Medical Association Declaration of Helsinki: Ethical Principles for Medical Research Involving Human Subjects. *JAMA*. 2013;310(20):2191–2194. <https://www.wma.net/policies-post/wma-declaration-of-helsinki-ethical-principles-for-medical-research-involving-human-subjects/>. Accessed 31 August 2020.)
- 13 ICH Harmonized Guideline. Integrated Addendum to ICH E6 (R1): Guideline for Good Clinical Practice E6 (R2). Current Step 4 version dated 9 November 2016. [https://database.ich.org/sites/default/files/E6\\_R2\\_Addendum.pdf](https://database.ich.org/sites/default/files/E6_R2_Addendum.pdf). Accessed 31 August 2020.
- 14 HPCUS Proving Guideline. Revision 2, April 11, 2015. <https://www.hpus.com/HPCUS-Proving-Guidelines-2015.pdf>. Accessed 31 August 2020.
- 15 Dominici G., Bellavite P., Stanislaw C d., Gulia P and Pitari G. Double-blind, placebo-controlled homeopathic pathogenetic trials: Symptom collection and analysis. *Homoeopathy* 95(3):123-30.
- 16 Bell I.R., Howerter A., Jackson N., Aickin M., Bootzin R.R. and Brooks A.J., Nonlinear dynamical systems effects of homeopathic remedies on multiscale entropy and correlation dimension of slow wave sleep EEG in young adults with histories of coffee-induced insomnia; *Homoeopathy* (2012) 101, 182-192.
- 17 Sherr J. and Quirk T., Systematic review of homeopathic pathogenetic trials: an excess of rigour?; *Homoeopathy* (2007) 96, 273–278.
- 18 Walach H; Response: potential nonlocal mechanisms make placebo controls in pathogenetic trials difficult; *Homoeopathy* (2012); 278
- 19 Signorini A, Lubrano A, Manuele G, Fagone G, Vittorini C, Boso F et al. Classical and new proving methodology: provings of *Plumbum metallicum* and *Piper methysticum* and comparison with a classical proving of *Plumbum metallicum*. *Homoeopathy* 2005; 94(3): 164–174.
- 20 Walach H, Sherr J, Schneider R, Shabi R, Bond A, Rieberer G. Homoeopathic Proving Symptoms: result of a local, non-local, or placebo process? A blinded, placebo-controlled pilot study. *Homoeopathy* 2004; 93(4): 179–185.
- 21 David Riley. Thoughts on Homoeopathic Drug Provings. *Homoeopathy* 2007; 96(4), 231–232.

## Chapter-9

# Clinical Verification/ Validation

**Dr. Suhana Panaparambil Azis<sup>1</sup>, Dr. Jaya Gupta<sup>1</sup>, Dr. Zaiba<sup>2</sup>**

1. Research Officers (H)

2. Junior Research Fellow (H)

Central Council for Research in Homoeopathy, Ministry of AYUSH, Govt. of India, New Delhi, India

### Historical Background

The verification of drug proving symptoms has been an essential aspect in clinical practice since Hahnemann discovered Homoeopathy. 'Here a drug is given to the sick, according to the symptoms it had produced on the healthy (provings) human being and the cures made were the verifications.' An unconfirmed proving symptom that never was verified by clinical data cannot yet be considered as useful for homeopathic practice. Hence clinical verification of proving symptoms is historical and even more importantly, relevant to validate modern homeopathic practice. Hahnemann<sup>1</sup> and Boenninghausen<sup>2</sup> in different literatures emphasised on the need for verifications with Hering<sup>3</sup> further streamlining the process when he stated that a symptom does not acquire the status of a guiding symptom unless, apart from its appearance in the provings, it has been verified at the bedside a number of times. Thus, grading of remedies in the first line Materia Medica and repertories of homoeopathic stalwarts was based on how frequently a particular symptom was verified and verifications were the non-plus ultra of those times. The Central Council for Research in Homoeopathy has been researching on rare, indigenous and lesser known drugs through the drug pathogenetic trials and clinical verification programme for the past 40 years.

Evidence based medicine (EBM) is the conscientious, explicit, judicious and reasonable use of modern, best evidence in making decisions about the care of individual patients. EBM integrates clinical experience and patient information with the best available research information.

The practice of evidence-based medicine is a process of lifelong, self-directed, problem-based learning in which caring for one's own patients creates the need for clinically important information about diagnosis, prognosis, therapy and other clinical and health care issues.<sup>4</sup> On the contrary to conventional medicine, the basis for Evidence Based Homoeopathy (EBH) will be formed by extensive 'verifications' of 'homoeopathic symptoms' which are the framework on which the concept of patient relief and cure depends for a homoeopathic physician. Such verifications are not easy due to the fact that physicians in this system use varying methodologies and strategies according to their training, expertise and clinical experience. It will be a tedious process to bring in uniformity to the interpretation of symptoms due to the multitude of inter-rater variability factors that arise due to the uniqueness of homoeopathic principles. EBH can only be built on the framework of homoeopathic concept of similarity.<sup>5</sup> In clinical medicine, the term prognosis refers to the risk of future health outcomes in people with a given disease or health condition.<sup>6</sup> Prognostic factor means 'A situation or condition, or a characteristic of a patient, that can be used to estimate the chance of recovery from a disease or the chance of the disease recurring (coming back).'<sup>7</sup> Conventionally, prognostic factor research aims to discover and evaluate factors that might be useful as modifiable targets for interventions to improve outcome, building blocks for prognostic models or predictors of differential treatment response, as for eg. CD4 count in HIV infection, carcino embryonic antigen (CEA) levels in colorectal cancer etc.<sup>8</sup>

In Homoeopathic medicine, selection is dependent on signs and symptoms of the patient. A combination of symptoms point towards a specific medicine. When a homoeopathic doctor with adequate training prescribes a homoeopathic medicine, he/she is able to predict the chance that the medicine will work for the patient, based on individual symptoms and the doctor's prior experience with the medicine.<sup>9</sup> Therefore in homoeopathic context symptoms act as *prognostic factors* and are potential predictors of efficacy of a particular medicine. A specific symptom is an indication for a specific medicine, if the prevalence of the symptom in the population that responds well to the specific medicine is greater than in the whole population. PFR in homoeopathy can be assessed by applying Bayes' theorem which tells us how to use practical experience gathered from the past for prescribing in new situations.<sup>10</sup>

It is based on the mathematical law of conditional probability which can be extrapolated to homoeopathy as: homoeopathic symptoms have a statistical relationship with curative effects of specific homoeopathic medicines. Thus, the probability that a homoeopathic medicine will work increases if a patient has a specific symptom indicating this medicine. Adding other symptoms indicating the same medicine stepwise increases the chance that the medicine will work. The essence of Homoeopathy is that it has two centuries of experience in relating symptoms and personal characteristics to specific medicines.<sup>9</sup> Homoeopathy is in the true sense individualised/personalised medicine. Until now the emphasis on the individual patient instead of the disease has been a key difference between homoeopathy and conventional medicine, but that gap is beginning to close. Conventional medicine is evolving to attain the realm of personalised medicine by emphasising on diagnosis and prognosis research. In changing times it is imperative that Homoeopathy establishes its own exemplary scientific identity by basing on the sound mathematical foundation of Bayes' theorem which identifies homoeopathic symptoms as prognostic factors and offers an interesting perspective of individualised research.<sup>9</sup>

Knowledge about the symptoms which are significantly indicated for selection of different medicines have grown exponentially over time through clinical experience which in turn are entered as repertory rubrics in modern repertories. But this huge amount of information is collected with questionable reliability.<sup>5</sup> This is especially relevant for the rare and lesser known drugs which are fragmentarily proved and rarely verified in patients. The symptoms of these novel, rare drugs have to be added to

existing repertory rubrics or as new rubrics after clinical verifications in large populations.

### Likelihood Ratio

The essence of Bayes' theorem is that, if a symptom has a higher prevalence in the 'population responding to a specific medicine' than the prevalence in the remainder population, the probability of cure increases.<sup>11,12</sup> A modern statistical method to approach clinical verification of homoeopathy is assessing likelihood ratio (LR). Likelihood ratio is a constant that indicates the relation between prior odds (the odds before the test) and posterior odds (the odds after the test). The relationship is given by the formula

$$\text{Posterior odds} = \text{LR} \times \text{Prior odds}$$

$$\text{LR} = \text{Likelihood Ratio}$$

$$= \frac{\text{Prevalence in target population}}{\text{Prevalence in remainder of population}}$$

By using LR<sup>11,13</sup> it is possible to define the prognostic value of the link between a symptom and a medicine. Positive LR (LR+) is the prognostic value of a symptom if it is present in the patient. Negative LR (LR-) is the prognostic value of the symptom if it is absent.

The target population, in this case, is the population where the medicine has a curative effect. The LR of a symptom indicates a chance of curative action of that medicine when that symptom is present in a patient.<sup>9</sup>

This chance increases if LR is higher than 1, which indicates a better prognosis and implies that the medicine has been effective in the presence of that symptom.<sup>14</sup> The higher LR the greater the chance that the medicine will work. High LRs are associated with peculiar symptoms, consistent with Hahnemann's aphorism 153. The calculation of LR is easy and can be done by making a 2 x 2 table of symptom present/absent and population cured by medicine/remainder population<sup>12</sup>.

### Possibilities of PFR of homoeopathic symptoms with Bayesian Statistics

(Table: 1 Recent Articles on PFR and clinical verification)

### Qualitative, quantitative, retrospective and prospective PFR:

Since 1997, three initial projects have been performed in clinical practice to assess the applicability of the scientific instruments of Bayesian statistics and Likelihood Ratio.

Two of the projects are related. The retrospective *Materia Medica Validation* evaluating best cases qualitatively and quantitatively by consensus procedure. This combination of qualitative and quantitative assessment is called a mixed methods approach. This project and the consequent prospective LR assessment of six homeopathic symptoms were both initiated by the Committee for Methods and Validation (CMV) of the Dutch association of homeopathic physicians (VHAN). Another retrospective PFR was linked to the Cli-Fi-Col project.<sup>15</sup> Later prospective collection of data was performed by Klein-Laansma on PMS symptoms<sup>16</sup> and by Eizayaga on objective clinical signs (submitted for publication).

### Retrospective Prognostic Factor Research of previous data

Data of three retrospective PFR projects based on the respective articles, by Rutten/Frei,<sup>17</sup> by Jose Enrique Eizayaga et al<sup>14</sup> and by Munmun Koley et al.<sup>18</sup>

Many data about homoeopathic treatments have been recorded in the past. It would be wasteful to neglect these data as it could be used to test the applicability and external validity of LR research in homoeopathic practice<sup>19</sup> If the outcome of these data from retrospective research and expert knowledge differ from prospective research we can reflect about the cause of these differences to improve PFR methodology. In retrospective PFR, several weaknesses and biases should be taken into account while considering the results. Confirmation bias, recall bias and missing data are special problems. Strengths like the knowledge of homoeopathic drugs has grown mostly by means of clinical response of few or unique cases or even by vague appreciations by diverse authors. From an epidemiological point of view, the absence of a symptom that occurs in relatively many patients responding well to a specific medicine could be used as a relative contra-indication for that medicine using negative LR.<sup>20</sup> However, the absence of a symptom has less influence of a curative action than the presence. This is consistent with the experience of homeopathic practitioners.

### Generalisability of prognostic factor research confined to specific conditions<sup>21</sup>

If PFR is restricted to specific conditions we must realise that the outcome is only valid for those specific conditions. The outcome can be generalised provided strict precautions. Furthermore, we must realise that, for some conditions, specific medicines are preferred. In other words: the prior chance of success for a medicine can be influenced by the condition. The likelihood

ratios for 11 homoeopathic medicines for the symptom 'cough' and other upper respiratory tract symptoms were analysed, based on data from the IIPCOS2 (German database) study.<sup>10</sup> Precautions have to be taken to improve generalisability in future (prospective) research. However, working with sub-populations instead of the whole population may be unavoidable, or there may be good reasons to choose a sub-population such as:

- If a research program is specialized in a specific condition.
- For the development of expert systems and designing treatment algorithms for a specific condition.
- For comparing the medicines already used for a disease/condition with new medicines.
- For assessing symptoms related to a specific disease.

Use of subpopulations make collection of data and analysis easier. Another attempt was made to assess group-confined likelihood ratio (GCLR) for the symptom 'Headache' from among 20 lesser-known remedies clinically verified by the Central Council for Research in Homoeopathy during the period 2012–2018.<sup>22</sup> The symptom 'Headache' was recorded in a part of the population: 4582 patients, where 20 lesser known medicines were prescribed. Of these medicines, 8 have a GCLR >1, indicating that the symptom headache could indicate these medicines out of the assessed group of 20 and only two could be considered for the further evaluation of the relationship with headache. These findings should be confirmed in properly organised prognostic factor research in a larger population, not restricted to specific medicines, that enables proper comparison. After pooling data of different projects, if medicines and conditions or symptoms and conditions are correlated this will rule out if the data of projects in different conditions are combined.

### Research programs for LR, rare remedies and clinical verification

LR investigation is not yet recommended for medicines with infrequent use in the population like rare remedies, or for very peculiar symptoms since it needs much larger sample size. It is mostly suited for symptoms that are regarded as keynotes for regularly used medicines available with authenticity in homoeopathic *materia medica* literature. Nevertheless, attempts should also be made to record LR of symptoms of lesser known remedies on which CCRH has been exclusively collecting research data for the past many years. Clinical verification is an ongoing research program of the Council that verified many rare

homoeopathic drugs where the 'symptomatology' of these drugs is ascertained by assessing the symptoms improved during verification.

### Role of CCRH in Prognostic Factor Research and recent advancements

Different conditions should be synchronized. The symptoms assessed in these programmes should be the same and be checked the same way. The comparability of outcomes should be monitored and statistically evaluated. Verification of drugs gives more reliability and helps us in creating an authentic Materia Medica. Central Council for Research in Homoeopathy has been conducting clinical verification studies of indigenous, rare and fragmentarily proved drugs since its inception in 1978. Some of these drugs are first proved by CCRH. The programme is multicentre, as per open clinical trial design in which patients are enrolled from O.P.D. as and when they come, after confirmation of their inclusion criteria as per a standard protocol. The primary objective of the study was to clinically verify the symptomatology of the drug as observed during proving or as mentioned in other literature. The secondary objective was to ascertain the clinical symptoms that did not appear during the proving but were improved in the patients after its administration, either completely or partially. The homoeopathic medicines were prescribed on the basis of symptom similarity. The individualistic symptoms of each case were evaluated as per the Materia Medica & Repertorial index especially devised for the programme from the proving data. Clinical Verification of symptomatic data of 118 drugs have been conducted so far. Thousands of proving symptoms have been verified in over 20,000 study subjects in this flagship programme of the Council. The data thus obtained have been disseminated in the form of books (**Table: 2** Books published on CV by CCRH) and a number of peer reviewed articles (**Table: 3** Articles on CV published in Indian Journal for Research in Homoeopathy & **Table: 4** Articles on CV published in Quarterly Bulletin, CCRH). Council has revised its Clinical Verification protocol in 2013 and 2018-19 by including scales to assess patient and remedy reactions. The notable inclusion was the modified Naranjo criteria for assessing the causal attribution of change (i.e., attribution of observed changes to a particular remedy) after homoeopathic prescriptions in conformation with international standards<sup>23,24,25</sup>. The classification of result following the above scale will be

done if a causal relationship is likely. CCRH has been following the traditional method of clinical verification since long where a largely qualitative data was collected by verifying the symptoms used for remedy selection and was done on a smaller sample size. Here the symptoms verified depended on the number of subjects improved/not improved alone and not subjected to any further analysis. Later on CCRH brought out a series of papers<sup>26,27,28,29,30</sup> on five lesser known remedies (*Ocimum canum*, *Cynodon dactylon*, *Mangifera indica*, *Aranea diadema*, *Mygale lasiodora*) by quantitative evaluation of an impressive number of clinical cases recorded in CV project from the period of 2005-2018 using retrospective assessment of prevalence and LR of symptoms in good responders. Here the CV data was scrutinised to give methodical rigor in the light of Bayes' theorem and PFR and thus paving way to evidence based homoeopathy. But feasibility of conducting such retrospective analyses was a fine point of contention. Finding out the prevalence of these symptoms in remainder of the general population treated during the study period in those institutes/units of CCRH where the study had been conducted was not feasible since it was outside the scope of the protocol. Hence, formulation of  $2 \times 2$  contingency table for calculation of LR did not seem possible at that point of time.

Council has so far experimented with small and lesser known remedies following a specific policy<sup>31</sup> to promote focused research on plants of indigenous origin. CCRH has evolved methodologically in its approach to clinical verification and has already started working on validating polychrest remedies as per the Essential Drug List (EDL) of the Ministry of AYUSH, government of India on the lines of PFR by capturing data for prevalence of symptoms in particular clinical conditions. Now the ongoing and future clinical verification programme of the Council shall have an additional arm of PFR for verifying and validating the proving data of these rare/lesser known/indigenous drugs which is a niche area of research of the council. Structured questionnaires, polarity analysis and prospective estimation of LR of the symptoms using Bayesian statistical methods should be employed in larger statistically significant samples to utilize the future verification data of homoeopathic medicines in clinical practice for realizing the goal of evidence based homoeopathy, by contributing eventually to an evidence based materia medica and repertory.

**TABLE 1: Recent articles on Prognostic Factor Research and Clinical Verification**

S. NO.	AUTHOR	PUBLICATIONS	REFERENCES
1.	Stolper CF et al	Improving homeopathic prescribing by applying epidemiological techniques: the role of likelihood ratio.	Stolper CF, Rutten AL, Lugten RF, Barthels RJ. Improving homeopathic prescribing by applying epidemiological techniques: the role of likelihood ratio. <i>Homoeopathy</i> . 2002 Oct;91(4):230-8. Available from: <a href="https://www.ncbi.nlm.nih.gov/pubmed/12422927">https://www.ncbi.nlm.nih.gov/pubmed/12422927</a> [Accessed 17th September 2019].
2.	Rutten L et al	Assessing likelihood ratio of clinical symptoms: handling vagueness.	Rutten AL, Stolper CF, Lugten RF, Barthels RW. Assessing likelihood ratio of clinical symptoms: handling vagueness. <i>Homoeopathy</i> . 2003 Oct;92(4):182-186. Available from: <a href="https://www.ncbi.nlm.nih.gov/pubmed/14587683">https://www.ncbi.nlm.nih.gov/pubmed/14587683</a> [Accessed 17th September 2019].
3.	Rutten L et al	Is assessment of likelihood ratio of homeopathic symptoms possible? A pilot study.	Rutten AL, Stolper CF, Lugten RF, Barthels RW. Is assessment of likelihood ratio of homeopathic symptoms possible? A pilot study. <i>Homoeopathy</i> . 2003 Oct;92(4):213-216. Available from: <a href="https://www.ncbi.nlm.nih.gov/pubmed/14587688">https://www.ncbi.nlm.nih.gov/pubmed/14587688</a> [Accessed 17th September 2019].
4.	Rutten L et al	'Cure' as the gold standard for likelihood ratio assessment: theoretical considerations.	Rutten AL, Stolper CF, Lugten RF, Barthels RW. 'Cure' as the gold standard for likelihood ratio assessment: theoretical considerations. <i>Homoeopathy</i> . 2004 Apr;93(2):78-83. Available from: <a href="https://www.ncbi.nlm.nih.gov/pubmed/15139091">https://www.ncbi.nlm.nih.gov/pubmed/15139091</a> [Accessed 17th September 2019].
5.	Wassenhoven MV et al	Towards an evidence-based repertory: clinical evaluation of Veratrum album.	Wassenhoven MV. Towards an evidence-based repertory: clinical evaluation of Veratrum album. <i>Homoeopathy</i> . 2004 Apr;93(2):71-77. Available from: <a href="https://www.ncbi.nlm.nih.gov/pubmed/15139090">https://www.ncbi.nlm.nih.gov/pubmed/15139090</a> [Accessed 17th September 2019].
6.	Rutten L et al	Repertory and likelihood ratio: time for structural changes.	Rutten AL, Stolper CF, Lugten RF, Barthels RW. Repertory and likelihood ratio: time for structural changes. <i>Homoeopathy</i> . 2004 Jul;93(3):120-4. Available from: <a href="https://www.ncbi.nlm.nih.gov/pubmed/15287430">https://www.ncbi.nlm.nih.gov/pubmed/15287430</a> [Accessed 17th September 2019].
7.	Rutten L et al	Bayesian Homoeopathy: talking normal again.	Rutten AL. Bayesian Homoeopathy: talking normal again. <i>Homoeopathy</i> . 2007 Apr;96(2):120-124. Available from: <a href="https://www.ncbi.nlm.nih.gov/pubmed/17437940">https://www.ncbi.nlm.nih.gov/pubmed/17437940</a> [Accessed 17th September 2019].
8.	Rutten L et al	Clinical Verification of Homoeopathic Symptoms: Experience and Statistics.	Rutten L, Wassenhoven MV. Clinical Verification of Homoeopathic Symptoms: Experience and Statistics. Bonamin L.V. (eds) <i>Signals and Images</i> . Springer, Dordrecht. 2008:151-182. Available from: <a href="https://link.springer.com/chapter/10.1007/978-1-4020-8535-2_11">https://link.springer.com/chapter/10.1007/978-1-4020-8535-2_11</a> [Accessed 17th September 2019].
9.	Rutten L et al	Statistical analysis of six repertory rubrics after prospective assessment applying Bayes' theorem.	Rutten AL, Stolper CF, Lugten RF, Barthels RW. Statistical analysis of six repertory rubrics after prospective assessment applying Bayes' theorem. <i>Homoeopathy</i> . 2009 Jan;98(1):26-34. Available from: <a href="https://www.ncbi.nlm.nih.gov/pubmed/12422927">https://www.ncbi.nlm.nih.gov/pubmed/12422927</a> [Accessed 17th September 2019].
10.	Rutten L et al	Frequently occurring polar symptoms assessed by successful cases.	Rutten ALB, Frei H. Frequently occurring polar symptoms assessed by successful cases. <i>Homoeopathy</i> . 2012;101(2):103-111. doi:10.1016/j.homp.2012.02.004
11.	Rutten L et al	Data collection: Treat every variable as a treasure. <i>Homoeopathy</i> 2015; 104:190-6.	Rutten L. Data collection: Treat every variable as a treasure. <i>Homoeopathy</i> 2015; 104:190-6. Available from: <a href="https://www.ncbi.nlm.nih.gov/pubmed/26143452">https://www.ncbi.nlm.nih.gov/pubmed/26143452</a> [Accessed 17th September 2019].
12.	Manchanda RK et al	Mygale lasiodora: A multicentric observational homoeopathic clinical verification study	Manchanda RK, Chakraborty PS, Singh P, Nayan SS, Singh O, Pradhan PK, et al. Mygale lasiodora: A - multicentric observational homoeopathic clinical verification study. <i>Indian Journal of Research in Homoeopathy</i> . 2015;9(4):249-257. Available from: <a href="http://www.ijrh.org/article.asp?issn=0974-7168;year=2015;volume=9;issue=4;spage=249;epage=257;auiast=Manchanda">http://www.ijrh.org/article.asp?issn=0974-7168;year=2015;volume=9;issue=4;spage=249;epage=257;auiast=Manchanda</a> [Accessed 17th September 2019].

S. NO.	AUTHOR	PUBLICATIONS	REFERENCES
13.	Rutten L et al	Homoeopathy: Discussion on scientific validation.	Rutten L, Manchanda RK. Homoeopathy: Discussion on scientific validation. Indian Journal of Research in Homoeopathy. 2016;10(1): 66-74. Available from: <a href="http://www.ijrh.org/article.asp?issn=0974-7168;year=2016;volume=10;issue=1;spage=66;epage=74;aurlast=Rutten">http://www.ijrh.org/article.asp?issn=0974-7168;year=2016;volume=10;issue=1;spage=66;epage=74;aurlast=Rutten</a> [Accessed 17th September 2019].
14.	Koley M et al	Prospective Evaluation of Few Homoeopathic Rubrics of Kent's Repertory from Bayesian Perspective.	Koley M, Saha S, Das KD, Roy S, Goenka R, Chowdhury PR, Hait H, Bhattacharyya CK, Sadhukhan SK. Prospective Evaluation of Few Homoeopathic Rubrics of Kent's Repertory from Bayesian Perspective. J Evid Based Complementary Altern Med. 2016 Oct;21(4):277-81. Available from: <a href="https://www.ncbi.nlm.nih.gov/pubmed/26297174">https://www.ncbi.nlm.nih.gov/pubmed/26297174</a> [Accessed 17th September 2019].
15.	Rutten L et al	Prognostic factor research in Homoeopathy	Rutten L. Prognostic factor research in Homoeopathy. Indian Journal of Research in Homoeopathy. 2016;10(1):59-65. Available from: <a href="http://www.ijrh.org/article.asp?issn=0974-7168;year=2016;volume=10;issue=1;spage=59;epage=65;aurlast=Rutten">http://www.ijrh.org/article.asp?issn=0974-7168;year=2016;volume=10;issue=1;spage=59;epage=65;aurlast=Rutten</a> [Accessed 17th September 2019].
16.	Eizayaga JE et al	Prevalence and likelihood ratio of symptoms in patients with good therapeutic response to Lycopodium clavatum. A retrospective study.	Eizayaga JE, Pozzi MI, Canan MC, Saravia L. Prevalence and likelihood ratio of symptoms in patients with good therapeutic response to Lycopodium clavatum. A retrospective study. Homoeopathy. 2016 Feb;105(1):78-83. Available from: <a href="https://www.ncbi.nlm.nih.gov/pubmed/26828001">https://www.ncbi.nlm.nih.gov/pubmed/26828001</a> [Accessed 17th September 2019].
17.	Manchanda RK et al	A multicenter, observational, homoeopathic clinical verification study of Cynodon dactylon revealing symptom prevalence in a cohort of 340 patients	Manchanda RK, Chakraborty P, Singh P, Pradhan PK, Prasad VG, Singh O, et al. A - multicenteric observational, homoeopathic clinical verification study of Cynodon dactylon revealing symptom prevalence in a cohort of 340 patients. Indian Journal of Research in Homoeopathy. 2016;10(4):225-237. Available from: <a href="http://www.ijrh.org/article.asp?issn=0974-7168;year=2016;volume=10;issue=4;spage=225;epage=237;aurlast=Manchanda">http://www.ijrh.org/article.asp?issn=0974-7168;year=2016;volume=10;issue=4;spage=225;epage=237;aurlast=Manchanda</a> [Accessed 17th September 2019].
18.	Klein-Laansma et al	Evaluation of a Prognostic Homoeopathic Questionnaire for Women with Premenstrual Disorders	Klein-Laansma CT, Rutten ALB, Jansen JPCH, Van Wietmarschen H, Jong MC. Evaluation of a Prognostic Homoeopathic Questionnaire for Women with Premenstrual Disorders. Complement Med Res. 2018;25(3):173-182. doi:10.1159/000487318
19.	Manchanda RK et al	Symptom prevalence in a cohort of 147 patients improved with the homoeopathic medicine Ocimum canum: A multicenter, open, observational, clinical verification study	Manchanda RK, Chakraborty P, Das KC, Rai MK, Singh O, et al. Symptom prevalence in a cohort of 147 patients improved with the homoeopathic medicine Ocimum canum: A multicenter, open, observational, clinical verification study. Indian Journal of Research in Homoeopathy. 2016;10(4):238-248. Available from: <a href="http://www.ijrh.org/article.asp?issn=0974-7168;year=2016;volume=10;issue=4;spage=238;epage=248;aurlast=Manchanda">http://www.ijrh.org/article.asp?issn=0974-7168;year=2016;volume=10;issue=4;spage=238;epage=248;aurlast=Manchanda</a> [Accessed 17th September 2019].
20.	Manchanda RK et al	Formic acid: A multicentric observational homoeopathic clinical verification trial	Manchanda RK, Gupta J, Chakraborty P, Singh P, Nayan SS, Singh P, et al. Formic acid: A multicentric observational homoeopathic clinical verification trial. Indian Journal of Research in Homoeopathy. 2016;10(4):249-257. Available from: <a href="http://www.ijrh.org/article.asp?issn=0974-7168;year=2016;volume=10;issue=4;spage=249;epage=257;aurlast=Manchanda">http://www.ijrh.org/article.asp?issn=0974-7168;year=2016;volume=10;issue=4;spage=249;epage=257;aurlast=Manchanda</a> [Accessed 17th September 2019].
21.	Miglani A et al	Generalisability of prognostic factor research: further analysis of data from the IIPCOS2 study.	Miglani A, Rutten L, Manchanda RK. Generalisability of prognostic factor research: further analysis of data from the IIPCOS2 study. Homoeopathy. 2017 Aug;106(3):155-159. Available from: <a href="https://www.ncbi.nlm.nih.gov/pubmed/28844288">https://www.ncbi.nlm.nih.gov/pubmed/28844288</a> [Accessed 17th September 2019].
22.	Rutten L et al	What is a homoeopathic symptom, in daily practice and research?	Rutten L, Muraleedharan KC, Shinde VH, Manchanda RK. What is a homoeopathic symptom, in daily practice and research?. Indian Journal of Research in Homoeopathy. 2017;11(1):12-20. Available from: <a href="http://www.ijrh.org/article.asp?issn=0974-7168;year=2017;volume=11;issue=1;spage=12;epage=20;aurlast=Rutten">http://www.ijrh.org/article.asp?issn=0974-7168;year=2017;volume=11;issue=1;spage=12;epage=20;aurlast=Rutten</a> [Accessed 17th September 2019].

S. NO.	AUTHOR	PUBLICATIONS	REFERENCES
23.	Manchanda RK et al	Symptom prevalence in a cohort of 65 patients improved with the homoeopathic medicine <i>Mangifera indica</i> : A multicentric open observational clinical verification study	Manchanda RK, Chakraborty PS, Singh P, Rai MK, Singh O, Singh DK, et al. Symptom prevalence in a cohort of 65 patients improved with the homoeopathic medicine <i>Mangifera indica</i> : A multicentric open observational clinical verification study. <i>Indian Journal of Research in Homoeopathy</i> . 2017;11(3): 184-195. Available from: <a href="http://www.ijrh.org/article.asp?issn=0974-7168;year=2017;volume=11;issue=3;spage=184;epage=195;aualast=Manchanda">http://www.ijrh.org/article.asp?issn=0974-7168;year=2017;volume=11;issue=3;spage=184;epage=195;aualast=Manchanda</a> [Accessed 17th September 2019].
24.	Gupta J et al	Prevalence and prognostic factor in patients with good therapeutic response in a cohort of 172 patients with the homoeopathic medicine <i>Aranea diadema</i> : A multicentre, open-label, observational study	Gupta J, Manchanda RK, Chakraborty P, Singh P, Ramteke S, Singh O, et al. Prevalence and prognostic factor in patients with good therapeutic response in a cohort of 172 patients with the homoeopathic medicine <i>Aranea diadema</i> : A multicentre, open-label, observational study. <i>Indian Journal of Research in Homoeopathy</i> . 2018;12(1):20-28. Available from: <a href="http://www.ijrh.org/article.asp?issn=0974-7168;year=2018;volume=12;issue=1;spage=20;epage=28;aualast=Gupta;type=0">http://www.ijrh.org/article.asp?issn=0974-7168;year=2018;volume=12;issue=1;spage=20;epage=28;aualast=Gupta;type=0</a> [Accessed 17th September 2019].
25.	Manchanda RK et al	Retrospective estimation of prevalence and likelihood ratio of general symptoms of 29 less frequently prescribed homoeopathic medicines by clinical verification	Manchanda RK, Chakraborty P, Koley M, Singh D, Singh P, Singh O et al. Retrospective estimation of prevalence and likelihood ratio of general symptoms of 29 less frequently prescribed homoeopathic medicines by clinical verification. <i>Indian Journal of Research in Homoeopathy</i> . 2019;13(2): 72-80. Available from: <a href="http://www.ijrh.org/article.asp?issn=0974-7168;year=2019;volume=13;issue=2;spage=72;epage=80;aualast=Manchanda">http://www.ijrh.org/article.asp?issn=0974-7168;year=2019;volume=13;issue=2;spage=72;epage=80;aualast=Manchanda</a> [Accessed 17th September 2019].
26.	Gupta J et al	Exploring the predictive value of specific symptom as prognostic factor: Assessment of group-confined likelihood ratio for symptom 'Headache' in 20 lesser-known drugs	Gupta J, Azis SP, Rutten L, Manchanda RK, Pramanik A, Chakraborty P, et al. Exploring the predictive value of specific symptom as prognostic factor: Assessment of group-confined likelihood ratio for symptom 'Headache' in 20 lesser-known drugs. <i>Indian Journal of Research in Homoeopathy</i> . 2019;13(1):4-11. Available from: <a href="http://www.ijrh.org/article.asp?issn=0974-7168;year=2019;volume=13;issue=1;spage=4;epage=11;aualast=Gupta;type=0">http://www.ijrh.org/article.asp?issn=0974-7168;year=2019;volume=13;issue=1;spage=4;epage=11;aualast=Gupta;type=0</a> [Accessed 17th September 2019].
27.	Rutten L	Prognostic Factor Research in Homoeopathy – A Practical Guide for Researchers	Lex Rutten, Editor. <i>Prognostic Factor Research in Homoeopathy</i> . Central Council for Research in Homoeopathy. New Delhi. April 2019.

TABLE 2: Books on Clinical verification published by CCRH

S. NO.	NAME OF THE DRUG	SOURCE OF DRUG	PERIOD OF VERIFICATION STUDY	PUBLICATION
1.	<i>Abroma augusta</i> (Olatkambal)*	Plant	1979-2007	<i>Abroma augusta</i> . In: <i>Study of Homoeopathic Medicines Through Clinical Verification - A New Perspective</i> . Volume-1. New Delhi, India: Central Council for Research in Homoeopathy; 2011. P.1-20.
2.	<i>Acalypha indica</i> (Khokali)*	Plant	2007-2012	<i>Acalypha indica</i> . In: <i>Study of Homoeopathic Medicines Through Clinical Verification – A New Perspective</i> . Volume-3. New Delhi, India: Central Council for Research in Homoeopathy (An Autonomous Body under Ministry of AYUSH, Government of India); 2016. P.1-18.
3.	<i>Achyranthes aspera</i> (Latjira)*	Plant	1979-2007	<i>Achyranthes aspera</i> . In: <i>Study of Homoeopathic Medicines Through Clinical Verification - A New Perspective</i> . Volume-1. New Delhi, India: Central Council for Research in Homoeopathy; 2011. P.21-31.
4.	<i>Acid butyricum</i> (Butyric acid)	Chemical	2007-2012	<i>Acid butyricum</i> . In: <i>Study of Homoeopathic Medicines Through Clinical Verification – A New Perspective</i> . Volume-3. New Delhi, India: Central Council for Research in Homoeopathy (An Autonomous Body under Ministry of AYUSH, Government of India); 2016. P.19-28.

S. NO.	NAME OF THE DRUG	SOURCE OF DRUG	PERIOD OF VERIFICATION STUDY	PUBLICATION
5.	Aegle folia (Bael)*	Plant	1979-2007	Aegle folia. In: Study of Homoeopathic Medicines Through Clinical Verification - A New Perspective. Volume-1. New Delhi, India: Central Council for Research in Homoeopathy; 2011. P.32-50.
6.	Aegle marmelos(Bel)*	Plant	1979-2007	Aegle marmelos. In: Study of Homoeopathic Medicines Through Clinical Verification - A New Perspective. Volume-1. New Delhi, India: Central Council for Research in Homoeopathy; 2011. P.51-66.
7.	Agave americana (Century plant)	Plant	2012-2014	Agave Americana. In: Study of Homoeopathic Medicines Through Clinical Verification– A New Perspective. Volume-4. New Delhi, India: Central Council for Research in Homoeopathy (An Autonomous Body under Ministry of AYUSH, Government of India); 2018. P.15-30.
8.	Amygdalus persica (Peach Tree)	Plant	1979-2007	Amygdalus persica. In: Study of Homoeopathic Medicines Through Clinical Verification - A New Perspective. Volume-1. New Delhi, India: Central Council for Research in Homoeopathy; 2011. P.85-90.
9.	Andrographis paniculata (Kalmegh)*	Plant	2012-2014	Andrographis paniculata. In: Study of Homoeopathic Medicines Through Clinical Verification– A New Perspective. Volume-4. New Delhi, India: Central Council for Research in Homoeopathy (An Autonomous Body under Ministry of AYUSH, Government of India); 2018. P.31-54.
10.	Anthrakokali (Lithanthrakokali)	Chemical	1979-2007	Anthrakokali. In: Study of Homoeopathic Medicines Through Clinical Verification– A New Perspective. Volume-2. New Delhi, India: Central Council for Research in Homoeopathy; 2011. P.15-27.
11.	Aranea scinencia (Grey Spider)	Animal	2007-2012	Aranea scinencia. In: Study of Homoeopathic Medicines Through Clinical Verification – A New Perspective. Volume-3. New Delhi, India: Central Council for Research in Homoeopathy (An Autonomous Body under Ministry of AYUSH, Government of India); 2016. P.52-57.
12.	Argemone mexicana (Yellow Mexican Poppy)	Plant	2012-2014	Argemone Mexicana. In: Study of Homoeopathic Medicines Through Clinical Verification– A New Perspective. Volume-4. New Delhi, India: Central Council for Research in Homoeopathy (An Autonomous Body under Ministry of AYUSH, Government of India); 2018. P.52-72.
13.	Arsenicum bromatum (Arsenious bromide)	Chemical	2007-2012	Arsenicum bromatum. In: Study of Homoeopathic Medicines Through Clinical Verification – A New Perspective. Volume-3. New Delhi, India: Central Council for Research in Homoeopathy (An Autonomous Body under Ministry of AYUSH, Government of India); 2016. P.58-65.
14.	Ars. sulph. flavum (Arsenic tri sulphide)	Chemical	1979-2007	Arsenic sulphuratum flavum. In: Study of Homoeopathic Medicines Through Clinical Verification - A New Perspective. Volume-1. New Delhi, India: Central Council for Research in Homoeopathy; 2011. P.91-97.
15.	Atista indica (Ban-nimbu)*	Plant	1979-2007	Atista indica. In: Study of Homoeopathic Medicines Through Clinical Verification - A New Perspective. Volume-1. New Delhi, India: Central Council for Research in Homoeopathy; 2011. P.98-108.
16.	Azadirachta indica (Nim)*	Plant	2007-2012	Azadirachta indica. In: Study of Homoeopathic Medicines Through Clinical Verification– A New Perspective. Volume-4. New Delhi, India: Central Council for Research in Homoeopathy (An Autonomous Body under Ministry of AYUSH, Government of India); 2018. P.73-96.
17.	Bacillinum (Maceration of tuberculous lung)	Nosode	1979-2007	Bacillinum. In: Study of Homoeopathic Medicines Through Clinical Verification– A New Perspective. Volume-2. New Delhi, India: Central Council for Research in Homoeopathy; 2011. P.28-40.
18.	Bacopa monniere (Brahmi)	Plant	2012-2014	Bacopa monniere. In: Study of Homoeopathic Medicines Through Clinical Verification– A New Perspective. Volume-4. New Delhi, India: Central Council for Research in Homoeopathy (An Autonomous Body under Ministry of AYUSH, Government of India); 2018. P.97-116.
19.	Baryta iodata (Barium iodide)	Chemical	1979-2007	Baryta iodata. In: Study of Homoeopathic Medicines Through Clinical Verification– A New Perspective. Volume-2. New Delhi, India: Central Council for Research in Homoeopathy; 2011. P.41-48.

S. NO.	NAME OF THE DRUG	SOURCE OF DRUG	PERIOD OF VERIFICATION STUDY	PUBLICATION
20.	Baryta muriaticum (Barium chloride)	Chemical	1979-2007	Baryta muriatica. In: Study of Homoeopathic Medicines Through Clinical Verification– A New Perspective. Volume-2. New Delhi, India: Central Council for Research in Homoeopathy; 2011. P.49-63.
21.	Bellis perennis (Daisy)	Plant	2007-2012	Bellis perennis. In: Study of Homoeopathic Medicines Through Clinical Verification – A New Perspective. Volume-3. New Delhi, India: Central Council for Research in Homoeopathy (An Autonomous Body under Ministry of AYUSH, Government of India); 2016. P.66-75.
22.	Benzoicum acid (Benzoic acid)	Chemical	1979-2007	Acidum benzoicum. In: Study of Homoeopathic Medicines Through Clinical Verification– A New Perspective. Volume-2. New Delhi, India: Central Council for Research in Homoeopathy; 2011. P.1-14.
23.	Benzinum nitricum (Nitro benzene)	Chemical	1979-2007	Benzinum nitricum. In: Study of Homoeopathic Medicines Through Clinical Verification - A New Perspective. Volume-1. New Delhi, India: Central Council for Research in Homoeopathy; 2011. P.109-113.
24.	Berberis vulgaris (Barberry)	Plant	1979-2007	Berberis vulgaris. In: Study of Homoeopathic Medicines Through Clinical Verification– A New Perspective. Volume-2. New Delhi, India: Central Council for Research in Homoeopathy; 2011. P.64-78.
25.	Boerhavia diffusa (Sant)*	Plant	1979-2007	Boerahaavia diffusa. In: Study of Homoeopathic Medicines Through Clinical Verification - A New Perspective. Volume-1. New Delhi, India: Central Council for Research in Homoeopathy; 2011. P. 123-132.
26.	Caesalpinia bonducella (Karanju)*	Plant	1979-2007	Caesalpinia bonducella. In: Study of Homoeopathic Medicines Through Clinical Verification - A New Perspective. Volume-1. New Delhi, India: Central Council for Research in Homoeopathy; 2011. P.133-140.
27.	Calotropis gigantea (Madar)*	Plant	2007-2012	Calotropis gigantea. In: Study of Homoeopathic Medicines Through Clinical Verification – A New Perspective. Volume-3. New Delhi, India: Central Council for Research in Homoeopathy (An Autonomous Body under Ministry of AYUSH, Government of India); 2016. P.76-86.
28.	Cannabis indica(Bhang)*	Plant	1979-2007	Cannabis indica. In: Study of Homoeopathic Medicines Through Clinical Verification– A New Perspective. Volume-2. New Delhi, India: Central Council for Research in Homoeopathy; 2011. P.79-86.
29.	Cannabis sativa (Ganja)	Plant	1979-2007	Cannabis sativa. In: Study of Homoeopathic Medicines Through Clinical Verification– A New Perspective. Volume-2. New Delhi, India: Central Council for Research in Homoeopathy; 2011. P.87-95.
30.	Carica papaya (Papeeta)*	Plant	1979-2007	Carica papaya. In: Study of Homoeopathic Medicines Through Clinical Verification - A New Perspective. Volume-1. New Delhi, India: Central Council for Research in Homoeopathy; 2011. P.141-149.
31.	Cassia sophera (Kasunda)*	Plant	1979-2007	Cassia sophera. In: Study of Homoeopathic Medicines Through Clinical Verification - A New Perspective. Volume-1. New Delhi, India: Central Council for Research in Homoeopathy; 2011. P.149-167.
32.	Cephalandra indica (Kundurur)*	Plant	1979-2007	Cephalandra indica. In: Study of Homoeopathic Medicines Through Clinical Verification - A New Perspective. Volume-1. New Delhi, India: Central Council for Research in Homoeopathy; 2011. P.168-174
33.	Chromium kali sulph (Chromium potassium sulphate)	Chemical	2007-2012	Chromium kali sulphuratum. In: Study of Homoeopathic Medicines Through Clinical Verification – A New Perspective. Volume-3. New Delhi, India: Central Council for Research in Homoeopathy (An Autonomous Body under Ministry of AYUSH, Government of India); 2016. P.99-103.
34.	Cuprum aceticum (Acetate of Copper)	Chemical	1979-2007	Cuprum aceticum. In: Study of Homoeopathic Medicines Through Clinical Verification– A New Perspective. Volume-2. New Delhi, India: Central Council for Research in Homoeopathy; 2011. P.96-105.

S. NO.	NAME OF THE DRUG	SOURCE OF DRUG	PERIOD OF VERIFICATION STUDY	PUBLICATION
35.	Embelia ribes (Baberang)*	Plant	1979-2007	Embelia ribes. In: Study of Homoeopathic Medicines Through Clinical Verification - A New Perspective. Volume-1. New Delhi, India: Central Council for Research in Homoeopathy; 2011. P.181-188.
36.	Euphorbia lathyris (Caper Spurge)	Plant	2007-2012	Euphorbia lathyris. In: Study of Homoeopathic Medicines Through Clinical Verification – A New Perspective. Volume-3. New Delhi, India: Central Council for Research in Homoeopathy (An Autonomous Body under Ministry of AYUSH, Government of India); 2016. P.115-123.
37.	Gallicum acidum (Gallic acid)	Chemical	1979-2007	Gallium acidum. In: Study of Homoeopathic Medicines Through Clinical Verification - A New Perspective. Volume-1. New Delhi, India: Central Council for Research in Homoeopathy; 2011. P.210-218.
38.	Gymnema sylvestre (Gurmar)*	Plant	1979-2007	Gymnema sylvestre. In: Study of Homoeopathic Medicines Through Clinical Verification - A New Perspective. Volume-1. New Delhi, India: Central Council for Research in Homoeopathy; 2011. P.219-224.
39.	Hecla lava (Lava Scoriae from Mt.Hekla)	Mineral	1979-2007	Hecla lava. In: Study of Homoeopathic Medicines Through Clinical Verification - A New Perspective. Volume-1. New Delhi, India: Central Council for Research in Homoeopathy; 2011. P.225-233.
40.	Holarrhena antidysenterica (Kurchi)*	Plant	2007-2012	Holarrhena antidysenterica. In: Study of Homoeopathic Medicines Through Clinical Verification – A New Perspective. Volume-3. New Delhi, India: Central Council for Research in Homoeopathy (An Autonomous Body under Ministry of AYUSH, Government of India); 2016. P.141-155.
41.	Hydrocotyle asiatica (Brahma manduki)*	Plant	1979-2007, 2012-2014	Hydrocotyle asiatica. In: Study of Homoeopathic Medicines Through Clinical Verification - A New Perspective. Volume-1. New Delhi, India: Central Council for Research in Homoeopathy; 2011. P.234-251.
42.	Hygrophilla spinosa (Talimakhana)*	Plant	1979-2007	Hygrophilla spinosa. In: Study of Homoeopathic Medicines Through Clinical Verification - A New Perspective. Volume-1. New Delhi, India: Central Council for Research in Homoeopathy; 2011. P.252-260.
43.	Jaborandi (Pilocarpus)	Plant	1979-2007	Jaborandi. In: Study of Homoeopathic Medicines Through Clinical Verification - A New Perspective. Volume-1. New Delhi, India: Central Council for Research in Homoeopathy; 2011. P.267-276.
44.	Jacaranda caroba (Brazilian Caroba Tree)	Plant	1979-2007	Jacaranda caroba. In: Study of Homoeopathic Medicines Through Clinical Verification - A New Perspective. Volume-1. New Delhi, India: Central Council for Research in Homoeopathy; 2011. P.277-283.
45.	Jalapa (Exogonium purga)	Plant	1979-2007	Jalapa. In: Study of Homoeopathic Medicines Through Clinical Verification– A New Perspective. Volume-2. New Delhi, India: Central Council for Research in Homoeopathy; 2011. P.113-121.
46.	Juglans regia (Akrot)*	Plant	1979-2007, 2012-2014	Juglans regia. In: Study of Homoeopathic Medicines Through Clinical Verification - A New Perspective. Volume-1. New Delhi, India: Central Council for Research in Homoeopathy; 2011. P.284-294.
47.	Justicia adhatoda (Vasaka)*	Plant	1979-2007	Justicia adhatoda. In: Study of Homoeopathic Medicines Through Clinical Verification - A New Perspective. Volume-1. New Delhi, India: Central Council for Research in Homoeopathy; 2011. P.295-304.
48.	Kali muriaticum (Chloride of Potassium)	Chemical	1979-2007	Kali muriaticum. In: Study of Homoeopathic Medicines Through Clinical Verification– A New Perspective. Volume-2. New Delhi, India: Central Council for Research in Homoeopathy; 2011. P.122-147.
49.	Lac caninum (Bitch's Milk)	Animal	1979-2007	Lac caninum. In: Study of Homoeopathic Medicines Through Clinical Verification– A New Perspective. Volume-2. New Delhi, India: Central Council for Research in Homoeopathy; 2011. P.148-170.

S. NO.	NAME OF THE DRUG	SOURCE OF DRUG	PERIOD OF VERIFICATION STUDY	PUBLICATION
50.	Lapis albus (Gastein Rock)	Mineral	2007-2012	Lapis albus. In: Study of Homoeopathic Medicines Through Clinical Verification – A New Perspective. Volume-3. New Delhi, India: Central Council for Research in Homoeopathy (An Autonomous Body under Ministry of AYUSH, Government of India); 2016. P.165-171.
51.	Liatris spicata (Dense button Snake root)	Plant	2012-2014	Liatris spicata. In: Study of Homoeopathic Medicines Through Clinical Verification – A New Perspective. Volume-4. New Delhi, India: Central Council for Research in Homoeopathy (An Autonomous Body under Ministry of AYUSH, Government of India); 2018. P.159-176.
52.	Magnesia sulphurica (Epsom salt)	Chemical	2007-2012	Magnesia sulphurica. In: Study of Homoeopathic Medicines Through Clinical Verification – A New Perspective. Volume-3. New Delhi, India: Central Council for Research in Homoeopathy (An Autonomous Body under Ministry of AYUSH, Government of India); 2016. P.180-197.
53.	Mangifera indica (Am)*	Plant	2007-2012	Mangifera indica. In: Study of Homoeopathic Medicines Through Clinical Verification – A New Perspective. Volume-3. New Delhi, India: Central Council for Research in Homoeopathy (An Autonomous Body under Ministry of AYUSH, Government of India); 2016. P.172-179.
54.	Nyctanthes arbor-tristis (Harsinghar)*	Plant	1979-2007	Nyctanthes arbor-tristis. In: Study of Homoeopathic Medicines Through Clinical Verification - A New Perspective. Volume-1. New Delhi, India: Central Council for Research in Homoeopathy; 2011. P.316-324.
55.	Oxytropis lambertii (Locoweed)	Plant	2007-2012	Oxytropis lambertii. In: Study of Homoeopathic Medicines Through Clinical Verification– A New Perspective. Volume-4. New Delhi, India: Central Council for Research in Homoeopathy (An Autonomous Body under Ministry of AYUSH, Government of India); 2018. P.177-186.
56.	Pyrus americana (Mountain ash)	Plant	2007-2012	Pyrus Americana. In: Study of Homoeopathic Medicines Through Clinical Verification– A New Perspective. Volume-4. New Delhi, India: Central Council for Research in Homoeopathy (An Autonomous Body under Ministry of AYUSH, Government of India); 2018. P.187-196.
57.	Rauwolfia serpentine (Sarpagandha)*	Plant	2007-2012	Rauwolfia serpentine. In: Study of Homoeopathic Medicines Through Clinical Verification– A New Perspective. Volume-4. New Delhi, India: Central Council for Research in Homoeopathy (An Autonomous Body under Ministry of AYUSH, Government of India); 2018. P.197-210.
58.	Saraca indica (Ashoka)*	Plant	1979-2007	Saraca indica. In: Study of Homoeopathic Medicines Through Clinical Verification - A New Perspective. Volume-1. New Delhi, India: Central Council for Research in Homoeopathy; 2011. P.352-339.
59.	Sarsaparilla (Smilax)	Plant	1979-2007	Sarsaparilla. In: Study of Homoeopathic Medicines Through Clinical Verification– A New Perspective. Volume-2. New Delhi, India: Central Council for Research in Homoeopathy; 2011. P.171-182.
60.	Syzygium jambolanum (Jamoon)*	Plant	1979-2007	Syzygium jambolanum. In: Study of Homoeopathic Medicines Through Clinical Verification - A New Perspective. Volume-1. New Delhi, India: Central Council for Research in Homoeopathy; 2011. P.340-345.
61.	Tarentula cubensis (Cuban Spider)	Animal	1979-2007	Tarentula cubensis. In: Study of Homoeopathic Medicines Through Clinical Verification– A New Perspective. Volume-4. New Delhi, India: Central Council for Research in Homoeopathy (An Autonomous Body under Ministry of AYUSH, Government of India); 2018. P.237-254.
62.	Tela aranea (Spider web)	Animal	2007-2012	Tela aranea. In: Study of Homoeopathic Medicines Through Clinical Verification– A New Perspective. Volume-4. New Delhi, India: Central Council for Research in Homoeopathy (An Autonomous Body under Ministry of AYUSH, Government of India); 2018. P.255-266.
63.	Terminalia arjuna (Arjuna)*	Plant	1979-2007	Terminalia arjuna. In: Study of Homoeopathic Medicines Through Clinical Verification - A New Perspective. Volume-1. New Delhi, India: Central Council for Research in Homoeopathy; 2011. P.346-355.
64.	Terminalia chebula (Harara)*	Plant	1979-2007	Terminalia chebula. In: Study of Homoeopathic Medicines Through Clinical Verification - A New Perspective. Volume-1. New Delhi, India: Central Council for Research in Homoeopathy; 2011. P.356-366.

S. NO.	NAME OF THE DRUG	SOURCE OF DRUG	PERIOD OF VERIFICATION STUDY	PUBLICATION
65.	Thea chinensis (Tea)	Plant	2007-2012	Thea chinensis. In: Study of Homoeopathic Medicines Through Clinical Verification– A New Perspective. Volume-4. New Delhi, India: Central Council for Research in Homoeopathy (An Autonomous Body under Ministry of AYUSH, Government of India); 2018. P.283-300.
66.	Theridion (Orange spider)	Animal	2007-2012	Theridion currassavicum. In: Study of Homoeopathic Medicines Through Clinical Verification– A New Perspective. Volume-4. New Delhi, India: Central Council for Research in Homoeopathy (An Autonomous Body under Ministry of AYUSH, Government of India); 2018. P.301-312.
67.	Tribulus terrestris (Gokhru)*	Plant	2012-2014	Tribulus terrestris. In: Study of Homoeopathic Medicines Through Clinical Verification– A New Perspective. Volume-4. New Delhi, India: Central Council for Research in Homoeopathy (An Autonomous Body under Ministry of AYUSH, Government of India); 2018. P.313-326.
68.	Viscum album (Ban banda)	Plant	1979-2007	Viscum album. In: Study of Homoeopathic Medicines Through Clinical Verification– A New Perspective. Volume-2. New Delhi, India: Central Council for Research in Homoeopathy; 2011. P.199-216.

\* Signifies drug of Indian origin

**TABLE 3: Articles on Clinical Verification published in IJRH**

S. No.	AUTHOR	TITLE	YEAR	VOLUME	ISSUE	PAGE NO.	No. of CASES	No. of SYMPTOMS	No. of REMEDIES	REFERENCES
1.	A.K. Vichitra et al	Damiana – A Clinical Verification Study (A multicentric study conducted by CCRH)	2007	1	1	17-23	3032	39	1	Vichitra AK, Singh AKN, Singh DK, Chakraborty D, Singh H, Singh JP, et al. Damiana - A Clinical Verification Study (A Multicentric Study conducted by CCRH). Indian Journal of Research in Homoeopathy. 2007;1(1):17-23. Available from: <a href="http://www.ijrh.org/article.asp?issn=0974-7168;year=2007;volume=1;issue=1;spage=17;epage=23;aulast=:type=0">http://www.ijrh.org/article.asp?issn=0974-7168;year=2007;volume=1;issue=1;spage=17;epage=23;aulast=:type=0</a> [Accessed 29th August 2019].
Clinical condition verified - <b>Impotency or erectile dysfunction (69.5%), sexual neurasthenia and nervous fatigue (64.2%), leucorrhoea (71.0 %), migraine (72.0 %).</b>										
2.	P.S. Chakraborty et al	Amoora rohituka: A multicentric clinical verification study conducted by CCRH	2008	2	1	19-25	4706	90	1	Chakraborty PS, Singh JP, Rai MK, Singh P, Singh H, Bhagat SR, et al. Amoora rohituka - A multicentric clinical verification study conducted by CCRH. Indian Journal of Research in Homoeopathy. 2008;2(1):19-25. Available from: <a href="http://www.ijrh.org/article.asp?issn=0974-7168;year=2008;volume=2;issue=1;spage=19;epage=25;aulast=Chakraborty">http://www.ijrh.org/article.asp?issn=0974-7168;year=2008;volume=2;issue=1;spage=19;epage=25;aulast=Chakraborty</a> [Accessed 29th August 2019].

S. No.	AUTHOR	TITLE	YEAR	VOLUME	ISSUE	PAGE NO.	No. of CASES	No. of SYMPTOMS	No. of REMEDIES	REFERENCES
Clinical condition verified - <b>Fever (68.95%), intermittent fever with enlargement of liver and spleen (100%), constipation and bleeding (66.90%), weakness of memory (87.87%), liver and spleen enlargements (64.60%).</b>										
3	P.S. Chakraborty et al	Blatta orientalis	2008	2	2	25-30	6184	69	1	Chakraborty PS, Singh JP, Rai MK, Singh P, Vichitra AK, Singh AKN, et al. Blatta orientalis. Indian Journal of Research in Homoeopathy. 2008;2(2):25-30.
Clinical condition verified - <b>Difficulty in breathing (71%), aggravation rainy season (65%) and humid weather (75%).</b>										
4	P.S. Chakraborty et al	Ferrum picricum: A multicentric clinical verification study conducted by CCRH	2008	2	3	1521	3565	69	1	Chakraborty PS, Singh JP, Rai MK, Singh P, Vichitra AK, Singh AKN, et al. Ferrum Picricum - A Multicentric Clinical Verification Study conducted by CCRH. Indian Journal of Research in Homoeopathy. 2008;2(3):15-21. Available from: <a href="http://www.ijrh.org/article.asp?issn=0974-7168;year=2008;volume=2;issue=3;spage=15;epage=21;aulast=Chakraborty;type=0">http://www.ijrh.org/article.asp?issn=0974-7168;year=2008;volume=2;issue=3;spage=15;epage=21;aulast=Chakraborty;type=0</a> [Accessed 29th August 2019].
Clinical condition verified - <b>BPH with frequent urination (69.85%), retention of urine (72%), burning (63%), and dribbling urination (69%), scanty urination (67%), enlarged prostate (67.3%).</b>										
5	P.S. Chakraborty et al	Mentha piperita – A multicentric clinical verification study conducted by CCRH	2008	2	4	26-33	6372	105	1	Chakraborty PS, Singh JP, Rai MK, Singh P, Vichitra AK, Singh AKN, et al. Mentha piperita - A Multicentric Clinical Verification Study conducted by CCRH. Indian Journal of Research in Homoeopathy. 2008;2(4):26-33. Available from: <a href="http://www.ijrh.org/article.asp?issn=0974-7168;year=2008;volume=2;issue=4;spage=26;epage=33;aulast=Chakraborty">http://www.ijrh.org/article.asp?issn=0974-7168;year=2008;volume=2;issue=4;spage=26;epage=33;aulast=Chakraborty</a> [Accessed 29th August 2019].
Clinical condition verified - <b>Dry cough &lt; cold air (85%), colicky pain in abdomen with flatulence (64.58%), flatulence with bloated abdomen (71.11%).</b>										
6	P.S. Chakraborty et al	Fagopyrum esculentum – A multicentric clinical verification study conducted by CCRH	2009	3	1	23-33	6829	150	1	Chakraborty PS, Singh JP, Rai MK, Singh P, Vichitra AK, Singh AKN, et al. Fagopyrum esculentum - A Multicentric Clinical Verification Study conducted by CCRH. Indian Journal of Research in Homoeopathy. 2009;3(1):23-33. Available from: <a href="http://www.ijrh.org/article.asp?issn=0974-7168;year=2009;volume=3;issue=1;spage=23;epage=33;aulast=Chakraborty;type=0">http://www.ijrh.org/article.asp?issn=0974-7168;year=2009;volume=3;issue=1;spage=23;epage=33;aulast=Chakraborty;type=0</a> [Accessed 29th August 2019].

S. No.	AUTHOR	TITLE	YEAR	VOLUME	ISSUE	PAGE NO.	No. of CASES	No. of SYMPTOMS	No. of REMEDIES	REFERENCES
Clinical condition verified - <b>Leucorrhoea (72.32%), itching in vagina (76.04%), excoriating leucorrhoea (70.27%), vesicular eruption with itching (56.90%), pustular eruption (64.94%), coryza (75.35%) and tonsillitis (94.38%).</b>										
7	P.S. Chakraborty et al	Alstonia constricta	2009	3	2	38-43	3854	63	1	Chakraborty PS, Khurana AK, Singh JP, Rai MK, Singh P, Vichitra AK, et al. Alstonia constricta - A Multicentric Clinical Verification Study conducted by CCRH. Indian Journal of Research in Homoeopathy. 2009;3(2):38-43.
Clinical condition verified – <b>Diarrhoea (71.90%), intermittent fever (72.13%), leucorrhoea.</b>										
8	P.S. Chakraborty et al	Ephedra vulgaris - A multicentric clinical verification study conducted by CCRH	2009	3	3	14-20	1657	48	1	Chakraborty PS, Khurana AK, Singh JP, Rai MK, Singh P, Vichitra AK, et al. Ephedra vulgaris - A Multicentric Clinical Verification Study conducted by CCRH. Indian Journal of Research in Homoeopathy. 2009;3(3):14-20. Available from: <a href="http://www.ijrh.org/article.asp?issn=0974-7168;year=2009;volume=3;issue=3;spage=14;epage=20;aulast=Chakraborty;type=0">http://www.ijrh.org/article.asp?issn=0974-7168;year=2009;volume=3;issue=3;spage=14;epage=20;aulast=Chakraborty;type=0</a> [Accessed 29th August 2019].
Clinical condition verified – <b>Headache (60%), left sided hemicrania (64.28%), Grave's disease (60 %), cervical spondylosis (93.87%).</b>										
9	P.S. Chakraborty et al	Tarentula hispanica-A multicentric clinical verification study conducted by CCRH	2009	3	4	25-36	2794	129	1	Chakraborty PS, Khurana AK, Singh JP, Rai MK, Singh P, Vichitra AK, et al. Tarentula hispanica - A Multicentric Clinical Verification Study conducted by CCRH. Indian Journal of Research in Homoeopathy. 2009;3(4):25-36.
Clinical condition verified – <b>Depression, vertigo, headache, otorrhoea, dyspepsia, and hiccough.</b>										
10	P.S. Chakraborty et al	Iris tenax-A multicentric clinical verification study	2010	4	2	18-22		35	1	Chakraborty PS, Khurana A, Vichitra AKN, Chakraborty D, Singh DK, Singh H, et al. Iris tenax - A multicentric clinical verification study. Indian Journal of Research in Homoeopathy. 2010;4(2):18-22. Available from: <a href="http://www.ijrh.org/downloadpdf.asp?issn=0974-7168;year=2010;volume=4;issue=2;spage=18;epage=22;aulast=Chakraborty;type=2">http://www.ijrh.org/downloadpdf.asp?issn=0974-7168;year=2010;volume=4;issue=2;spage=18;epage=22;aulast=Chakraborty;type=2</a> [Accessed 29th August 2019].

S. No.	AUTHOR	TITLE	YEAR	VOLUME	ISSUE	PAGE NO.	No. of CASES	No. of SYMPTOMS	No. of REMEDIES	REFERENCES
Clinical condition verified – <b>Appendicitis (71.05%), pain in right iliac region (75.90%), constipation (90.22%).</b>										
11	C. Nayak et al	Glycyrrhiza glabra- A multicentric clinical verification study	2010	4	2	22-33	278	133	1	Nayak C, Singh V, Singh K, Chakraborty PS, Kaushik, Ray RK, et al. Glycyrrhiza glabra - A multicentric clinical verification study. Indian Journal of Research in Homoeopathy. 2010;4(3):22-33. Available from: <a href="http://www.ijrh.org/downloadpdf.asp?issn=0974-7168;year=2010;volume=4;issue=3;spage=22;epage=33;au last=Nayak;type=2">http://www.ijrh.org/downloadpdf.asp?issn=0974-7168;year=2010;volume=4;issue=3;spage=22;epage=33;au last=Nayak;type=2</a> [Accessed 29th August 2019].
Clinical condition verified – <b>Constipation (75%), loose watery mucoid stool (91.66%), dry cough &gt; from drinking water (66.66%), &lt; afternoon (75%).</b>										
12	C. Nayak et al	Tylophora indica- A multicentric clinical verification study	2010	4	4	12-18	340	43	1	Nayak C, Singh V, Singh K, Chakraborty PS, Kaushik, Ray RK et al, Tylophora indica - A multicentric clinical verification study. Indian Journal of Research in Homoeopathy. 2010;4(4):12-18. Available from: <a href="http://www.ijrh.org/downloadpdf.asp?issn=0974-7168;year=2010;volume=4;issue=4;spage=12;epage=18;au last=Nayak;type=2">http://www.ijrh.org/downloadpdf.asp?issn=0974-7168;year=2010;volume=4;issue=4;spage=12;epage=18;au last=Nayak;type=2</a> [Accessed 29th August 2019].
Clinical condition verified - <b>Cough, constipation, diarrhoea, earache, headache, rhinitis, fearful dreams and lumbago.</b>										
13	PS Chakraborty et al	Curcuma longa - A multicentric clinical verification study	2011	5	1	19-27	129	94	1	Chakraborty PS, Ali SA, Kaushik S, Ray RK, Yadav RP, Rai MK, et al. Curcuma longa - A multicentric clinical verification study. Indian Journal of Research in Homoeopathy. 2011;5(1):19-27. Available from: <a href="http://www.ijrh.org/article.asp?issn=0974-7168;year=2011;volume=5;issue=1;spage=19;epage=27;au last=Chakraborty;type=0">http://www.ijrh.org/article.asp?issn=0974-7168;year=2011;volume=5;issue=1;spage=19;epage=27;au last=Chakraborty;type=0</a> [Accessed 29th August 2019].
Clinical condition verified - <b>Anorexia, dyspepsia, abdominal colic, constipation, laryngitis, dry cough, dysmenorrhea, lumbago, headache, vertigo, conjunctivitis, toothache and anxiety neurosis.</b>										
14	PS Chakraborty et al	Cassia fistula - A multicentric clinical verification study	2011	5	2	20-29	129	82	1	Chakraborty PS, Kaushik S, Ray RK, Yadav RP, Rai MK, Singh D, et al. Cassia fistula - A multicentric clinical verification study. Indian Journal of Research in Homoeopathy. 2011;5(2):20-29. Available from: <a href="http://www.ijrh.org/article.asp?issn=0974-7168;year=2011;volume=5;issue=2;spage=20;epage=29;au last=Chakraborty;type=0">http://www.ijrh.org/article.asp?issn=0974-7168;year=2011;volume=5;issue=2;spage=20;epage=29;au last=Chakraborty;type=0</a> [Accessed 29th August 2019].

S. No.	AUTHOR	TITLE	YEAR	VOLUME	ISSUE	PAGE NO.	No. of CASES	No. of SYMPTOMS	No. of REMEDIES	REFERENCES
Clinical condition verified - <b>Anorexia, confusion, constipation, coryza, earache, fever, headache, lethargy, nasal obstruction, pain in abdomen, pain in knee joint, sneezing, sleeplessness, stiffness of joints, arthritis, cervical spondylitis, tonsillitis and weakness.</b>										
15	PS Chakraborty et al	Alfalfa - A multicentric clinical verification study	2011	5	3	36-43	169	55	1	Chakraborty PS, Kaushik S, Nain SS, Singh P, Prasad VG, D Singh, et al. Alfalfa - A multicentric clinical verification study. Indian Journal of Research in Homoeopathy. 2011;5(3):36-43. Available from: <a href="http://www.ijrh.org/article.asp?issn=0974-7168;year=2011;volume=5;issue=3;spage=36;epage=43;aurlast=Chakraborty;type=0">http://www.ijrh.org/article.asp?issn=0974-7168;year=2011;volume=5;issue=3;spage=36;epage=43;aurlast=Chakraborty;type=0</a> [Accessed 29th August 2019].
Clinical condition verified - <b>Anorexia, coryza, depression, fever, headache, lethargy, sneezing, sleeplessness, cervical pain, fever, irritability of mind and weakness.</b>										
16	PS Chakraborty et al	Staphylococcinum - A multicenter clinical verification study	2012	6	2	15-21	411	39	1	Chakraborty PS, Kaushik S, Nain SS, Singh P, Singh D, Singh O, et al. Staphylococcinum - A multicenter clinical verification study. Indian Journal of Research in Homoeopathy. 2012;6(2):15-21. Available from: <a href="http://www.ijrh.org/article.asp?issn=0974-7168;year=2012;volume=6;issue=2;spage=15;epage=21;aurlast=Chakraborty;type=0">http://www.ijrh.org/article.asp?issn=0974-7168;year=2012;volume=6;issue=2;spage=15;epage=21;aurlast=Chakraborty;type=0</a> [Accessed 29th August 2019].
Clinical condition verified - <b>Acne, aphthae, arthritis, dermatitis, fever, headache, toothache and urinary tract infection.</b>										
17	PS Chakraborty et al	Clinical Verification of Ichthyolum - A multicentric observational study	2012	6	4	24-33	131	57	1	Chakraborty PS, Kaushik S, Nain SS, Singh P, Singh O, Das KC, et al. Clinical Verification of Ichthyolum - A multicentric observational study. Indian Journal of Research in Homoeopathy. 2012;6(4):24-33. Available from: <a href="http://www.ijrh.org/article.asp?issn=0974-7168;year=2012;volume=6;issue=4;spage=24;epage=33;aurlast=Chakraborty;type=0">http://www.ijrh.org/article.asp?issn=0974-7168;year=2012;volume=6;issue=4;spage=24;epage=33;aurlast=Chakraborty;type=0</a> [Accessed 29th August 2019].

S. No.	AUTHOR	TITLE	YEAR	VOLUME	ISSUE	PAGE NO.	No. of CASES	No. of SYMPTOMS	No. of REMEDIES	REFERENCES
Clinical condition verified - <b>Headache, vertigo, eye pain, acne, tonsillitis, dyspepsia, abdominal colic, constipation, diarrhoea, urinary tract infections, dry cough, disturbed sleep, warts and itching eruptions on skin.</b>										
18	PS Chakraborty et al	Assessing the therapeutic usefulness of Ricinus communis: A multicentric observational clinical verification study	2014	8	4	200-208	225	53	1	Chakraborty PS, Kaushik S, Singh P, Nain SS, Singh O, Ramteke SS, et al. Assessing the therapeutic usefulness of Ricinus communis: A multicentric observational clinical verification study. Indian Journal of Research in Homoeopathy. 2014;8(4):200-208. Available from: <a href="http://www.ijrh.org/article.asp?issn=0974-7168;year=2014;volume=8;issue=4;spage=200;epage=208;aulast=Chakraborty;type=0">http://www.ijrh.org/article.asp?issn=0974-7168;year=2014;volume=8;issue=4;spage=200;epage=208;aulast=Chakraborty;type=0</a> [Accessed 29th August 2019].
Clinical condition verified - <b>Headache, coryza, aphthae, gastritis, diarrhea, constipation and acne.</b>										
19	Raj K Manchanda et al	Mygale lasiodora: A multicentric observational homoeopathic clinical verification study	2015	9	4	249-257	166	76	1	Manchanda RK, Chakraborty PS, Singh P, Nayan SS, Singh O, Pradhan PK, et al. Mygale lasiodora: A - multicentric observational homoeopathic clinical verification study. Indian Journal of Research in Homoeopathy. 2015;9(4):249-257. Available from: <a href="http://www.ijrh.org/article.asp?issn=0974-7168;year=2015;volume=9;issue=4;spage=249;epage=257;aulast=Manchanda">http://www.ijrh.org/article.asp?issn=0974-7168;year=2015;volume=9;issue=4;spage=249;epage=257;aulast=Manchanda</a> [Accessed 29th August 2019].
Clinical condition verified - <b>White coated tongue (61.67%), reddish pimples on face (41.82%), insufficient, scanty, mucoid stool; or frequent, profuse stool, with stitching pain in abdomen; amel. After stool (57.89%).</b>										
20	Raj K Manchanda et al	A multicenter, observational, homoeopathic clinical verification study of Cynodon dactylon revealing symptom prevalence in a cohort of 340 patients	2016	10	4	225-237	340	340	1	Manchanda RK, Chakraborty P, Singh P, Pradhan PK, Prasad VG, Singh O, et al. A - multicentric observational, homoeopathic clinical verification study of Cynodon dactylon revealing symptom prevalence in a cohort of 340 patients. Indian Journal of Research in Homoeopathy. 2016;10(4):225-237. Available from: <a href="http://www.ijrh.org/article.asp?issn=0974-7168;year=2016;volume=10;issue=4;spage=225;epage=237;aulast=Manchanda">http://www.ijrh.org/article.asp?issn=0974-7168;year=2016;volume=10;issue=4;spage=225;epage=237;aulast=Manchanda</a> [Accessed 29th August 2019].

S. No.	AUTHOR	TITLE	YEAR	VOLUME	ISSUE	PAGE NO.	No. of CASES	No. of SYMPTOMS	No. of REMEDIES	REFERENCES
Clinical condition verified - <b>Haemorrhoids(18.6%), diarrhoea and dysentery (16.1%), rheumatic conditions and myalgia (8.4%), menorrhagia (6.2%), and urolithiasis (4.0%).</b>										
21	Raj K Manchanda et al	Symptom prevalence in a cohort of 147 patients improved with the homoeopathic medicine Ocimum canum: A multicenter, open, observational, clinical verification study	2016	10	4	238-248	214 / 179	173	1	Manchanda RK, Chakraborty P, Das KC, Rai MK, Singh O, et al. Symptom prevalence in a cohort of 147 patients improved with the homoeopathic medicine Ocimum canum: A multicenter, open, observational, clinical verification study. Indian Journal of Research in Homoeopathy. 2016;10(4):238-248. Available from: <a href="http://www.ijrh.org/article.asp?issn=0974-7168;year=2016;volume=10;issue=4;spage=238;epage=248;aualast=Manchanda">http://www.ijrh.org/article.asp?issn=0974-7168;year=2016;volume=10;issue=4;spage=238;epage=248;aualast=Manchanda</a> [Accessed 29th August 2019].
Clinical condition verified - <b>Respiratory tract infection (56.46%).</b>										
22	Rajkumar Manchanda et al	Formic acid: A multicentric observational homoeopathic clinical verification trial	2016	10	4	249-257	270 / 266	266	1	Manchanda RK, Gupta J, Chakraborty P, Singh P, Nayan SS, Singh P, et al. Formic acid: A multicentric observational homoeopathic clinical verification trial. Indian Journal of Research in Homoeopathy. 2016;10(4):249-257. Available from: <a href="http://www.ijrh.org/article.asp?issn=0974-7168;year=2016;volume=10;issue=4;spage=249;epage=257;aualast=Manchanda">http://www.ijrh.org/article.asp?issn=0974-7168;year=2016;volume=10;issue=4;spage=249;epage=257;aualast=Manchanda</a> [Accessed 29th August 2019].
Clinical condition verified – <b>Dyspepsia (62.05%), headache (47%), arthralgia (43.2%).</b>										
23	Manchanda RK et al	Symptom prevalence in a cohort of 65 patients improved with the homoeopathic medicine Mangifera indica: A multicentric open observational clinical verification study	2017	11	3	184-195	114	71	1	Manchanda RK, Chakraborty PS, Singh P, Rai MK, Singh O, Singh DK et al. Symptom prevalence in a cohort of 65 patients improved with the homoeopathic medicine Mangifera indica: A multicentric open observational clinical verification study. Indian Journal of Research in Homoeopathy. 2017;11(3):184-195. Available from: <a href="http://www.ijrh.org/article.asp?issn=0974-7168;year=2017;volume=11;issue=3;spage=184;epage=195;aualast=Manchanda">http://www.ijrh.org/article.asp?issn=0974-7168;year=2017;volume=11;issue=3;spage=184;epage=195;aualast=Manchanda</a> [Accessed 18th Sep 2019].

S. No.	AUTHOR	TITLE	YEAR	VOLUME	ISSUE	PAGE NO.	No. of CASES	No. of SYMPTOMS	No. of REMEDIES	REFERENCES
Clinical condition verified - <b>Coryza with watery nasal discharge (53.85%), Coryza with heaviness of head (16.92%), Appetite diminished (16.92%), Pain in joints, better from pressure (7.69%), Fever with chill and body-ache (7.69%).</b>										
24	Jaya Gupta et al	Prevalence and prognostic factor in patients with good therapeutic response in a cohort of 172 patients with the homoeopathic medicine Aranea diadema: A multicenter, open-label, observational study.	2018	12	1	20-28	174 / 172		1	Gupta J, Manchanda RK, Chakraborty P, Singh P, Ramteke S, Singh O, et al. Prevalence and prognostic factor in patients with good therapeutic response in a cohort of 172 patients with the homoeopathic medicine Aranea diadema: A multicenter, open-label, observational study. Indian Journal of Research in Homoeopathy. 2018;12(1):20-28. Available from: <a href="http://www.ijrh.org/article.asp?issn=0974-7168;year=2018;volume=12;issue=1;spage=20;epage=28;abstract=Gupta.type=0">http://www.ijrh.org/article.asp?issn=0974-7168;year=2018;volume=12;issue=1;spage=20;epage=28;abstract=Gupta.type=0</a> [Accessed 29th August 2019].
Clinical condition verified – <b>Forgetfulness, vertigo, headache, epistaxis, thirstlessness, diarrhoea, seminal emission, fever, hard stool, eruptions on face.</b>										
25	Gupta J et al	Exploring the predictive value of specific symptom as prognostic factor: Assessment of group-confined likelihood ratio for symptom 'Headache' in 20 lesser-known drugs.	2019	13	1	4-11	4582	859	20	Gupta J, Jaya Gupta, Azis SP, Rutten L, Manchanda RK, Pramanik A, Chakraborty P, et al. Exploring the predictive value of specific symptom as prognostic factor: Assessment of group-confined likelihood ratio for symptom 'Headache' in 20 lesser-known drugs. Indian Journal of Research in Homoeopathy. 2019;13(1):4-11. Available from: <a href="http://www.ijrh.org/article.asp?issn=0974-7168;year=2019;volume=13;issue=1;spage=4;epage=11;abstract=Gupta.type=0">http://www.ijrh.org/article.asp?issn=0974-7168;year=2019;volume=13;issue=1;spage=4;epage=11;abstract=Gupta.type=0</a> [Accessed 29th August 2019].
The 'Group confined likelihood ratio' values found cannot be as such transposed to the condition 'Headache' because other medicines were not prescribed in this programme. For future evaluation of all medicines related to headache, <i>Allium sativum</i> and <i>Formicum acidum</i> are worth considering.										

Table 4: Articles on Clinical Verification published in Quarterly Bulletin

S. NO.	AUTHOR	TITLE	YEAR	VOLUME	ISSUE	PAGE NO.	No. of CASES	No. of SYMPTOMS	No. of REMEDIES	RESULT
1	CCRH Team	Clinical verification of hypoglycemic effect of <i>Cephalandra indica</i> in patients of diabetes mellitus	1990	12	3&4	20, 21 & 38	148		1	Central Council for Research in Homoeopathy. Clinical verification of hypoglycemic effect of <i>Cephalandra indica</i> in patients of diabetes mellitus. Quarterly bulletin. 1990;12(3&4):20-21 & 38.

S. NO.	AUTHOR	TITLE	YEAR	VOLUME	ISSUE	PAGE NO.	No. of CASES	No. of SYMPTOMS	No. of REMEDIES	RESULT
<b>RESULT - Cephalandra indica does possess the hypoglycemic effect as shown by reduction in sugar level of the patients and it also helped in mitigating the suffering of the patients.</b>										
2	CCRH Team	Abroma augusta folia (Olat kambal)	1997	19	3&4	1-8	22932	179	1	Central Council for Research in Homoeopathy. Abroma augusta folia (Olat kambal). Quarterly bulletin. 1997;19(3&4):1-8.
<b>RESULT- Pain in joints especially knee joints with modalities similar to that of the Bryonia alba shows its usefulness in arthritis.</b>										
3	CCRH Team	Cassia sophera (Kasunda)	1997	19	3&4	9-11	13314	46	1	Central Council for Research in Homoeopathy. Cassia sophera (Kasunda). Quarterly bulletin. 1997;19(3&4):9-11.
<b>RESULT - The sphere of the action of Cassia saphora not only on respiratory organs but also on nose, joints, back, etc. It has been found effective in catarrhal type of asthma and asthma complicated with bronchitis.</b>										
4	CCRH Team	Justicia adhatoda (Vasaka)	1997	19	3&4	18-21	16691	60	1	Central Council for Research in Homoeopathy. Justicia adhatoda (Vasaka). Quarterly bulletin. 1997;19(3&4):18-21.
<b>RESULT – It is found effective in the early stage of acute rhinitis when it starts with sneezing, discharge is thin, watery and profuse. It is also useful in patients who develop sneezing, coryza, wheezing from dust.</b>										
5	CCRH Team	Berberis vulgaris (Barberry)	1997	19	3&4	22-24	7747	35	1	Central Council for Research in Homoeopathy. Berberis vulgaris (Barberry). Quarterly bulletin. 1997;19(3&4):22-24.
<b>RESULT - The efficacy of Berberis vulgaris for renal and gall stone complaints have been reconfirmed. In biliary colic 29 patients improved symptomatically out of 47 and in renal colic 755 patients were relieved symptomatically out of 798.</b>										
6	CCRH Team	Boerhaavia diffusa (punarnava)	2003	25	1&2	3-5	2489	41	1	Central Council for Research in Homoeopathy. Boerhaavia diffusa (punarnava). Quarterly bulletin. 2003;25(1&2):3-5.
<b>Result - Boerhaavia diffusa has a special affinity for the heart (hypertension), and dropsical swelling all over the body. This is exhibited by the symptoms produced and verified in the head, vertigo, coryza, liver pain, jaundice, cough, palpitation with dyspnea, pain in cardiac region, hypertension with puffiness of face, dropsical swelling all over the body and body ache.</b>										
7	CCRH Team	Caesalpinia bonducella (Caes. Bon.)	2003	25	1&2	6-8	5808	56	1	Central Council for Research in Homoeopathy. Caesalpinia bonducella (Caes. Bon.). Quarterly bulletin. 2003;25(1&2):6-8.
<b>RESULT - Caesalpinia bonducella has a wide sphere of action not only on intermittent fever but also have the action on other parts like mind, abdomen, rectum, skin. This is a very good medicine foe intermittent fever &lt; at 8-10 a.m &amp; 2 to 4 p.m. with chill and bodyache, restlessness, extreme weakness after fever, depression, headache better by pressure, liver enlargement with pain &lt; by pressure, stools are hard, reddish eruptions like mosquito bites.</b>										

S. NO.	AUTHOR	TITLE	YEAR	VOLUME	ISSUE	PAGE NO.	No. of CASES	No. of SYMPTOMS	No. of REMEDIES	RESULT
8	CCRH Team	Carica papaya (Carica p.)	2003	25	1&2	9-11	4021	79	1	Central Council for Research in Homoeopathy. Carica papaya (Carica p.). Quarterly bulletin. 2003;25(1&2):9-12.
<p><b>RESULT - sphere of action of Carica papaya not only on G.I.T. but also on head, eye, mouth, fever, sleep etc. It has been found effective in jaundice, enlargement of liver, dyspnoes and indigestion, acidity with sour eructation after milk, appetite decreased, bitter taste in mouth, constipation with scanty hard stool, stools loose frequent, pain in hepatic region, conjunctiva yellow, intolerance of milk, causes flatulence and acidity</b></p>										
9	CCRH Team	Hydrocotyle asiatica (Hydro. as.)	2003	25	1&2	13-17	7176	136	1	Central Council for Research in Homoeopathy. Hydrocotyle asiatica (Hodro. As.). Quarterly bulletin. 2003;25(1&2):13-17.
<p><b>RESULT - It has an special affinity for skin, mind, head, nose, respiratory system, extremities. Disinclination to work has come out as great concomitant for many of the physical symptoms, which too have been clinically verified. Many of the symptoms like irritability, vertigo, headache, coryza with thin nasal discharge aggravation morning, tongue white coated with excessive salivation, soreness and in throat, backache etc. appeared during council's proving these too have been clinically verified. Some additional symptoms which are given above are not mentioned in literature and nor appeared during proving but present in the patients were disappeared by the Hydrocotyle asiatica medicine during course of treatment.</b></p>										
10	CCRH Team	Jaborandi (Pilocarpus microphyllus)	2003	25	1&2	1821	5416	76	1	Central Council for Research in Homoeopathy. Jaborandi (Pilocarpus microphyllus). Quarterly bulletin. 2003;25(1&2):18-21.
<p><b>RESULT - This medicine has the action on other part of body like vertigo, head, eyes and pimples over face, leucorrhoea, cough and excessive perspiration. It is found effective in headache dull aching in frontal region &lt; reading and &gt; by pressure, falling of hair in bathing and combing, premature graying hair, dandruff with dryness of skin, white spot before eyes, Lachrymation per eyes, dim vision, bed effect of eye strain, coryza with copious nasal discharge, pimples over face with itching, cutting pain in abdomen with flatulence, constipation with hard stools, eruptions with itching over male genitalia, whitish leucorrhoea discharge, cough with or without expectoration, palpitation with excessive perspiration over palms and soles and excessive perspiration.</b></p>										
11		Nyctanthes arbortristis (Nyct. Arb.)	2003	25	1&2	22-24	5490	62	1	Central Council for Research in Homoeopathy. Nyctanthes arbortristis (Nyct. Arb.). Quarterly bulletin. 2003;25(1&2):22-24.
<p><b>RESULT - Nyctanthes arbortristis has a wide sphere of action in fever with chill, dull headache with giddiness, tongue white coated, bilious vomiting, loss of appetite, thirst for cold water, constipation in children, dry cough, sciatica, rheumatic pain in joint, fever with body aches.</b></p>										
12	CCRH Team	Saraca indica (Janosia asoka)	2003	25	1&2	25-28	9194	93	1	Central Council for Research in Homoeopathy. Saraca indica (Janosia asoka). Quarterly bulletin. 2003;25(1&2):25-28.
<p><b>RESULT - This medicine has found effective not only on female genitalia but on other parts of the body like mind, vertigo, head, eyes, ear, nose, stomach, abdomen, rectum, male genitalia, respiratory system. Chest, back, extremities, fever etc. It is very good medicine for absent mind, vertigo &gt; in open air, frontal headache, tonsillitis, loss of appetite, flatulence, constipation dry hard stool, bleeding piles, swelling of testacies with drawing pain in spermatic cord, leucorrhoea before and after menses, infantile leucorrhoea, irregular menses, amenorrhoea, dry cough &lt; morning, palpitation, backache, pain in calf muscles, fever with chills and thirstlessness, likes open air &amp; open air relives the complaints.</b></p>										

S. NO.	AUTHOR	TITLE	YEAR	VOLUME	ISSUE	PAGE NO.	No. of CASES	No. of SYMPTOMS	No. of REMEDIES	RESULT
13	CCRH Team	Sarasaprilla (sarsap)	2003	25	1&2	29-32	4367	104	1	Central Council for Research in Homoeopathy. Sarasaprilla (sarsap). Quarterly bulletin. 2003;25(1&2):29-32.
<b>RESULT – Clinically verified symptoms were abscess on buttock, recurrent aphthae, pain in heels, papular eruption over scalp with itching, irregular menses with pus like discharge etc. have been observed.</b>										
14	CCRH Team	Terminalia chebula (Haritaki)	2003	25	1&2	33-35	3353	59	1	Central Council for Research in Homoeopathy. Terminalia chebula (Haritaki). Quarterly bulletin. 2003;25(1&2):33-35.
<b>RESULT - Its therapeutic action is to make the bowel clear, It is good for flatulence, piles, diarrhea, dysentery, headache, vertigo, indigestion, heartburn, constipation with ineffectual urging for stool, bleeding piles, backache. Hot sun rays, motion and heat of sun aggravate most of the complaint. Some complaint is &lt; heat and eating after. Most of the complaints are ameliorated by cold, cold application, cold air, open air, rest, pressure, passing stools.</b>										
15	CCRH Team	Viscum album (Vis. Alb)	2003	25	1&2	36-40	7831	106	1	Central Council for Research in Homoeopathy. Viscum album (Vis. Alb). Quarterly bulletin. 2003;25(1&2):36-40.
<b>RESULT - It has been found efficacious medicine for hypotension, sciatica, chorea, rheumatic deafness, asthma, and hypertension with albuminuria. Symptoms, that are given in the Homoeopathic literature are verified, some additional symptoms also verified which are not given in homoeopathic literature, those symptoms are mentioned above.</b>										
16	CCRH Team	Juglans regia (Symptoms clinically verified under CCRH)	2004	26	1	17-21	3484	81	1	Central Council for Research in Homoeopathy. Juglans regia (Symptoms clinically verified under CCRH). Quarterly bulletin. 2004;26(1):17-21.
<b>RESULT - The symptoms observed in less than 30 patients have been excluded. clinical conditions verified are Headache, stye, acne, toothache, constipation, bleeding piles, eczema.</b>										
17	CCRH Team	Hygrophilla spinosa (Symptoms clinically verified under CCRH)	2004	26	2	13-11	2396	57	1	Central Council for Research in Homoeopathy. Hygrophilla spinosa (Symptoms clinically verified under CCRH). Quarterly bulletin. 2004;26(2):11-13.
<b>RESULT - The symptoms observed in less than 30 patients have been excluded. Clinical conditions verified are Anorexia, Renal calculus, UTI, Leucorrhoea, Rheumatic pains, Prickly heat, urticaria, fever.</b>										
18	CCRH Team	Achyranthes aspera (Clinically verified symptoms)	2004	26	3	17-21	3832	103	1	Central Council for Research in Homoeopathy. Achyranthes aspera (Clinically verified symptoms). Quarterly bulletin. 2004;26(3):17-21.
<b>RESULT - Clinically verified conditions are Vertigo, anorexia, coryza, diarrhoea, boils, dysentery, fever, cough, bad effects of insect bites, poisonous wounds.</b>										

S. NO.	AUTHOR	TITLE	YEAR	VOLUME	ISSUE	PAGE NO.	No. of CASES	No. of SYMPTOMS	No. of REMEDIES	RESULT
19	CCRH Team	Embelia ribes (Clinically verified symptoms)	2004	26	4	11-15	3019	70	1	Central Council for Research in Homoeopathy. Embelia ribes (Clinically verified symptoms). Quarterly bulletin. 2004;26(4):11-15.
<b>RESULT - Clinically verified conditions are Intestinal worms, diarrhoea, flatulence.</b>										
20	CCRH Team	Anthrakokali (Clinically verified symptoms)	2005	27	1	26-31	5367	88	1	Central Council for Research in Homoeopathy. Anthrakokali (Clinically verified symptoms). Quarterly bulletin. 2005;27(1):26-31.
<b>RESULT - Clinically verified conditions are Herpes, urticaria, ringworm, scabies, pimples, fever, constipation.</b>										
21	CCRH Team	Bacillinum (Clinically verified symptoms)	2005	27	2	20-26	3436	124	1	Central Council for Research in Homoeopathy. Bacillinum (Clinically verified symptoms). Quarterly bulletin. 2005;27(2):20-26.
<b>RESULT - Clinically verified conditions are Ringworm, headache, coryza, cervical lymphadenopathy, bronchitis, humid asthma, pityriasis versicular.</b>										
22	CCRH Team	Aegle marmelos (Clinically verified symptoms)	2005	27	3	30-35	3709	43	1	Central Council for Research in Homoeopathy. Aegle marmelos (Clinically verified symptoms). Quarterly bulletin. 2005;27(3):30-35.
<b>RESULT - Clinically verified conditions are Vertigo, headache, stye, coryza, anorexia, indigestion, constipation, diarrhoea, dysentery, hemorrhoids, backache, fever.</b>										
23	CCRH Team	Aegle folia (Clinically verified symptoms)	2005	27	4	12-19	5330	60	1	Central Council for Research in Homoeopathy. Aegle folia (Clinically verified symptoms). Quarterly bulletin. 2005;27(4):12-19.
<b>RESULT - Clinically verified symptoms are Diarrhoea, dysentery, fever, dropsy, pain in abdomen, Headache, flatulence, constipation.</b>										
24	CCRH Team	Lac caninum (Clinically verified symptoms)	2006	28	1	18-24	4347	78	1	Central Council for Research in Homoeopathy. Lac caninum (Clinically verified symptoms). Quarterly bulletin. 2006;28(1):18-24.
<b>RESULT - Clinically verified symptoms are Headache, coryza, tonsillitis, anorexia, mastitis, leucorrhoea, bronchitis, cervical spondylosis, lumbago, rheumatic pain, sciatica.</b>										

S. NO.	AUTHOR	TITLE	YEAR	VOLUME	ISSUE	PAGE NO.	No. of CASES	No. of SYMPTOMS	No. of REMEDIES	RESULT
25	K. Singh, Rajpal, PS Chakraborty, S Kaushik, Divya Taneja.	Amygdalus persica- Clinical Verification Study	2006	8	3	19-22	341	31	1	Central Council for Research in Homoeopathy. Amygdalus persica- Clinical Verification Study. Quarterly bulletin. 2006;28(3):19-22.
<p><b>RESULT - The clinical conditions where the drug was implicated were irritation of eyes, Gastric irritation, Genital weakness, Sprains, Loss of smell, Affections of toenails, Disordered vision, Affection of Wrist. This study expands the pathogenetic role of Amygdalus persica, by indicating its usefulness in clinical conditions like in Morning sickness, Dyspepsia and Gastritis associated with Nausea and Vomiting. The success of the drug would depend on the symptom similarity of the disease picture and the drug picture.</b></p>										
26	CCRH Team	Baryta iodata- Clinical verification study	2006	28	4	16-23	3915	55	1	Central Council for Research in Homoeopathy. Baryta iodata- Clinical verification study. Quarterly bulletin. 2006;28(4):16-23.
<p><b>RESULT - The clinical condition where the drug was indicated were Cancer of Breast, Cancer, Enlargement of glands, and Tumours. This study expands the pathogenetic role of Baryta iodata, by indicating its usefulness in clinical conditions like in Tonsillitis, Indurated glands including cervical glands, tonsils, breast, bronchitis, stunted growth in children, etc. The success of this drug would depend on the symptoms similarity of the disease picture and the drug picture.</b></p>										

- Hering. C. The Guiding Symptoms of our Materia Medica; Vol 1. Reprint ed. New Delhi: B. Jain Publishers (P) Ltd. 2000.p.6-7
- Wassenhoven M.V., Clinical verification – Verification of homeopathic symptoms; B. Jain Publishers 2008
- <http://www.wholehealthnow.com/bios/constantine-hering.html>
- Masic I., Miokovic M., Muhamedagic B. Evidence based medicine – new approaches and challenges. Acta Inf. Med. 2008;16: 219–225.
- Wassenhoven VM . Towards an evidence based repertory: clinical evaluation of Veratrum album . Homp 2004;93: 71-77.
- Hemingway H, Croft P, Perel P, Hayden JA, Abrams K, Timmis A et al. Prognosis research strategy (PROGRESS) 1: A framework for researching clinical outcomes. BMJ 2013; 346: c5595.
- NCI Dictionary of Cancer terms Retrieved September 2018 from <https://www.cancer.gov/publications/dictionaries/cancer-terms/def/prognostic-factor>.
- Riley DR, Hayden JA, Steyerberg WE, Moons MGK, Abrams K, Kyzas AP, Malats N, et al Prognosis Research Strategy (PROGRESS) 2 : Prognosis Factor research. Plos Med 2013; 346(2) : e5595
- Rutten L. Prognostic factor research in Homoeopathy. Indian J Res Homoeopathy 2016; 10:59-65.
- Migliani A , Rutten L , Manchanda KR . Generalisability of prognostic factor research: further analysis of data from the IIPCOS2 study. Homp 2017; 106: 155-159.
- Rutten ALB, Stolper CF, Lugten RFG, Barthels RWJM. Assessing likelihood ratio of clinical symptoms : handling vagueness. Homoeopathy 2003 ; 92 :182-186. ; 92:213-6.
- Rutten ALB. Bayesian homoeopathy: Talking normal again. Homoeopathy 2007; 96:120-124
- Stolper CF, Rutten AL, Lugten RFG, Barthels RJWM. Improving homeopathic prescribing by applying epidemiological techniques: The role of likelihood ratio. Homoeopathy 2002; 91:230-8.
- Eizayaga JE, Pozzi MI, Canan MC, Saravia L. Prevalence and likelihood ratio of symptoms in patients with good therapeutic response to Lycopodium clavatum. A retrospective study. Homoeopathy 2016; 105:78-83.
- Clinical verification of homeopathic symptoms: experience and statistics. In: Rutten L. (ed.) Prognostic factor research in Homoeopathy – A Practical Guide for Reseachers. New Delhi, India: Central Council for Research in Homoeopathy; 2019. P207-240.
- Klein-Laansma CT, Rutten ALB, Jansen JPCH, Van Wietmarschen H, Jong MC. Evaluation of a Prognostic Homoeopathic Questionnaire for Women with Premenstrual Disorders. Complement Med Res. 2018;25(3):173-182. doi:10.1159/000487318
- Rutten ALB, Frei H. Frequently occurring polar symptoms assessed by successful cases. Homoeopathy. 2012;101(2):103-111. doi:10.1016/j.homp.2012.02.004
- Manchanda RK, Chakraborty P, Koley M, Singh D, Singh P, Singh O, Prasad VG, Singh JP, Nain SS, Pradhan PK, Ramteke SS, Bawaskar R, Debata LP, Saha S, Nayak C, Rutten L. Retrospective estimation of prevalence and likelihood ratio of general symptoms of 29 less frequently prescribed homoeopathic medicines by clinical verification. Indian J Res Homoeopathy 2019;13:72-80

- 19 Prevalence and likelihood ratio of symptoms in patients with good therapeutic response to *Lycopodium clavatum*. A retrospective study. In: Rutten L. (ed.) Prognostic factor research in Homoeopathy – A Practical Guide for Researchers. New Delhi, India: Central Council for Research in Homoeopathy; 2019. P:241-250.
- 20 New possibilities: handling absent symptoms with negative LR. In: Rutten L. (ed.) Prognostic factor research in Homoeopathy – A Practical Guide for Researchers. New Delhi, India: Central Council for Research in Homoeopathy; 2019. P:140-145
- 21 Generalisability of prognostic factor research. In: Rutten L. (ed.) Prognostic factor research in Homoeopathy – A Practical Guide for Researchers. New Delhi, India: Central Council for Research in Homoeopathy; 2019. P:251-259
- 22 Gupta J, Azis SP, Rutten L, Manchanda RK, Pramanik A, Chakraborty P, et al. Exploring the predictive value of specific symptom as prognostic factor: Assessment of group-confined likelihood ratio for symptom 'Headache' in 20 lesser-known drugs. *Indian Journal of Research in Homoeopathy*. 2019;13(1):4-11.
- 23 R.A Van Haselen. Homoeopathic clinical case reports: Development of a supplement (HOM-CASE) to the CARE clinical case reporting guideline. *Complementary therapies in Medicine*. 2016 April
- 24 Riley DS, Barber MS, Kienle GS, Aronson JK, von Schoen-Angerer T, Tugwell P, Kiene H, Helfand M, Altman DG, Sox H, Werthmann PG, Moher D, Rison RA, Shamseer L, Koch CA, Sun GH, Hanaway P, Sudak NL, Kaszkin-Bettag M, Carpenter JE, Gagnier JJ. CARE guidelines for case reports: explanation and elaboration document. *J Clin Epidemiol*. 2017 May
- 25 Naranjo CA, Busto U, Sellers EM, Sandor P, Ruiz I, Roberts EA, Janecek E, Domecq C, Greenblatt DJ. A method for estimating the probability of adverse drug reactions. *Clin Pharmacol Ther* 1981; 80: 289–95
- 26 Manchanda R, Chakraborty P, Das K C, Rai M K, Singh O, Pradhan P K, Singh DK, Koley M, Saha S, Nayak C. Symptom prevalence in a cohort of 147 patients improved with the homoeopathic medicine *Ocimum canum*: A multicenter, open, observational, clinical verification study. *Indian J Res Homoeopathy* 2016;10:238-48
- 27 Manchanda R, Chakraborty P, Singh P, Pradhan P K, Prasad V G, Singh O, Rai M K, Koley M, Saha S, Nayak C. A multicenter, observational, homoeopathic clinical verification study of *Cynodon dactylon* revealing symptom prevalence in a cohort of 340 patients. *Indian J Res Homoeopathy* 2016;10:225-37
- 28 Manchanda RK, Chakraborty PS, Singh P, Rai M K, Singh O, Singh D K, Paul S, Nayak C. Symptom prevalence in a cohort of 65 patients improved with the homoeopathic medicine *Mangifera indica*: A multicentric open observational clinical verification study. *Indian J Res Homoeopathy* 2017;11:184-95
- 29 Gupta J, Manchanda RK, Chakraborty P, Singh P, Ramteke S, Singh O, et al. Prevalence and prognostic factor in patients with good therapeutic response in a cohort of 172 patients with the homoeopathic medicine *Aranea diadema*: A multicentre, open-label, observational study. *Indian Journal of Research in Homoeopathy*. 2018;12(1):20-28.
- 30 Manchanda RK, Chakraborty PS, Singh P, Nayan SS, Singh O, Pradhan PK, et al. *Mygale lasiodora*: A - multicentric observational homoeopathic clinical verification study. *Indian Journal of Research in Homoeopathy*. 2015;9(4):249-257.
- 31 Available from: [http://ayush.gov.in/sites/default/files/7870046089-Ayush%20n%20policy%20ISM%20and%20H%20Homoeopathy\\_0.pdf](http://ayush.gov.in/sites/default/files/7870046089-Ayush%20n%20policy%20ISM%20and%20H%20Homoeopathy_0.pdf) (last accessed on 24.08.2019)

## Chapter-10

# Basic Science

**Dr. Subhranil Saha,<sup>1</sup> Dr. Pooja Gautam,<sup>2</sup> Dr Swapnil A Kamble<sup>3</sup>**

1 Senior Research Fellow (H) | 2,3 Research Officer (H)

Central Council for Research in Homoeopathy, Ministry of AYUSH, Govt. of India, New Delhi, India

A few centuries ago, concepts such micro-organisms and astronomical systems were inconceivable due to lack of technology which could characterize their presence. With the dawn of the 20<sup>th</sup> century things begun to change as there were promising new technologies which could make the human race perceive the reality of such entities as mentioned above. When all these scientific advancements were slowly but surely unravelling the mysteries of nature, the system of medicine of Homoeopathy as founded by Master Hahnemann kept baffling the scientific minds, as the principles of this system of medicine kept challenging the laws as enunciated in the basic sciences of physics, chemistry and mathematics. The advent of 21<sup>st</sup> century gave clarity to science in the field of Quantum mechanics and concepts of interdisciplinary sciences and thus gave hope to the realisation of understanding the phenomenon of homoeopathic medicine and its mode of action in a living system. All the efforts thus made with the help of such interdisciplinary sciences towards understanding the phenomenon of homoeopathic medicine and its mode of action in a living system could be defined today as the field of basic research in homoeopathy.

Basic research in Homoeopathy investigates a particular set of questions, chiefly the presence of therapeutic powers of original substances in ultra-high-diluted potencies, mechanism of action of the medicine, once administered, in a biological system, be it human, animal or plant, both its pharmacokinetic and pharmacodynamics aspects and the relevance of negative controls in basic researches in order to validate the clinical findings.

A brief of all such important efforts towards understanding the physicochemical and pharmacodynamic research in homoeopathy is as follows:

The initial steps in this direction came in 1967, when Barnard gave the concept of 'memory of water'. It defines the conventional scientific understanding of physical chemistry thus was not accepted by the scientific community. Later, when J. Benveniste in 1988 in journal 'Nature' reported that basophils, can be activated to produce an immune response by solutions of antibodies that have been diluted so far that they contain none of these biomolecules at all<sup>1</sup>, it seemed to support the concept. However, the attempts of reproducing the similar results failed in other experiments.<sup>2,3</sup> Later when it was investigated from the physicochemical point of view using well-established techniques: flux calorimetry, conductometry, pHmetry and galvanic cell electrodes potential water prepared by the procedures of homeopathic medicine was found different from the initial water,<sup>4</sup> the debate started which is still going on.

Several models were put forward in order to explain the unique phenomenon that unlike allopathic medicines, how the homoeopathic medicines can become more potent at higher dilution. In this sequence, anagnostatos tried to explain it through 'Clathrate model' according to which during dilutions small clusters of the diluted substance surrounded by shells of organized hydrogen-bonded molecules of the solvent (called clathrates) are formed & during succussions, core clathrates move out of their mantle clathrates and stimulate the formation of new mantle clathrates leaving old mantle clathrates and so on.<sup>5</sup> Later, an experiment using methods (FT-IR spectroscopy, UV-vis spectroscopy, fluorescence microscopy (FM), Atomic Force Microscopy (AFM)) confirmed the hypothesis that formation of water aggregates occurs in extremely diluted solutions.<sup>6</sup>

One other attempt was ‘Silica hypothesis’ that suggested the presence of physical entities.<sup>7</sup> Ruzic et al demonstrated that biologically relevant information from various substances can be non-chemically transferred to organisms through the combination of high voltage electric field that can stable imprint information into water or water solution.<sup>8</sup>

The nano-heterogeneous structure of water can be determined by interactive phenomena such as epitaxy (the transmission of structural information from the surface of one material to another without the transfer of any matter), temperature-pressure processes during succussion, and formation of colloidal nanobubbles containing gaseous inclusions of oxygen, nitrogen, carbon dioxide, and possibly the remedy source material. Author also gave preliminary data obtained using Raman and Ultra-Violet-Visible (UV-VIS) spectroscopy illustrating the ability to distinguish two different homeopathic medicines (Nux vomica and Natrum muriaticum) from one another and to differentiate, within a given medicine, the 6c, 12c, and 30c potencies.<sup>9</sup> However, the idea was soon questioned that the data presented are wholly inadequate to support the authors’ assertion.<sup>10</sup>

Atmanspacher et al. introduced an original line of thought, based on ‘weak quantum entanglement.’<sup>11</sup> Quantum entanglement occurs when subatomic particles interact in such a way that the quantum state of each particle cannot be described independently instead, quantum state of the whole system must be considered. The implication is that subatomic particles with a common origin remain ‘entangled’, so that anything done to one particle instantaneously influences the other entangled particles, even when they have travelled enormous distances from their common origin.<sup>12</sup> A metaphor for Homoeopathy is developed in which the potentised medicine, the patient, and the practitioner are seen as forming a non-local therapeutically ‘entangled’ triad, qualitatively described in terms of the transactional interpretation of quantum mechanics.<sup>13</sup> The concept was later extended by importing concepts used in chemistry to describe the electronic structures of molecules.<sup>14</sup> It was further refined by adapting concepts derived from Greenberger, Horne, and Zeilinger’s treatment of three-particle entanglement (GHZ states), and a generalised version of quantum theory, called weak quantum theory (WQT).<sup>15</sup> Walach gives the idea that Homoeopathy uses two instances of generalized entanglement: one between the remedy and the original substance (potentization principle) and one between the individual symptoms of a patient and the general symptoms of a remedy picture (similarity

principle). By bringing these two elements together, double entanglement ensues, which is reminiscent of cryptographic and teleportation applications of entanglement in QM proper. Homoeopathy could be a macroscopic analogue to quantum teleportation.<sup>16</sup> Then possibility of unifying GHZ/WQT-based entanglement model, with Walach’s semiotic model involving double entanglement was discussed which invokes a ‘geometry’ of patient-practitioner-remedy (PPR) entanglement embedded in a therapeutic state space.<sup>17</sup> Reason for the failure of randomized controlled trials (RCTs) to demonstrate unequivocally the efficacy of Homoeopathy was proposed to be entanglement-disrupting effects of blinding.<sup>18</sup> However, Leick concluded the proposed applications of Weak Quantum Theory to the problem of ultra-molecular dilutions in Homoeopathy are not science, but rhetoric.<sup>19</sup>

Khuda-Bukhsh claimed that one way through which the potentized homeopathic drugs act could be through their precise role in regulation of relevant gene expression, the possible pathways and sites of action have also been discussed by his group.<sup>20</sup>

Another breakthrough occurred when Chikramane et al demonstrated the presence of physical entities in these extreme dilutions, in the form of nanoparticles of the starting metals for the first time by Transmission Electron Microscopy (TEM), electron diffraction and chemical analysis by Inductively Coupled Plasma-Atomic Emission Spectroscopy (ICP-AES).<sup>21</sup> They showed that once the bulk concentration is below a threshold level, at the end of each dilution step, all of the nanoparticles levitate to the surface and are accommodated as a monolayer at the top. This dominant population at the air-liquid interface is preserved and carried to the subsequent step. Thus, all dilutions are only apparent and not real in terms of the concentrations of the starting raw materials.<sup>22 23 24 25 26 27 28 29 30 31 32 33</sup>

Similar results were produced in another set of experiment conducted using water soluble drug. Further, the particles were seen embedded in a meso-microporous silicate layer through interfacial encapsulation. Similar silicate coatings were also seen in metal based medicines. Thus, universal microstructural hypothesis that all types of homeopathic medicines consist of silicate coated nano-structures dispersed in the solvent was also proposed.<sup>34</sup> (23)

Consequent to the studies revealing that homeopathic remedies contain nanoparticles (NPs) of source materials, Bell & Shwartz proposed, silica nanostructures formed

during succussions may convey epitaxial information from remedy source materials into higher potencies. NPs have enhanced bioavailability, adsorptive capabilities, adjuvant reactivity, electromagnetic and quantum properties compared with their bulk forms. NPs induce adaptive changes in the organism at nontoxic doses (hormesis), by activation of stress response effectors that initiate beneficial compensatory as a complex adaptive system rather than conventional pharmacological effects.<sup>24</sup> However, the results of Chikramane (2010) were not reproduced in yet another study<sup>25</sup> & claimed that it was not possible except through contamination.<sup>26</sup>

Consequently after questioning the nanoparticle hypothesis, retention of memory of a source drug through serial succussed dilutions was tried to explain through 'Nanoparticle - EZ Shell Model' which suggests that during a few initial dilutions, nanoparticles adsorb the source drug which modifies their structure. These build up modified EZ shells around them which have information about the source drug in "crude and condensed" form. In successive dilutions, during violent strokes at each dilution, the modified EZ shells strip off to spread as further modified EZ templates to nanoparticles present in that dilution, modifying their structures accordingly. Thus the source drug information passes, "evolving" from one dilution to the next, beyond even Avogadro.<sup>27</sup>

The last systematic review of physicochemical research performed on homeopathic preparations was published in 2003. The latest of such review was done in the year 2018. This systematic review and bibliometric analysis into the physico-chemical nature of homeopathic preparations concluded that the techniques most frequently used in physicochemical research on homeopathic preparations were electrical impedance (26%), analytical methods (20%), spectroscopy (20%), and nuclear magnetic resonance (NMR, 19%). Subsequently, the authors analyzed these publications to identify any empirical evidence for specific physicochemical properties of homeopathic preparations and to identify most promising experimental techniques for future studies. The most promising techniques identified were NMR relaxation, optical spectroscopy, and electrical impedance measurements. In these three areas, several sets of replicated high-quality experiments provided evidence for specific physicochemical properties of homeopathic preparations. The authors recommended using succussed controls, or comparing different homeopathic preparations with each other to reliably identify any specific physicochemical properties.<sup>35</sup>

A variety of local and non-local models have been proposed so far to understand the physicochemical aspects of homeopathic preparations. In recent years a number of experiments have been carried out for understanding their pharmacodynamics. A few relevant ones amongst these are described below:

- The Laboratory of Hematology, Faculty of Pharmacy, University of Bordeaux, reported that different doses and dilutions of aspirin, *Aspirin* 15cH was found to act through the inhibition of the COX-2 pathway producing a clear pro-thrombotic effect.<sup>36</sup>
- Few theoretical models have been conceptualized. The 'biocrystallomics' model includes study of the result of co-crystallization of a biological liquid (blood serum or plasma) of a patient with the intended dose of the drug, estimated for the purpose of individualization. This technique can be applied to any liquid or soluble compounds with potential therapeutic activity, including their ultra-high dilutions. In an attempt at explaining Homoeopathy with quantum electrodynamics (QED), the authors concluded that QED principles and explanations are embodied in the fundamental teachings of the homeopathic method, thus providing the homeopath with a firm grounding in the practice of rational medicine.<sup>37</sup>
- The behavioral changes in zebrafish (*Danio rerio*) induced by sodium arsenate, through an analysis of locomotor activity and anxiety-related parameters, and determine whether ultra-diluted substances are able to mitigate neurobehavioral effects. Anxiogenic effects were observed in the animals that were reversed by *Arsenicum album* 6cH effectively.<sup>38</sup>
- In another experiment in the brain of a teleost fish under ethanol intoxication, *Nux vomica* 200cH was experimented for its alcohol counteractive effects. Treatment with *Nux vomica* increased the level of free water in the brain significantly as compared to the untreated alcoholic group, probably having acted on aquaporins in the glial cells.<sup>39</sup>
- In one experiment, B16-F10 metastatic murine melanoma cells were found to be selectively affected in vitro by *Atropa belladonna* 200cH in Balb/3T3 normal murine fibroblasts. An in-vitro assay estimated the changes in melanin content of melanoma cells due to 30cH dilutions of kojic acid, hydrogen peroxide, 6-biopterin, and [Nle4, D-Phe7]- $\alpha$ -melanocyte-

- stimulating hormone (NLE), known to induce vitiligo or melano-destruction at physiological dose. The study demonstrated melanogenic effects of the homeopathic preparations.<sup>40</sup>
- In Wistar rats model, homeopathic drug dilutions 6cH, 30cH and 200cH of *Thuja occidentalis* was found to have significantly attenuated complete Freund's adjuvant-induced arthritis, thus substantiating its anti-arthritic effects.<sup>41</sup>
  - In an in-vitro model of *Encephalitozoon cuniculi*-infected macrophages, effects of different potencies of homeopathic *Phosphorus* were studied. *Phosphorus* 200cH was found to have a modulatory action on the activity of infected macrophages.<sup>42</sup>
  - The efficacy of isopathic immunotherapy with highly diluted ovalbumin (HD-OVA) in the treatment of OVA-induced allergic asthma in BALB/c mice was evaluated. Isopathic immunotherapy significantly reduced lung tissue inflammation, the number of eosinophils in bronchoalveolar fluid, allergen-specific IgE and interleukin-4 production. It also insignificantly increased the production of transforming growth factor-beta and proliferation of regulatory T cells against the allergen.<sup>43</sup>
  - The effect of *Thymulin* 5cH on Ehrlich tumor growth in mice was experimented. Although it did not influence systemic immunity parameters, *Thymulin* 5cH was found to induce some specific changes in the tumor environment.<sup>44</sup>
  - The effect of *Zincum metallicum* 6cH in maternal deprivation-induced behavioral disturbances in female rats were studied and was found to be able to prevent anxiety-like behaviour.<sup>45</sup>
  - Investigations into the effect of homeopathic medicines *Sulfur* 12cH and *Pyrogenium* 12cH, and the nosode produced from *Cochliomyia hominivorax* (Diptera: Calliphoridae) larvae at potencies 8cH and 12cH on third-stage larvae of a *C. hominivorax* colony. Results were promising and Results suggest that Homoeopathy could be used therapeutically to prevent and treat animals and humans with myiasis caused by *C. Hominivorax*.<sup>46</sup>
  - Researches intended to see whether potentized *Cantharis* could ameliorate heat stress in germinating seeds of cowpea were conducted. *Cantharis* 200c was found to counteract the deleterious effects of heat stress on juvenile tissues and membranes and can be used effectively to counter heat stress in tropical countries especially during summer.<sup>47</sup>
  - In one experiment to see whether the high and ultra-low dose effects of  $HgCl_2$  involve different binding sites of the enzyme and in order to find an explanation for the low dose effect of  $HgCl_2$  in spite of absence of its original molecules, the mother tincture and potencies produced different effects on the enzyme substrate interaction. The authors concluded that the drugs used in Homoeopathy produce dual action on proteins. At high doses they act on a binding site(s) but at ultra low doses they act on a different binding site(s).<sup>48</sup>
  - Few researchers studied the phytochemical profile and anti-proliferative properties of *Viscum album* mother tincture and were found to have promising anti-tumor potential.<sup>49</sup>
  - Another chemoprofiling study of homeopathic drug *Holarrhena antidysenterica* was conducted that yielded data on physicochemical and phytochemical properties of the drug and that may be considered as pharmacopoeia standards.<sup>50</sup>
  - In another experiment, the physicochemical data of the drug, *Blatta orientalis* was obtained for ascribing pharmacopoeial standard for authentication, quality assurance and quality control process of the commercially available drug.<sup>51</sup>
  - Antiproliferative potential and phenolic compounds of infusions and essential oil of chamomile cultivated with Homoeopathy were explored in a study. The authors of this study concluded that cultivation with Homoeopathy does not induce a genotoxic effect in the use of infusions and essential oil of chamomile and it emphasize antiproliferative activity on the cell cycle of *Allium cepa*, favoring the sustainable cultivation and the safe use of this medicinal species when cultivated with Homoeopathy.<sup>52</sup>

## Overview

It is obvious thus that the basic researches in Homoeopathy are increasing both in terms of quantity and quality of the publications. Number of papers identified was 183. Countries with most publications were Germany (n = 42, 23%), France (n = 29, 16%), India (n = 27, 15%), and Italy (n = 26, 14%).<sup>35</sup>

## Challenges

In the last few decades, basic researches in Homoeopathy have reached incredible heights. Although the exact mode of action underlying specific effects of highly diluted homeopathic preparations is a matter of debate and yet to be established, a variety of local and non-local models have been proposed. Even though many experiments have been carried out in basic research in homoeopathy, a major challenge of homeopathic basic research is to decode any underlying physicochemical mode of action. Repeatability of experiments is an important criterion of modern research and is therefore another major challenge for homeopathic basic research. Several lines of evidence suggest that homeopathic high dilutions (HDs) can effectively have a pharmacological action, and so cannot be considered merely placebos. However, until now there

has been no unified explanation for these observations within the dominant paradigm of the dose-response effect.<sup>53</sup>

## Conclusion

A general adoption of succeeded controls, randomization and blinding would strengthen the evidence of further experiments. More replications should be done independently to establish models that are stable across laboratories and teams. As the knowledge of the dynamic processes within living organisms and of various phenomena in the environment that influence these organisms advances, the understanding of the physicochemical and pharmacodynamics aspects of Homoeopathy will grow further.

- 1 Dayenas E., Beauvais F., Amara J., Oberbaum M., Robinson B. T., Miadonna A. T., TedeschitA., PomeranzB., Fortner P., BelonP., Sainte-Laudy J., Poitevin B., Benveniste J. Human basophil degranulation triggered by very dilute antiserum against IgE. *Nature* 1988; 333: 816-818.
- 2 Ovelgönne J.H., Bol A.W., Hop W.C., van Wisk R. Mechanical agitation of very dilute antiserum against IgE has no effect on basophil staining properties. *Experientia* 1992; 48: 504-508.
- 3 Hirst S.J., Hayes N.A., Burridge J., Pearce F.L., Foreman J.C. Human basophil degranulation is not triggered by very dilute antiserum against human IgE. *Nature* 1993; 366: 525-527.
- 4 Elia V, Napoli E, Germano R. The "memory of water": An almost deciphered enigma. Dissipative structures in extremely diluted aqueous solutions of the homeopathic medicine. *Homoeopathy* 2007;96:163-9.
- 5 G.S. Anagnostatos, G. Vithoulkas, P. Garzonis, C. Tavouxoglou. A working hypothesis for homeopathic microdiluted remedies. *The Berlin Journal on Research in Homoeopathy*. 1991 June;1(3): 141-147.
- 6 Elia V, Ausanio G, Gentile F, Germano R, Napoli E, Niccoli M. Experimental evidence of stable water nanostructures in extremely dilute solutions, at standard pressure and temperature. *Homoeopathy*. 2014 Jan;103(1):44-50. doi: 10.1016/j.homp.2013.08.004.
- 7 Anick DJ, Ives JA. The silica hypothesis for homoeopathy: Physical chemistry. *Homoeopathy* 2007;96:189-95.
- 8 Ruzic R, Jerman I, Skarja M, Leskovar RT, Mogilnicki L. Electromagnetic transference of molecular information in garden cress germination. *Int J High Dilution Res* 2008; 7(24): 122-131.
- 9 Rao ML, Roy R, Bell IR, Hoover R. The defining role of structure (including epitaxy) in the plausibility of Homoeopathy. *Homoeopathy*. 2007 Jul;96(3):175-82. Erratum in: *Homoeopathy*. 2007 Oct;96(4):292.
- 10 Kerr M, Magrath J, Wilson P, Hebborn C. Comment on "The defining role of structure (including epitaxy) in the plausibility of Homoeopathy". *Homoeopathy*. 2008 Jan;97(1):44-5; author reply 45-6. doi: 10.1016/j.homp.2007.10.004.
- 11 Atmanspacher H., Romer H., Walach H. et al. Weakquantum theory; complementarity and entanglement in physics and beyond. *Found Phys* 2002; 32: 379-406.
- 12 Fisher P. Is quantum entanglement in Homoeopathy a reality? *Homoeopathy*. 2016 Aug;105(3):209-210. doi: 10.1016/j.homp.2016.06.001.
- 13 Milgrom LR. Patient-practitioner-remedy (PPR) entanglement. Part 1: a qualitative, non-local metaphor for Homoeopathy based on quantum theory. *Homoeopathy*. 2002 Oct;91(4):239-48. Review.
- 14 Milgrom LR. Patient-practitioner-remedy (PPR) entanglement. Part 2: Extending the metaphor for Homoeopathy using molecular quantum theory. *Homoeopathy*. 2003 Jan;92(1):35-43. Review.
- 15 Milgrom LR. Patient-practitioner-remedy (PPR) entanglement. Part 3. Refining the quantum metaphor for Homoeopathy. *Homoeopathy*. 2003 Jul;92(3):152-60. Review.
- 16 Walach H. Entanglement model of Homoeopathy as an example of generalized entanglement predicted by weak quantum theory. *Forsch Komplementarmed Klass Naturheilkd*. 2003 Aug;10(4):192-200.
- 17 Milgrom LR. Patient-practitioner-remedy (PPR) entanglement. Part 4. Towards classification and unification of the different entanglement models for Homoeopathy. *Homoeopathy*. 2004 Jan;93(1):34-42. Review.
- 18 Milgrom LR. Are randomized controlled trials (RCTs) redundant for testing the efficacy of Homoeopathy? A critique of RCT methodology based on entanglement theory. *J Altern Complement Med*. 2005 Oct;11(5):831-8. Review.
- 19 Leick P. Comment on: "Conspicuous by its absence: the Memory of Water, macro-entanglement, and the possibility of Homoeopathy" and "The nature of the active ingredient in ultramolecular dilutions". *Homoeopathy*. 2008 Jan;97(1):50-1. doi: 10.1016/j.homp.2007.11.007.
- 20 Khuda-Bukhsh AR. Current trends in high dilution research with particular reference to gene regulatory hypothesis. *Nucleus* 2014; 57:3-17.
- 21 Khuda-Bukhsh AR. Current trends in high dilution research with particular reference to gene regulatory hypothesis. *Nucleus* 2014; 57:3-17.
- 22 Chikramane PS, Kalita D, Suresh AK, Kane SG, Bellare JR. Why extreme dilutions reach non-zero asymptotes: a nanoparticulate hypothesis based on frothflotation. *Langmuir*. 2012 Nov 13;28(45):15864-75. doi: 10.1021/la303477s. Epub 2012 Nov 1.

- 23 Temgire MK, Suresh AK, Kane SG, Bellare JR. Establishing the interfacial nano-structure and elemental composition of homeopathic medicines based on inorganic salts: a scientific approach. *Homoeopathy* 2016; 105: 160-172
- 24 Bell IR, Schwartz GE. Adaptive network nanomedicine: an integrated model for homeopathic medicine. *Front Biosci (Schol Ed)*. 2013 Jan 1;5:685-708.
- 25 Van Wassenhoven M, Goyens M, Capieaux E, Devos P, Dorfman P. Nanoparticle characterization of traditional homeopathically manufactured Cuprum metallicum and Gelsemium sempervirens medicines and controls. *Homoeopathy* 2018; 107: 244-263
- 26 Upadhyay RP. The materialist view of Homoeopathy: an alternative hypothesis and the connection with hormesis. *Homoeopathy* 2018; 107: 46-49
- 27 Upadhyay RP. The possible mechanism of memory through nanoparticles and exclusion zones. *Water* 2017 doi: 10.14294/water.2016.4
- 28 Upadhyaya RP, Nayak C. Homoeopathy emerging as nanomedicine. *IJRH*. 2012; 6(3):31-38.
- 29 Bell IR, Koithan M. A model for homeopathic remedy effects: low dose nanoparticles, allostatic cross-adaptation, and time-dependent sensitization in a complex adaptive system. *BMC Complement Altern Med*. 2012; 12: 191.
- 30 Bell IR, Koithan M, Brooks AJ. Testing the nanoparticle-allostatic cross-adaptation-sensitization model for homeopathic remedy effects. *Homoeopathy*. 2013 Jan;102(1):66-81. doi: 10.1016/j.homp.2012.10.005.
- 31 Demangeat JL. Nanosized solvent superstructures in ultramolecular aqueous dilutions: twenty years' research using water proton NMR relaxation. *Homoeopathy*. 2013 Apr;102(2):87-105. doi: 10.1016/j.homp.2013.01.001.
- 32 Demangeat JL. Gas nanobubbles and aqueous nanostructures: the crucial role of dynamization. *Homoeopathy*. 2015 Apr;104(2):101-15. doi: 10.1016/j.homp.2015.02.001. Epub 2015 Mar 13
- 33 Bellavite P, Marzotto M, Olioso D, Moratti E, Conforti A. High-dilution effects revisited. *Physicochemical aspects*. *Homoeopathy*. 2014 Jan;103(1):4-21. doi: 10.1016/j.homp.2013.08.003.
- 34
- 35 Klein Sabine D., Wurtenberger Sandra, Wolf Ursula, Baumgartner, Tournier Alexander. *Physicochemical Investigations of Homoeopathic preparations: A Systematic Review and Bibliometric analysis*.
- 36 Eizayaga F, Belon P, Desplat V, Aguejof O, Doutremepuich C. Effects of Ultra-Low-Dose Aspirin in Thrombosis and Haemorrhage. *Homoeopathy*. 2019 Apr 20. doi: 10.1055/s-0038-1677495. PMID: 31005060.
- 37 Andrew Kimovich Martusevich. The use of methods of the biocrystallomics in personification of the treatment with highly diluted drugs. *International Journal of High Dilution Research*. 2018; 17 (2): 33. *Proceedings of the XXXII GIRI Meeting, 2018*.
- 38 Cideli de Paula Coelho, Vanessa R L Chaulat, Katia L.T. Cappelli, Rafael Acordi Santos, Henrique Carvalho Vieira, Maria Martha Bernardi, Neurobehavioral assessment of Danio rerio intoxicated by sodium arsenate and the use of Arsenicum Album to reverse the condition of anxiety. *International Journal of High Dilution Research*. 2018; 17 (2): 5-6. *Proceedings of the XXXII GIRI Meeting, 2018*.
- 39 Atheni Konar, Nirmal Chandra Sukul. Extreme dilution of Strychnos Nux vomica mitigates alcohol-induced reduction in enthalpies associated with free water molecules in fish brain. *International Journal of High Dilution Research*, 2018; 17 (3-4): 2-8. *Proceedings of the XXXII GIRI Meeting, 2018*.
- 40 Munshi R, Joshi S, Talele G, Shah R. An In-Vitro Assay Estimating Changes in Melanin Content of Melanoma Cells due to Ultra-Dilute, Potentized Preparations. *Homoeopathy*. 2019 Mar 5. doi: 10.1055/s-0039-1678541. PMID: 30836409
- 41 Sachin S Patil, Umesh B Mahajan, Sameer N Goyal, Sateesh Belemkar, Chandragouda R Patil. Homoeopathic drug dilutions of Thuja occidentalis attenuate complete Freund's adjuvant-induced arthritis in Wistar rats. *Indian Journal of Research in Homoeopathy* 2018; 12 (4): 202 - 211. DOI: 10.4103/ijrh.ijrh\_49\_18.
- 42 Nagai MY, Dalboni LC, Cardoso TN, Correia MS, Pinto SAG, Pinto AAG, Coelho CP, Alvarez-Saraiva A, Peres GB, Lallo MA, Bonamin LV. Effects of Homoeopathic Phosphorus on Encephalitozoon cuniculi-Infected Macrophages In-Vitro. *Homoeopathy*. 2019 Apr 18. doi: 10.1055/s-0039-1678700. PMID: 30999383.
- 43 Mazloomi E, Ilkhanizadeh B, Zare A, Shahabi S. Evaluation of the efficacy of isopathic immunotherapy in the treatment of allergic asthma in BALB/C mice. *J Asthma*. 2019 Apr 3:1-10. doi: 10.1080/02770903.2019.1599384. PMID: 30943821
- 44 Juliana Gimenez Amaral, Thayna Neves Cardoso, Aloísio Cunha de Carvalho, Cideli de Paula Coelho, Silvia Waisse, Elizabeht Cristina Perez, Leoni Villano Bonamin. High-diluted thymulin on Ehrlich tumor growth in mice and the importance of tumor microenvironment. *International Journal of High Dilution Research*. 2018; 17 (3-4): 20-41.
- 45 Cideli de Paula Coelho, Larissa Cristiana A Silveira da Motta, Victoria Arrifano, Maria Martha Bernardi. Assessment of the effects of Zincum metallicum in maternal deprivation-induced behavioral disturbances in female rats. *International Journal of High Dilution Research*. 2018; 17 (3-4): 42-57.
- 46 de Barros GP, Seugling J, Bricarello PA. Effect of Homoeopathic Medicines and a Nosode on Larvae of Cochliomyia hominivorax (Diptera: Calliphoridae). *Homoeopathy*. 2019 Mar 5. doi: 10.1055/s-0038-1677479. PMID: 30836408
- 47 Tandra Sarkar, Atheni Konar, Nirmal Chandra Sukul, Nirmal Chandra Sukul. Cantharis 200c counters heat stress in germinating seeds of Vigna unguiculata (L.) Walp. *International Journal of High Dilution Research*. 2018; 17 (3-4): 11-19.
- 48 Nirmal Chandra Sukul, Tandra Sarkar, Atheni Konar, Anirban Sukul. Proteins as targets for high dilutions of drugs: Interaction between  $\alpha$ -amylase and mercuric chloride. *International Journal of High Dilution Research*. 2018; 17 (2): 24-25. *Proceedings of the XXXII GIRI Meeting, 2018*.
- 49 Carla Holandino Quaresma, Michelle Nonato de Oliveira Melo, João Vítor da Costa Batista, Venício Féo da Veiga Adriana Passos Oliveira, Cassiana Santos de Oliveira Mirio Grazi, Hartmut Ramm, Claudia Dalla Torre, Gerhard Schaller, Claudia Scherr, Maria Olga Kokornaczyk, Konrad Urech Ulrike Weissenstein, Stephan Baumgartner. Viscum album homeopathic tinctures: phytochemical profile and antiproliferative activity. *International Journal of High Dilution Research* 2018; 17 (2): 7-8. *Proceedings of the XXXII GIRI Meeting, 2018*.
- 50 Rakhi Mishra, Manoj Kumar, Binit Dwivedi, BS Arya, Renu Arya, Anil Khurana, Raj K Manchanda. Chemoprofiling of homoeopathic drug Holarrhena antidysenterica L. *Indian Journal of Research in Homoeopathy*. 2018; 12 (4): 212-219. DOI: 10.4103/ijrh.ijrh\_29\_18.
- 51 Bibaswan Biswas, Shyaga Jhansi, Ramchander Potu, Satish Patel, M Nagaraju, Renu Arya, EN Sundaram, AK Khurana, Raj K Manchanda. Physicochemical study of the homoeopathic drug, Blatta orientalis. *Indian Journal of Research in Homoeopathy* 2018; 12(3): 125-131. DOI: 10.4103/ijrh.ijrh\_24\_18.
- 52 Ubessi C, Tedesco SB, de Bona da Silva C, Baldoni M, Krysczun DK, Heinzmann BM, Rosa IA, Mori NC. Antiproliferative potential and phenolic compounds of infusions and essential oil of chamomile cultivated with Homoeopathy. *J Ethnopharmacol*. 2019; 239: 111907. doi: 10.1016/j.jep.2019.111907. PMID: 31029759
- 53 Bellavite P, Marzotto M, Olioso D, Moratti E, Conforti A. High-dilution effects revisited. 1. *Physicochemical aspects*. *Homoeopathy*. 2014 Jan;103(1):4-21. doi: 10.1016/j.homp.2013.08.003.

## Chapter-11

# Homoeopathy in Veterinary Practice

Petra Weiermayer<sup>1</sup>, Edward De Beukelaer, Peter Gregory

1. President of the Austrian Association for Veterinary Homoeopathy – OEGVH

When in 1813 Dr. Hahnemann hinted upon the fact that Homoeopathy could be beneficial to animals just as well as to people, little did he realise that veterinary Homoeopathy would become a major offshoot of mainstream Homoeopathy. Interest and acceptance of complementary and alternative veterinary medicine (CAVM) within the veterinary profession has continued to increase in all parts of world, reported use being available from Europe<sup>1</sup>, USA and India. Most member countries of European Council for Classical Homoeopathy (Armenia, Belgium, Bosnia and Herzegovina, Bulgaria, Czech Republic, Finland, Germany, Greece, Ireland, Israel, Norway, Serbia, Spain, Sweden, Switzerland, United Kingdom) report use of Homoeopathy for animals to some extent, while other few report of a more common use. This is in particular true for Germany, where training courses in animal Homoeopathy have been established. Such courses also exist in Switzerland.<sup>1</sup> In USA, the academy of Veterinary Homoeopathy offers courses in veterinary classical Homoeopathy. In other places, there are associations of veterinary homeopaths. In India, however, neither such association nor any specialized courses exist.

Whatever is being practiced has been learned from human Homoeopathy and successfully adapted to veterinary medicine.<sup>2</sup> Homoeopathy has gained the reputation of an effective alternative therapy in veterinary practice. High cost of modern medicine, their inherited side effects and problems of antimicrobial residues in animal products have caused an apparent discomfort to animal owners invoking their interest in alternative approaches of animal health care. The Veterinary Medicines Division

of European Medicines Agency advocates reduction in the use of antimicrobials as their use in animals – for treatment and disease prevention may give rise to treatment failures in veterinary medicine as well as project a potential food safety problem. Furthermore, it may cause contamination as resistant bacteria and resistance genes can spread from food animals or food derived thereof to humans through the food-chain, through direct contact from animals to animal keepers but also to the environment. As genetic mutations, gene selection and movements in bacteria are associated with the use of antimicrobial agents, efforts to contain antimicrobial resistance must focus on avoiding unnecessary use of antimicrobial agents and promoting their responsible use. Prevention and containment of antimicrobial resistance requires a holistic, multifaceted and inter-sectorial approach.<sup>3</sup> Since homeopathic medicines are non-toxic and result in reduced use of antibiotics and other medicines, and, therefore, lesser medicine residues in, European Union recommended the homeopathic and phytotherapeutic medicines as the first choice in the healthcare of animals being raised organically.<sup>1</sup> Further, farmers in developing countries look for a cheaper, eco-friendly, safe and effective alternative as a ‘firstline’ therapy.<sup>2</sup>

In most European countries both pets and farm animals are treated homeopathically. Most commonly pets include cats and dogs, and farm animals mainly include cattle and horses, but to some extent pigs and birds such as canaries and parrots are given homeopathic medicines. Animals are treated homeopathically for both acute and chronic conditions. Acute conditions include injuries. Both physical and behavioral problems are treated. Physical

problems include conditions of the skin such as eczemas, eye inflammations, allergies, cough, gastrointestinal disorders, urinary tract diseases including infections and diseases of the kidneys, diabetes, problems of the liver and thyroid, diseases of the loco motor system, neurological complaints such as paralysis and epilepsy, and hormonal disturbances.. Complaints arising from vaccination and breeding problems are also treated. In India, a survey conducted in Kerala (India) revealed most veterinarians used homeopathic medicines for diseases like mastitis, wart, posterior paralysis, FMD lesion, hemagalactia, tetanus etc. and found good results.<sup>2</sup>

More formal trials with homeopathic medicines have shown encouraging results in the management of bovine mastitis among other conditions.<sup>4</sup> In fact, mastitis, a frequently encountered disease in veterinary clinics, is such an economic burden that the search for cost- effective complementary and alternative treatment approaches for management of mastitis is being pursued throughout the world.<sup>5</sup> According to the survey of WHO and Food and Agriculture Organization 2000, 85% of animals in developing countries are given alternative therapies for their ailments; main alternatives being Homoeopathy and Ayurveda.<sup>6</sup> More research articles have been published on the subject in countries such as Germany, Norway, Sweden and the United Kingdom. Examples include projects on treatment of eczema in horses in Finland, utilization, effects and implications of Homoeopathy in health and productivity of dairy cows in Norway, and a number of trials in farming animals in Sweden. These include a survey of 41 dairy farmers reporting 76 % improvement in their animals. Results indicate significant reduction in the use of antibiotics in animals. This was also the main reason why farmers opted for Homoeopathy.<sup>7</sup>

Overall, the last three decades have seen a considerable increase in the number of clinical trials. This could be attributed to the ongoing argument over the placebo effect, and its role in the homeopathic treatment process. The presumption behind this is that by showing effects on animals, Homoeopathy could rise above the 'mere placebo' label. The minimal or no placebo effect, although true to an extent, has further been debated of late. With respect to the classical concept of placebo, animals cannot discriminate between drug and food or verum and placebo and therefore have no expectation regarding recovery (provided they have not been conditioned). But with respect to modern concepts of the placebo effect or context effects, various aspects have been reported to elicit a placebo response in animals.<sup>8</sup>

Clinical research in veterinary Homoeopathy has some inherent advantages compared to clinical research in human Homoeopathy. The environmental conditions can be considered as rather stable and comparable for all patients when located in the same isolated pen, kennel, etc. It is easier, in principle, to acquire larger numbers of participants, at least of livestock animals, and to maintain blinding. Therefore, studies of veterinary Homoeopathy that account for the above mentioned adaptations of the study design may be more useful in investigating whether homeopathic remedies have specific effects over and above those of placebo. However, the challenges like interview-based repertorisation being limited to objective parameters and interrogations of the animal owners, only a few drug provings available in animals and a small number of remedies enlisted for animals in the *Materia Medica* make the procedure rather cumbersome. In cases, a human repertory and *Materia Medica* are used to find the simillimum, an approach that is questioned by some authors.<sup>4</sup>

Several clinical trials and systematic reviews have been carried out to see the response of homeopathic treatment in animals. The Veterinary Clinical Research Database for Homoeopathy enlists 405 studies on use of Homoeopathy in veterinary including case reports, case series, controlled trials etc.<sup>9</sup>

Central Council for Research in Homoeopathy<sup>10</sup> India, has identified a few priority areas for research in veterinary science. These include subclinical mastitis, diarrhoea, skin diseases, reproductive disorders (metritis, infertility etc.), wound/injury management and problems concerning productivity of animal.

Since Homoeopathy is still to go a long way in order to establish its role in veterinary science, there is a vast scope for research. High-quality research can only be taken up when veterinary scientists and conventional practitioners are willing to collaborate for homeopathic projects on priority basis.

The goal of every homeopath is to become more efficient at matching the homeopathic medicine to the patient. To this extent, homeopaths have always practised Evidence based medicine, taking advantage of the updates in *Materia Medica*, new techniques of analysis and updated Repertories.

Most research into Homoeopathy does not improve this skill. However, this has not prevented a wide variety of

researchers from investigating Homoeopathy, which has resulted in a large evidence base for medical Homoeopathy. This has been paralleled in animals, as many of the experimental models have involved animals of various species, but much work has also involved domestic animals. The British Association of Homoeopathic Veterinary Surgeons and the International Association for Veterinary Homoeopathy Veterinary have collected over 800 papers on the website.<sup>11</sup> both from peer-reviewed and non-peer reviewed resources. There is a further number of more recent papers available on other sources.<sup>12</sup> The Carstens – Stiftung site was home to the database HomVetCR (Clinical Research on Veterinary Homoeopathy). Unfortunately, it was closed down, but fortunately the European Committee for Homoeopathy (ECH) and the University of Witten Herdecke decided to maintain this important data base of research in veterinary Homoeopathy. Finally, the Homoeopathic Research Institute (HRI) is a body dedicated to collating and promoting homeopathic research and this is the natural body to consult in this field. Anyone interested in this field is recommended to start by consulting the HRI website.

As will be clear by now, there are very few circumstances when a single homeopathic medicine would be appropriate to all patients suffering from a specific named condition, hence Homoeopathy does not lend itself to the standard design of randomised controlled trials.

Exceptions are where a homeopathic complex or a nosode are used, or where the condition being treated has a consistent pattern. An example of the latter is Camerlink et al's trial in the use of E.coli nosode on E.coli diarrhea in piglets or Day's trial in the use of homeopathic *Caulophyllum* on the rate of stillbirths in pigs<sup>13</sup>.

It is possible to design a randomised trial of individualised Homoeopathy, but the skill of the prescriber(s) can of course have a significant effect on the results. Individualised Homoeopathy was the subject of the trial in Homoeopathy in the treatment of atopic dermatitis in dogs, conducted at Bristol University Veterinary School<sup>14</sup>. Homoeopathy was associated with marked clinical improvement in 5 of 20 dogs. In fact, 14 dogs improved, but only 5 exceeded the end point of 50% reduction in pruritus, which was required to justify a bigger trial. Sadly, despite achieving the necessary result, there was no support for conducting a full trial.

In this context it is vital that in the design of any trial or analysis a properly qualified doctor or veterinary surgeon

is involved - in the latter trial homeopathic treatment was prescribed by a veterinary member of the Faculty of Homoeopathy. The consequences of not involving such a person in the team may be poor design trial, and misinterpretation of results. One example of this is the trial conducted by de Verdier et al<sup>15</sup> in which calves with diarrhoea were all given the same homeopathic medicine, or placebo. Predictably all calves in the trial suffered badly, and indeed unnecessarily. In the paper by Keller and Sundrum (2018)<sup>16</sup> the lack of a qualified veterinary homeopath in the team led to this trial being classified as of low risk of bias and hence reliable.

The use of a nosode may circumvent the need to match homeopathic medicine to symptoms, but the report by Holmes et al<sup>17</sup>, on the effect of a homeopathic nosode on the somatic cell counts in the milk of dairy cows, also suffers from poor design: in this trial, a commercial nosode was given for a period of 3 days and the somatic cell count measured for 28 days. This is an inappropriate dosage regime; hence it is not surprising that there was no significant reduction in cell counts. Nevertheless, most homeopaths would have recognised the rise of cell count on day 3 as the aggravation one could expect in such circumstances.

These examples demonstrate the importance of model validity (MV). This was examined by Mathie et al. in 2015<sup>18</sup> in a paper in which only 19 of 32 RCTs were considered to have an 'acceptable MV'. In this case the authors conclude that the published findings were seldom undermined but recommended that new RCTs should maximise MV. In Doehring and Sundrum's review (2016), in only 13 of 48 publications was Homoeopathy administered by a homeopathic veterinarian. Despite this 26 trials were favourable to Homoeopathy.

The trial into Homoeopathy and mastitis, by Keller and Sundrum<sup>19</sup> appears to suffer from the same issue; indeed, a letter to the Veterinary Record from the International Association for Veterinary Homoeopathy (unpublished but copied below) raises several questions about MV, including the fact that 'as acknowledged by the authors, it is unclear whether adequate and appropriate homeopathic individualisation took place. It is also unclear if after consulting the repertorisation tool, homeopathic medicines were studied in the *Materia Medica*, and a simile was chosen.

Issues of poor MV should of course be identified in the peer review system, but unless reviewers with the necessary

expertise in veterinary Homoeopathy are consulted, the process breaks down and invalid conclusions are published. This has a knock-on effect on systematic reviews and meta-analyses.

In contrast to these papers, a randomized, placebo controlled, double-blind study of the use of a nosode in the treatment of *E. coli* diarrhoea in piglets<sup>20</sup> showed that the treated group had significantly fewer piglets with *E. coli* diarrhoea; in addition, the severity of the disease was decreased, and diarrhoea, if it occurred, was of a shorter duration. The study was classified as high-quality by Doehring and Sundrum (2016). The repeatability of this study is currently being examined in other study centres.

Nevertheless a 2015 meta-analysis of randomised placebo-controlled trials in veterinary Homoeopathy by Mathie and Clausen<sup>21</sup> 9 of 15 trials showed risk of bias, however analysis showed that overall there is a positive trend in the evidence on veterinary Homoeopathy which is robust upon sensitivity analysis. This positive trend is unchanged whether one considers only the highest quality trials or all existing trials regardless of quality. Hence there was 'weak evidence' that Homoeopathy treatment is different from placebo ( $p = 0.01$  for  $N=15$  trials and  $p = 0.02$  for the  $N=2$  most reliable trials).

The authors concluded that 'Meta-analysis provides some very limited evidence that clinical intervention in animals using homeopathic medicines is distinguishable from corresponding intervention using placebos. The low number and quality of the trials hinders a more decisive conclusion.'

In conclusion there are hundreds of individual trials into veterinary Homoeopathy. The trend is towards demonstrating both efficacy and, more importantly, effectiveness of Homoeopathy in animals. Added to this is a much larger evidence base in medical Homoeopathy, and this mass of information is certainly sufficient to counter the claim that Homoeopathy has no evidence base.

Unfortunately, there is no commercial incentive to perform research into veterinary Homoeopathy and there is a paucity of funding sufficient for truly independent research; indeed, the present political environment provides a disincentive for investigators to include the word 'Homoeopathy' in their proposals. As such any change in the situation is unlikely in the near future.

More relevant to medical and veterinary practice is the effectiveness of Homoeopathy in a general practice, hence the interest in clinical outcome studies.

Two papers by Mathie investigated the use of Homoeopathy in veterinary clinical practice. The aims were: 'to collect clinical outcomes data systematically from individualised homeopathic treatment of cats and dogs that would help to inform controlled research in feline and canine Homoeopathy'<sup>22</sup> and 'first, to gain an insight into the chronic equine problems that vets in the UK treat using Homoeopathy; secondly, to determine owner-assessed changes in severity of the medical problems treated in follow-up appointments; and, thirdly, to identify any trends in disease status and clinical response that might help target future controlled research in Homoeopathy.'<sup>23</sup>

Response was assessed by owners as from -3 to +3. Overall response in 68.9 % of dogs were assessed by the owners as +2 or +3. The corresponding figures for cats was 63.3%. In the equine study, the figure was 86.7%.

The foregoing is in no way meant to represent a comprehensive review of the evidence base of Homoeopathy but hopefully will go some way towards fostering a better understanding and therefore a more informed interpretation. For any detailed investigation the sources already mentioned should be consulted.

Finally, it should not be forgotten that anecdotal evidence, case reports and individual experience constitute evidence; there are many case reports of the successful treatment of animals with Homoeopathy, not only in homeopathic journals, but also in mainstream publications. As Sackett reminds us: 'Evidence based medicine is the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients. The practice of evidence-based medicine means integrating individual clinical expertise with the best available external clinical evidence from systematic research. By individual clinical expertise we mean the proficiency and judgment that individual clinicians acquire through clinical experience and clinical practice. Increased expertise is reflected in many ways, but especially in more effective and efficient diagnosis and in the more thoughtful identification and compassionate use of individual patients' predicaments, rights, and preferences in making clinical decisions about their care.'<sup>24</sup>

In Veterinary medicine, the *Veterinary Record*<sup>25</sup> is seen as one of the reference magazines. In December 2016, they

published an article by Sundrum and Doehring titled: "Efficacy of Homoeopathy in livestock according to peer-reviewed publications from 1981 to 2014".<sup>16</sup> Sundrum and his team had declined our help with the EU project called IMPRO which amongst other things looked at the use of Homoeopathy in organic farming.

Scientific studies and, last but not least, a meta-analysis of randomized controlled trials provide, though limited, evidence for the effectiveness of veterinary Homoeopathy versus placebo.<sup>20,21,26</sup>

Further studies of high quality are required as in many areas of medicine. There are also studies on the mode of action of Homoeopathy<sup>27,28,29,30,31</sup> as well as a YouTube video of Bell, 2016, containing a solid summary.<sup>32</sup>

In a randomized, placebo controlled, double-blind study<sup>26</sup> for the homeopathic treatment of diarrhoea in piglets caused by the bacterium *Escherichia coli* (*E. coli*), it was already shown in 2010 that the homeopathically treated group had significantly fewer piglets with *E. coli* diarrhoea. In addition, the severity of the disease was lower and diarrhoea, if it occurred, of a shorter duration. Homoeopathic remedies were used as replacement to antibiotics in the case of *E. coli* diarrhoea in neonatal piglets. The study was classified as high-quality by Doehring and Sundrum, as well as by Mathie and Clausen. The repeatability of this study is currently being examined in other study centers.

### Antimicrobial Resistance (AMR) Action Plan

It is important to note that in the recently published documents on the antimicrobial resistance (AMR) Action Plan of the EU Commission, CAM (complementary, alternative medicine), Homoeopathy included, is mentioned as a potential approach to solutions to AMR, and their demand for further research in CAM is particularly relevant in terms of the importance of the AMR problem in humans and animals. In addition, in an annex to the RAND Survey on antibiotic resistance, submitted by the European Committee for Homoeopathy, numerous homeopathic studies on infectious diseases in humans and animals are listed and described.

In his meta-analysis from 2013<sup>33</sup>, Robert Hahn (Head of Research, Södertälje Hospital Sweden, Professor of Anesthesia & Intensive Care, Linköping University) has stated that, in order to demonstrate that Homoeopathy in humans does not show effectiveness, more than 90% of the

available clinical studies must be excluded or scientifically untenable statistical methods must be applied. At this point, a Cochrane Review<sup>34</sup> has to be mentioned, with 1016 systematic reviews on conventional therapies being investigated, with 44% positive, 7% negative results and 49% of the reviews reporting that the evidence did not support either benefit or harm.

### International, interdisciplinary cooperation

The European Homoeopathy Congress took place in Vienna from 17-19 November 2016 with 480 participants from well over 30 different countries. Veterinarians (International Association for Veterinary Homoeopathy, IAVH), human doctors and pharmacists (European Committee for Homoeopathy, ECH), and patient representatives (European Federation of Homoeopathic Patients' Associations, EFPHA) jointly organized the congress. Conventional medicine and Homoeopathy in mutual synergy was a key theme at the congress. Presentations like on State-of-the-art in the treatment of cancer patients and of orthopedic & internal emergencies in horses in combination with numerous presentations on human and veterinary homeopathic studies and on the classical homeopathic treatment of humans and animals in practice as well as a political and pharmaceutical discussion made the congress unique. Following the press conference, positive articles were to be read in two Austrian newspapers. (15, 16).

The International Association for Veterinary Homoeopathy (IAVH) has 745 active members and offers the possibility of obtaining the IAVH certificate. In all training courses on veterinary Homoeopathy, the principle that conventional medicine and Homoeopathy are always complementary to the well-being of the patient is fulfilled.

This is also the recommendation of the WHO strategy for CAM (complementary, alternative medicine) 2014-2023, which asks for the integration of CAM into health systems.

Further, the IAVH with the support of the ECH, EUROCAM, HRI and Prof Michael Frass, wrote to the Veterinary Record in 2018 in response to the publishing of the article "Comparative effectiveness of individualised Homoeopathy and antibiotics in the treatment of bovine clinical mastitis: randomised controlled trial" by Keller, D., Sundrum, A. in 2018. The Veterinary Record refused to publish this letter saying that they are a magazine publishing research based on what they described as being the 'Western Scientific Method' and that any concerns

relating to homeopathic research should find its place in homeopathic magazines.

### **IAVH (International Association for Veterinary Homoeopathy)**

The IAVH was created in Luxemburg in 1986. It has steadily grown and now brings together more than 800 members from all over the world. In its political, research and educational activity, it works in close cooperation with the LMHI, ECH, EUROCAM, HRI, WissHom and Wimforum in an effort to promote Homoeopathy in concert.

### **WVA (World Veterinary Association)**

Following an IAVH report sent to the WVA, the WVA included in its advice on the AMR issues the following statement:

“Effective alternative and complementary medicine and practices are needed as an important part of good husbandry practices to minimize or avoid antimicrobial use. Development of effective alternative management practices and treatments is needed to minimise antimicrobial use, while ensuring good animal health and welfare. This includes strategies such as vaccines, immunostimulants, probiotics, competitive exclusion principles and products, nutrition, etc. The WVA wants to maintain the effectiveness of antimicrobials for treating sick animals and humans and emphasises the need for innovation in these areas.”

In April 2019 at the occasion of the WVA annual board meeting, the IAVH proposed a motion for a statement by the WVA in favour of research into complementary medicines. The report prepared to support this motion is published below. It was well received by a few of the members but rejected by the majority for reasons to do with politics rather than science. A second step in the same direction is planned for 2020.

Contacts with the IVSA (International Veterinary Students association) through the WVA, makes it clear that the veterinary student representatives want us to continue to bring our message of complementary medicine and Homoeopathy. Researchers should be aware of this as it is their role to help the next generation of veterinary surgeons to learn to embrace Homoeopathy.

### **Integrative medicine**

Integrative medicine is receiving considerable attention in human medicine. A simple search in Pub Med of the term

‘integrative medicine’ produces a list of 32 000 articles, with 911 articles with the term in their title. (March 2019)

An article on Integrative Veterinary Medicine (IVM), ‘Integrative veterinary medical education and consensus guidelines for an integrative veterinary medicine curriculum within veterinary colleges’<sup>35(1)</sup>, has a compelling statement in its summary:

‘...Controversies regarding IVM (integrative veterinary medicine) and CAVM (Complementary Alternative Veterinary Medicine) must be addressed within the course and throughout the entire curriculum. Instructional honesty regarding the uncertainties in this emerging field is critical. Increased training of future veterinary professionals in IVM may produce an openness to new ideas that characterizes the scientific method and a willingness to pursue and incorporate evidence-based medicine in clinical practice with all therapies, including those presently regarded as integrative, complementary, or alternative...’

The authors are cautious and employ caveats, yet they promote the need to look outside of conventional medicine.

Further arguments in this presentation for the need of a declaration in favour of Integrative veterinary medicine come mainly from the field of human medicine. But as Prof Arturo Anadòn so clearly explained last year in Barcelona (WVA congress), in his presentation about the Spanish Academy for Veterinary Sciences, it is important for the veterinary community to learn from developments in human medicine.

In relation to Antimicrobial Resistance (AMR)

A narrative review article looked into the contribution of complementary and alternative medicine (CAM) to reduce antibiotic use. Their conclusion was that CAM prevention and treatment strategies could provide safe and effective alternatives to antibiotic use in many cases.<sup>35</sup>

### **The conventional medical model?**

In order to be open to IVM, it is important to accept and understand that conventional medicine does not hold all the answers. There are two books that illustrate this particularly well; both are written by experienced research scientists coming from widely different backgrounds.

In his book: How Healing Works, Wayne Jonas writes the following (p 208): ‘While we improved our science and certainty for managing acute diseases, we sacrificed what most people value about being alive, and we lost how healing works in chronic illness. Our improvements in health waned. The cost of medical care soared. The value of the mechanical and reductionist model has reached its limits.’

For him, the ideal medicine is Integrative medicine.

In his book The Demon in the Machine, Paul Davies asks some profound questions about our understanding of life, and suggests it is more likely to be found in information theory than chemistry. This is, of course, where some non-conventional medicines, and specifically Homoeopathy, can offer solutions. We certainly have no chemical effects in Homoeopathy; the action is most likely due to information effects. The DynHom project research lifts an edge of the veil to this effect.<sup>36</sup> Further, twelve independent research laboratories in the U.S., France, Italy, Russia, and India have now found that homeopathic medicines studied contain various nanostructures, including source material, silica nanoparticles and gas nanobubbles heterogeneously dispersed in colloidal solution.<sup>37,38,39,40</sup> This work suggests that homeopathic medicines, like modern engineered nanoparticles, act by modulating the allostatic stress response network (allostasis is the process of restoring a stable internal environment), including cytokines, oxidative stress and heat shock proteins.<sup>41,42</sup> Ivan Cavicci, who is a philosopher and professor in Rome teaching health policy, wrote the following in a magazine article.<sup>43</sup>

‘... Furthermore, medicine is not a science in the sense of a single knowledge but rather a “box” (meta-knowledge) that holds together a group of knowledge, coordinated and used pragmatically both by the patient and by the doctor. It is definitely an “abnormal science”.

Now to infer from an idea of normal science the postulates of an otherwise abnormal medicine, is not a recent type of epistemic deceit. The ontology of medicine is deducible only and exclusively from its own abnormal being, otherwise it would not be possible for it to distinguish a cell from a person....”

Homoeopathy practiced according to its specific principles is effective, non-toxic, non-polluting and usually cheaper than conventional medicine.<sup>44,45,46</sup> Homoeopathy is one of the types of none-conventional medicines that lends itself

very well to being part of modern Integrative Veterinary Medicine practice.

### Few publications in recent years

1. Morales-Vallecilla C, Ramírez N, Villar D, Díaz MC, Bustamante S, Ferguson D. Survey of Pain Knowledge and Analgesia in Dogs and Cats by Colombian Veterinarians. *Vet Sci*. 2019 Jan 10;6(1). pii: E6. doi: 10.3390/vetsci6010006. PMID: 30634671
2. Stalder S, Sidler X, Hässig M. [Milk production without use of -antibiotics]. *Schweiz Arch Tierheilkd*. 2018 Dec; 160(12):727-736. doi: 10.17236/sat0018 .PMID:30516475.
3. Petra Weiermayer. Wound Healing Disorder in a Horse, Associated With Antimicrobial-Resistant Bacteria, Resolved With a Homoeopathic Medicine - A Case Report. *Journal of Equine Veterinary Science*, Volume 67, August 2018, Pages 37-43. <https://doi.org/10.1016/j.jevs.2018.02.027>
4. Ellinger Liesbeth. Effect of weather and climate on animals starring Holy Mary. *Homoeopathic Links* 2018: 31(2); 159p.
5. Ellinger Liesbeth. A Case of Pemphigus Follicularis Treated with Homoeopathy in a Horse. *JAHVMA* 2018: 53.
6. Rosero-García ADP, Mazón-Suástegui JM, Dumas S, Chávez-Sánchez MC, Avilés-Quevedo A, Rodríguez-Jaramillo C. Effect of Homoeopathic Medicines on Intestinal Coccidia and Immune Response Cells in Spotted Rose Snapper (*Lutjanus guttatus*). *Homoeopathy*. 2019 Apr 18. doi: 10.1055/s-0039-1681062. PMID: 30999384
7. Keller, D., Blanco-Penedo, I., De Joybert, M., Sundrum, A. (2019) How target-orientated is the use of Homoeopathy in dairy farming. A survey in France, Germany and Spain. *Acta Vet Scand* 61(1):30.
8. Zeiser, J., Fritz, J. (2019): Use and efficacy of Homoeopathy in prevention and treatment of bovine mastitis. *Open Agricult* 4: 203-212.
9. Maeschli, A., Schmidt, A., Ammann, W., Schurtenberger, P., Maurer, E., Walkenhorst, M. (2019): Einfluss eines komplementärmedizinische telefonischen

- Beratungssystem auf den Antibiotikaeinsatz bei Nutztieren in der Schweiz. *Complement Med Res* 9: 1-8.
10. Memon, M.A., Shmalberg, J., Adair, H.S., Allweiler, S., Bryan, J.N., Cantwell, S., Carr, E., Chrisman, C., Egger, C.M., Greene, S., Haussler, K.K., Hershey, B., Holyoak, G.R., Johnson, M., Leu Jeune, S., Looney, A., Mcconnico, R.S., Medina, C., Morton, A.J., Munsterman, A., Nie, G.J., Park, N., Parsons-Doherty, M., Perdrizet, J.A., Peyton, J.L., Raditic, D., Ramirez, H.P., Saik, J., Robertson, S., Sleeper, M., Van Dyke, J., Wakshlag, J. (2016): Integrative veterinary medical education and consensus guidelines for an integrative veterinary medicine curriculum within veterinary colleges. *Open Vet J.* 6(1): 44-56.
- 
- 1 Regulation (EU) 2018/848 Of The European Parliament And Of The Council Of 30 May 2018 On Organic Production And Labelling Of Organic Products And Repealing Council Regulation (EC) No 834/2007  
<https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32018R0848&from=SV>
- 2 Madrewar B.P.; *A Scientific Clinical Research Veterinary Homoeopathy*; First Edition 2006; Pp 1-5
- 3 Veterinary Medicines Division, European Medicines Agency; Revised ESVAC reflection paper on collecting data on consumption of antimicrobial agents per animal species, on technical units of measurement and indicators for reporting consumption of antimicrobial agents in animals; 10 October 2013; EMA/286416/2012-Rev.1; pp 5-6
- 4 Upadhyaya AK, Sharma SP. Management of bovine mastitis by Homoeopathy. *Indian Vet Med J* 1999; 23: 71–72.
- 5 Varshney JP, Ram Naresh; Buffalo udder diseases and Homoeopathy; *Homoeopathy* (2004) 93, 17–20
- 6 Madrewar B.P.; *Scientific Clinical Research: Veterinary Homoeopathy*; B Jain Publishers 2006
- 7 European Council for Classical Homoeopathy; *The Homoeopathic Treatment of Animals in Europe*; Third Edition November 2007
- 8 J. Clausena, H. Albrecht, R.T. Mathie; *Veterinary Clinical Research Database for Homoeopathy: Placebo-controlled trials; Complementary Therapies in Medicine* (2013) 21, 115–120
- 9 <http://www.carstens-stiftung.de/clinresvet/ergebnis.php>; Last accessed on June 24, 2014
- 10 <http://ccrhindia.org/index.asp>
- 11 [www.homeopathicvet.org](http://www.homeopathicvet.org)
- 12 <http://www.iavh.org/en/for-veterinarians/research/>
- 13 Day C. Control of stillbirths using homoeopathy. *Veterinary Record* 1984; 114: 216.
- 14 Hill P, Hoare J, Lau-Gillard P, Rybnicek J, Mathie R. Pilot study of the effect of individualised Homoeopathy on the pruritus associated with atopic dermatitis in dogs. *Veterinary Record* 2009; 164: 364-370
- 15 De Verdier K, Öhagen P, Alenius S. No Effect of a Homoeopathic Preparation on Neonatal Calf Diarrhoea in a Randomised Double-Blind, Placebo-Controlled Clinical Trial. *Acta Vet Scand.* 2003; 44(2): 97–101
- 16 Doehring C, Sundrum A. Efficacy of Homoeopathy in livestock according to peer-reviewed publications from 1981 to 2014. *Veterinary Record* 2016; 179: 628
- 17 Holmes M, Cockcroft P, Booth C, Heath M. Controlled clinical trial of the effect of a homoeopathic nosode on the somatic cell counts in the milk of clinically normal dairy cows. *Veterinary Record* 2005; 156: 565-567
- 18 Mathie R, Van Wassenhoven M, Jacobs J, Oberbaum M, Roniger H, Frye J, Manchanda R, Terzan L, Chaufferin G, Dantas F, Fisher P. Model validity of randomised placebo-controlled trials of individualised homeopathic treatment. *Homoeopathy* 2015; 104: 164 -169
- 19 Keller D, Sundrum A. Comparative effectiveness of individualised Homoeopathy and antibiotics in the treatment of bovine clinical mastitis: randomised controlled trial. *Veterinary Record* 2018 doi: 10.1136/vr.104555
- 20 Camerlink I, L Ellinger L, EJ Bakker EJ and Lantinga EA. Homoeopathy as replacement to antibiotics in the case of *Escherichia coli* diarrhoea in neonatal piglets. *Homoeopathy* 2010; 99: 57-62
- 21 Mathie RT, Clausen J. *Veterinary Homoeopathy: meta-analysis of randomised placebo-controlled trials.* *Homoeopathy.* 2015; 104: 3–8
- 22 Mathie R, Baitson E, Hansen L, Elliott M., Hoare J. Homoeopathic prescribing for chronic conditions in equine veterinary practice in the UK. *Veterinary Record* 2010; 166: 234-237
- 23 Mathie R, Baitson E, Hansen L, Elliott M., Hoare J. Homoeopathic prescribing for chronic conditions in feline and canine veterinary practice. *Homoeopathy* 2010; 99: 243-248
- 24 Sackett D, Rosenberg W, Gray J, Haynes R, Richardson W. Evidence based medicine: what it is and what it isn't. *BMJ* 1996; 312:71-72
- 25 <https://veterinaryrecord.bmj.com/pages/about/>
- 26 Epstein 2014 <http://theavh.org/wp-content/uploads/2014/02/Homoeopathy-White-Paper.pdf>
- 27 Bell IR et al (2013). Testing the nanoparticle-allostatic cross-adaptation-sensitization model for homeopathic remedy effects. *Homoeopathy*; 102: 66-81.
- 28 Khuda-Bukhsa AR et al. (2011). Modulation of Signal Proteins: A Plausible Mechanism to Explain How a Potentized Drug Secale Cor 30C Diluted beyond Avogadro's Limit Combats Skin Papilloma in Mice. *Evidence-Based Complementary and Alternative Medicine*; Article ID 286320, 12 pages, 2011. doi:10.1093/ecam/nep084  
<https://www.hindawi.com/journals/ecam/2011/286320/>
- 29 Marzotto M, Bonafini C, Olioso D, Baruzzi A, Bettinetti L, Di Leva F, et al. (2016) *Arnica montana* Stimulates Extracellular Matrix Gene Expression in a Macrophage Cell Line Differentiated to Wound-Healing Phenotype. *PLoS ONE* 11(11): e0166340. doi:10.1371/journal.pone.0166340

- [http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0166340&utm\\_content=buffer2f226&utm\\_medium=social&utm\\_source=facebook.com&utm\\_campaign=buffer](http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0166340&utm_content=buffer2f226&utm_medium=social&utm_source=facebook.com&utm_campaign=buffer)
- 30 Montagnier L et al. (2009). Electromagnetic signals are produced by aqueous nanostructures derived from bacterial DNA sequences. *Interdiscip Sci*; 1: 81-90. Epub 2009 Mar 4. [http://sphq.org/wp-content/uploads/2016/03/etudes\\_Montagnier\\_Electro-signals-produced-by-aqueous-DNA.pdf](http://sphq.org/wp-content/uploads/2016/03/etudes_Montagnier_Electro-signals-produced-by-aqueous-DNA.pdf)
- 31 Witt CM et al. (2007). The in vitro evidence for an effect of high homeopathic potencies-a systematic review of the literature. *Complement Ther Med*; 15: 128-38. Epub 2007 Mar 28. [http://www.complementarytherapiesinmedicine.com/article/S0965-2299\(07\)00013-1/abstract](http://www.complementarytherapiesinmedicine.com/article/S0965-2299(07)00013-1/abstract)
- 32 Bell IR. (2016) [https://www.youtube.com/watch?feature=youtu.be&v=U8IUZRc8-DU&utm\\_content=buffer5344f&utm\\_medium=social&utm\\_source=facebook.com&utm\\_campaign=buffer](https://www.youtube.com/watch?feature=youtu.be&v=U8IUZRc8-DU&utm_content=buffer5344f&utm_medium=social&utm_source=facebook.com&utm_campaign=buffer)
- 33 Hahn RG. (2013). Homoeopathy: meta-analyses of pooled clinical data. *Forsch Komplementmed*; 20: 376-81. Epub 2013 Oct 17. <https://www.karger.com/Article/FullText/355916>
- 34 El Dib RP, Atallah AN, Andriolo RB (2007). Mapping the Cochrane evidence for decision making in healthcare. *Journal of Evaluation in Clinical Practice*; 13: 689-692. <https://www.ncbi.nlm.nih.gov/pubmed/17683315>
- 35 Memon MA1, Shmalberg J2, Adair HS 3rd3, Allweiler S4, Bryan JN5, Cantwell S6, Carr E7, Chrisman C2, Egger CM3, Greene S1, Haussler KK4, Hershey B8, Holyoak GR9, Johnson M2, Jeune SL10, Looney A11, McConnico RS12, Medina C13, Morton AJ2, Munsterman A14, Nie GJ15, Park N16, Parsons-Doherty M17, Perdrizet JA18, Peyton JL10, Raditic D19, Ramirez HP2, Saik J20, Robertson S7, Sleeper M2, Dyke JV21, Wakshlag J22. Integrative veterinary medical education and consensus guidelines for an integrative veterinary medicine curriculum within veterinary colleges. <https://www.ncbi.nlm.nih.gov/pubmed/27200270>
- 36 DynHom research [http://www.homeopathieunio.be/uploads/files/unprotected/Research/DYNHOM%20project%20status\\_November2016\\_v03.pdf](http://www.homeopathieunio.be/uploads/files/unprotected/Research/DYNHOM%20project%20status_November2016_v03.pdf)
- 37 Bhattacharyya SS, Mandal SK, Biswas R, Paul S, Pathak S, Boujedaini N, Belon P, Khuda-Bukhsh AR: In vitro studies demonstrate anticancer activity of an alkaloid of the plant *Gelsemium sempervirens*. *Exp Biol Med (Maywood)* 2008, 233(12):1591–1601.
- 38 Chikramane PS, Suresh AK, Bellare JR, Kane SG: Extreme homeopathic dilutions retain starting materials: A nanoparticulate perspective. *Homoeopathy* 2010, 99(4):231–242.
- 39 Upadhyay RP, Nayak C: Homoeopathy emerging as nanomedicine. *International Journal of High Dilution Research* 2011, 10(37):299–310
- 40 Ives JA, Moffett JR, Arun P, Lam D, Todorov TI, Brothers AB, Anick DJ, Centeno J, Nambodiri MA, Jonas WB: Enzyme stabilization by glass-derived silicates in glass-exposed aqueous solutions. *Homoeopathy* 2010, 99(1):15–24
- 41 Karatsoreos IN, McEwen BS: Psychobiological allostasis: resistance, resilience and vulnerability. *Trends Cogn Sci* 2011, 15(12):576–584.
- 42 McEwen BS: Central effects of stress hormones in health and disease: Understanding the protective and damaging effects of stress and stress mediators. *Eur J Pharmacol* 2008, 583(2–3):174–185
- 43 [http://www.quotidianosanita.it/studi-e-analisi/articolo.php?articolo\\_id=70087&fbclid=IwAR2IKuBoUi-8ZCE3b823zyI96xCEm6WDH-VW-L4pYimmpS8HDGK9jmrDkt4](http://www.quotidianosanita.it/studi-e-analisi/articolo.php?articolo_id=70087&fbclid=IwAR2IKuBoUi-8ZCE3b823zyI96xCEm6WDH-VW-L4pYimmpS8HDGK9jmrDkt4)
- 44 Rossignol M, Begaud B, Engel P, et al. Impact of physician preferences for homeopathic or conventional medicines on patients with musculoskeletal disorders: results from the EPI3-MSD cohort. *Pharmacopepidemiol. Drug Saf.* 2012, 21:1093-101.
- 45 Grimaldi-Bensouda L, Begaud B, Rossignol M, Avouac B, Lert F, et al. (2014) Management of Upper Respiratory Tract Infections by Different Medical Practices, Including Homoeopathy, and Consumption of Antibiotics in Primary Care: The EPI3 Cohort Study in France 2007–2008. *PLoS ONE* 9(3): e89990
- 46 -Bensouda L, Abenhaim L, Massol J et al. Homoeopathic medical practice for anxiety and depression in primary care: the EPI cohort study. *BMC Complementary and Alternative Medicine* (2016) 16:125

## Chapter-12

# Homoeopathy for Agriculture

**James Michael**

Senior Research Fellow (H)

Central Council for Research in Homoeopathy, Ministry of AYUSH, Govt. of India, New Delhi, India

For almost over a century, homeopathic drugs have been observed to have beneficial effects over plants in various experiments.<sup>1,2,3</sup> For many decades since 1923, Lilly Kolisko, a pioneer in this field, had been investigating the effects of micro dilutions (up to 10-30) of various substances on soaked wheat and other seeds.<sup>4, 5</sup> Richard Haehl had even referred to experiments on plants dating back to 1875, in his biography of Samuel Hahnemann, as supporting evidence that the smallest quantities can have effects on living organisms.<sup>6</sup>

Although all of the experiments mentioned by Haehl were conducted with dilutions well within the limit set by Avogadro number, research in recent decades with Ultra High Dilutions (UHDs) of substances going far beyond this limit are demonstrating effects even at an epigenetic level in plants.<sup>7</sup> (It is worth mentioning here that the terms homeopathic preparations and UHDs are not synonymous. Homoeopathic preparations are typically diluted as well as succussed whereas UHDs are not always succussed.)

Many potentially beneficial actions of homeopathic preparations have been observed in past<sup>3,8</sup> as well as recent studies utilising plants as living specimens. Enhanced growth of wheat seedlings was found under the influence of the dilution 24x of silver nitrate as compared to water as a control.<sup>9</sup> Significant increase in germination rate was seen when the number of strokes was  $\geq 32$  for both  $As_2O_3$  45x and  $H_2O$  45x.<sup>10</sup> However, no significant difference was observed between succussed and unsuccussed water in a recent study, which on the other hand yielded evidence for specific effects of *Merc-c.* 24x to 30x.<sup>11</sup> In another recent

study, potentized *Calcium carbonicum*, applied as sucrose pillules, was observed to influence pea shoot growth.<sup>12</sup> Thus, plant-based test systems may be a promising tool in homeopathic basic research for identifying specific effects of homeopathic preparations and investigating further research questions, such as hypotheses about the mode of action.<sup>13</sup>

Although the scope for Homoeopathy in agriculture might be considered promising, much more experimental work is needed<sup>14</sup> alongside improvement in study methodology. The importance of including systematic negative control (SNC) in experiments has been emphasized more often<sup>13,15</sup> and as the quality of publications is increasing<sup>13</sup>, more recent studies are incorporating SNCs.<sup>11,12,16</sup>

Further, it is essential to identify confounding factors that may influence the results of experiments in basic homoeopathic research to improve the stability and validity of test systems.<sup>16</sup> Different factors such as seasonality<sup>12</sup>, seed quality<sup>17,18</sup>, growth state<sup>19</sup> of the test organisms used for bioassays for homeopathic basic research must carefully be considered when replicating previous studies or designing a novel one. Introducing other approaches such as droplet evaporation method (DEM) to study the structure of UHDs and water might also prove to be useful.<sup>20</sup>

Plant-based bioassays have been used in homeopathic basic research for more than 100 years as test systems for investigating the effects of homeopathic preparations. However, a standard test system is yet to be established. More external replication trials of already well-

characterised test systems, and standardisation of influencing factors, are necessary to develop such a standard test system.<sup>13</sup>

As better evidence is being generated with time, the growing field of application of Homoeopathy in

agriculture seems to be simultaneously addressing the need for a reliable approach for investigating basic research questions relating to homeopathic preparations while providing safer, non-toxic alternatives for developing greater resistance to stresses in plants and improved yield for the agriculturist.

- 
- 1 Boyd WE. The threshold action of microdoses of mercuric chloride on the activity of diastase in the hydrolysis of starch. *British Homoeopathic Journal*. 1949 Oct;39(04):234-45.
  - 2 Koffler AH. Effects of sulphur dynamizations on onions. *British Homoeopathic Journal*. 1966 Jul;55(03):189-93.
  - 3 Khurana SP. Effect of homeopathic drugs on plant viruses. *Planta medica*. 1971 Sep;20(04):142-6.
  - 4 Coulter HL. Homoeopathy and Modern Medical Science. *The Hahnemannian Gleanings*. 1982;49(4):157.
  - 5 Kolisko L. Physiological Proof of effectiveness of small entities of seven metals [Physiologischer Nachweis der Wirksamkeit kleinster Entitäten bei 7 Metallen]. *Dornach*: 1926
  - 6 Haehl R. *Samuel Hahnemann: His Life and Work : Based on Recently Discovered State Papers, Documents, Letters, etc.* 11th ed. New Delhi, India: B Jain Publishers; 2013. Vol 2. p. 440
  - 7 Marotti I, Betti L, Bregola V, Bosi S, Trebbi G, Borghini G et al. Transcriptome Profiling of Wheat Seedlings following Treatment with Ultrahigh Diluted Arsenic Trioxide. *Evidence-Based Complementary and Alternative Medicine*. 2014;2014:1-15.
  - 8 Sukul NC, Ghosh S, Sukul A, Sinhababu SP. Amelioration of root-knot disease of lady's finger plants by potentized Cina and Santonin. *Homoeopathy*. 2006 Jul;95(03):144-7.
  - 9 Scherer-Pongratz W, Eндler PC, Lothaller H, Stephen S. Wheat and ultra high diluted silver nitrate—further experiments and re-analysis of data. *Homoeopathy*. 2015 Oct;104(04):246-9.
  - 10 Betti L, Trebbi G, Kokornaczyk MO, Nani D, Peruzzi M, Dinelli G, Bellavite P, Brizzi M. Number of succussion strokes affects effectiveness of ultra-high-diluted arsenic on in vitro wheat germination and polycrystalline structures obtained by droplet evaporation method. *Homoeopathy*. 2017 Aug;26(01):47-54.
  - 11 Jäger T, Würtenberger S, Baumgartner S. Effects of Homoeopathic Preparations of Mercurius corrosivus on the Growth Rate of Severely Mercury-Stressed Duckweed Lemna gibba L. *Homoeopathy*. 2019 May;108(02):128-38.
  - 12 Lutz B, Heer I, Katzensteiner R, Raak C, Wolf U, Heusser P, Frass M, Baumgartner S. Development of a whole plant bioassay to test effects of potentized calcium carbonate in pillule formulation. *Complementary therapies in medicine*. 2018 Oct 1;40:13-21.
  - 13 Uecker A, Baumgartner S, Sokol A, Huber R, Doesburg P, Jaeger T. Systematic review of plant-based homeopathic basic research: an update. *Homoeopathy*. 2018 May;107(02):115-29.
  - 14 Betti L, Trebbi G, Majewsky V, Scherr C, Shah-Rossi D, Jäger T, Baumgartner S. Use of homeopathic preparations in phytopathological models and in field trials: a critical review. *Homoeopathy*. 2009 Oct;98(04):244-66.
  - 15 Jäger T, Scherr C, Shah D, Majewsky V, Wolf U, Betti L, Baumgartner S. The use of plant-based bioassays in homeopathic basic research. *Homoeopathy*. 2015 Oct;104(04):277-82.
  - 16 Majewsky V, Scherr C, Schneider C, Arlt SP, Baumgartner S. Reproducibility of the effects of homeopathically potentised *Argentum nitricum* on the growth of *Lemna gibba* L. in a randomised and blinded bioassay. *Homoeopathy*. 2017 Aug;106(03):145-54.
  - 17 Baumgartner S, Thurneysen A, Heusser P. Growth stimulation of dwarf peas (*Pisum sativum* L.) through homeopathic potencies of plant growth substances. *Forsch Komplementarmed Klass Naturheilkd* 2004; 11: 281-292.
  - 18 Baumgartner S, Shah D, Schaller J, et al. Reproducibility of dwarf pea shoot growth stimulation by homeopathic potencies of gibberellic acid. *Complement Ther Med* 2008; 16: 183-191.
  - 19 Majewsky V, Scherr C, Arlt SP, et al. Reproducibility of effects of homeopathically potentised gibberellic acid on the growth of *Lemna gibba* L. in a randomised and blinded bioassay. *Homoeopathy* 2014; 103: 113-126.
  - 20 Kokornaczyk MO, Baumgartner S, Betti L. Polycrystalline structures formed in evaporating droplets as a parameter to test the action of *Zincum metallicum 30c* in a wheat seed model. *Homoeopathy*. 2016 May;105(02):173-9.

## Chapter-13

# Homoeopathy and Epidemic Diseases

Debadatta Nayak<sup>1</sup>, Rupali Bhalerao<sup>2</sup>, Lovepreet Kaur<sup>3</sup>, James Michael<sup>3</sup>, Ruchika Bhalla<sup>3</sup>, Karanpreet Nahar<sup>3</sup>, Hanuman Choudhary<sup>3</sup>, Swati Sharma<sup>3</sup>, Meeta Gupta<sup>4</sup>

1. Research Officer (H), 2. Research Associate (H), 3. Senior Research Fellows (H)  
Central Council for Research in Homoeopathy, Ministry of AYUSH, Govt. of India, New Delhi, India  
4. Chief Medical Officer (NFSG), Directorate of AYUSH, Government of NCT of Delhi

### History

Although its efficacy has been demonstrated in treatment of several individuals suffering from acute or chronic diseases, historical review illustrates Homoeopathy's greatest asset appears to be in the management of epidemic diseases. There are impressive examples of its broader applications in the 19<sup>th</sup> and 20<sup>th</sup> centuries.

Dr. S. Hahnemann, propagated unique methodology for the prevention and treatment during epidemics using homoeopathy. This approach through a treatment protocol for an epidemic disease, identified a remedy that he called *genus epidemicus*, based upon the collected signs and symptoms of a large group of patients suffering from the same epidemic. This was different than the treatment of non-epidemic diseases in which, for each patient a specific remedy is selected based on the unique expressions of the disease in that individual.

In giving an historical overview on the use of Homoeopathy in epidemic diseases, Bedayn<sup>1</sup> writes:

*“The curative results of the genus epidemicus were so positive during the epidemics in the ensuing decades that they not only cured the majority of those affected where nothing else had worked, but they also drew international acclaim towards Homoeopathy, the new, the rational, medicine. There is something intrinsically powerful about the success of Homoeopathy in curing large populations that*

*is undeniably attractive to anyone gifted with the power of observation, and it was through these early cures with epidemics that Hahnemann was able to quickly and widely spread the word: Homoeopathy.”*

Using *genus epidemicus* principle, homeopaths impressed the medical establishment with their results. Here are a few quotes to illustrate:

- General: “In epidemics, the mortality per 100 patients is 1/2 to 1/8 in homeopathic hospitals (a century ago there were several homeopathic hospitals in the US) compared to allopathic hospitals.”(Bradford, 1900)<sup>2</sup>
- General: “Homoeopathy had become very popular in North America during its early years due to its amazing successes obtained by the 'old guard' during the epidemics – epidemics of diphtheria, scarlet fever, cholera, malaria, yellow fever.” (From its Roots Upwards, Interview with André Saine, N.D., D.H.A.N.P., Vienna, January 1994)<sup>3</sup>
- General: “Ever since Samuel Hahnemann, Homoeopathy has time and again been able to successfully treat epidemics/pandemics with a small number of remedies.” (Stahl, Hadulla, Richter, 2006)<sup>4</sup>
- Cholera: “In Russia in the years 1830 and 1831, Homoeopathy was used to treat 1270 cholera

patients in the provinces of Saratoff, Tamboff and Twer: 1162 of those were cured, 108 died... similar results of homeopathic treatment for cholera were observed in Hungary, Mähren and Vienna.”(Gebhardt, 1929)<sup>5</sup>

- Cholera: “When in the year 1854 cholera came to Palermo, 1513 soldiers fell ill ... of these 902 were treated with allopathy of which 386 died, a bit more than 42%; 611 were treated with Homoeopathy, only 25, that is almost 4%, died.

In the above-mentioned years, cholera also visited the Caribbean, and on the ‘pearl’ of these islands, Barbados, 2113 people fell ill. Of the 346 treated with allopathy 154 died, but of the 1767 treated with Homoeopathy, only 370 died.” (Gebhardt, 1929)<sup>6</sup>

- Cholera: “3% of the cholera patients under homeopathic treatment died (Cincinnati, USA, 1849). Mortality rate of cholera patients under allopathic treatment was 40-70%.” (Humphreys, 1849)<sup>7</sup>
- Spanish influenza: “Perhaps the most recent use of Homoeopathy in a major epidemic was during the Influenza pandemic of 1918. The Journal of the American Institute for Homoeopathy, May, 1921, had a long article about the use of Homoeopathy in the flu epidemic. Dr. TA McCann, from Dayton, Ohio reported that 24,000 cases of flu treated allopathically had a mortality rate of 28.2% while 26,000 cases of flu treated homeopathically had 1.05% mortality rate.” (Winston 2006)<sup>8</sup>
- Spanish influenza: “Homoeopathy has been used with great degree of success in influenza and other epidemics for 200 years ... In 1918 flu pandemic, homeopaths reported around 1% mortality in their cases, while conventional doctors lost 30% of their patients.” [www.lifemedical.us/flu]

NB: The Spanish influenza virus, we know now was an avian virus. Approximately, 40 million people had died in just 18 months.

- Spanish influenza: “Dean W.A. Pearson of Philadelphia (Hahnemann College) collected 26,795 cases of influenza treated by homeopathic physicians with a mortality of 1.05 %, while the average old school mortality was 30 %. Conventional treatment of folks with flu caused at least 8038 deaths while homeopaths

lost only 281 patients which is a statistically significant difference.”

- “H.A. Roberts, MD, Derby, Connecticut: Thirty physicians in Connecticut responded to my request for data. They reported 6,602 cases with 55 deaths, which is less than 1%. In the transport service (during WWI) I had 81 cases on the way over. All recovered and landed. Every man received homeopathic treatment. One ship (using conventional therapy) lost 31 on the way.” A number of homeopathic physicians served in the Armed Forces during WWI and made use of their homeopathic training. (Dearborn, 1923)<sup>9</sup>; (Dewey, 1921)<sup>10</sup>
- Spanish influenza: “The most severe epidemic of all time was the Great Influenza Pandemic of 1918. Twenty percent of the entire world population was infected and 20-40 million people died. The epidemic was so devastating that the average lifespan in the United States was decreased by ten years. During this epidemic, homeopathic medicines were widely used for treatment and as prophylaxis. The average mortality under standard treatment ran from 2.5 - 10%, while 1% or fewer patients died under homeopathic treatment.” (Hoover, 2006)<sup>11</sup>
- Yellow Fever in USA: “Homoeopathy had become very popular in North America during its early years due to its amazing successes obtained by the ‘old guard’ during epidemics – epidemic of diphtheria, scarlet fever, cholera, malaria, yellow fever – especially the yellow fever epidemic; the death rate for which was 55% when allopathic treatment was used, but less than 5% in cases with homeopathic treatment and the same was observed for cholera. It is here with the ‘old guard’ that Homoeopathy obtained its golden letters.” (‘From its Roots Upwards’, Interview with André Saine, ND, DHANP, Vienna, January 1994.)<sup>12</sup>

These are certainly remarkable accomplishments when compared with the results of contemporary regular treatment. However, considering the advances made in conventional medicine in the past century, the question though arises whether Homoeopathy should still play a role in treating epidemic diseases.

## Homoeopathy and Epidemic Diseases Today

Towards the end of 1880’s, Homoeopathy and conventional medicine were equally accepted by public. In the early

1900s, conventional medical doctors in the US lobbied the government and a legislation was passed giving them the exclusive right to diagnose and treat medical conditions. With the US taking lead in the world, Homoeopathy went into a decline. Homoeopathic hospitals were closed. The light of Homoeopathy was kept alive by the smaller number of homeopaths, but most lost the track of what is called the Hahnemannian Homoeopathy and as a science, little progress was made. This changed in last decades of 20<sup>th</sup> century. Homoeopathy flourished again and, especially in the treatment of chronic diseases, great advances were made.

In today's time, the use of the *genus epidemicus* approach for epidemic diseases is marginal, partly, because the epidemic diseases like those mentioned above hardly play a role anymore in the West. Conversely, in developing countries, Homeopaths who went there to help those for whom often no medical care was available, were strongly confronted with epidemic diseases and thus experienced how successful Homoeopathy still is for epidemic conditions.

### Should Homoeopathy play a role in treating and preventing epidemics?

Homoeopathy does not stand in the way of effective treatment for patients but rather complements the available conventional treatment.

- The major homeopathic organizations in the world does not advise patients against the use of conventional medicine and this includes the treatment of epidemic diseases also. Patients undergoing homeopathic treatments are observed to develop increased immunity and significantly improved health, thus postponing the need for conventional therapy. Homoeopathic treatment boosts the immune system and extensively reduced the side effects from conventional treatments, if any.
- Conventional medical care has limited availability in many areas or is only available to very rich. Homoeopathy can be of major help in such situations. In conditions where conventional therapy does not work anymore, it has been observed that these patients respond well to homeopathic treatment.
- Therapy resistance is an increasing problem, making conventional medicines inactive and alternative approaches dearly needed. For the major epidemics in Africa – Malaria, TB and HIV – this has become

a serious crisis. The issues surrounding the resistance are finding an increasing acknowledgment within the healthcare community. “The threat of large-scale drug resistance is ‘real and scary.’” (Marani, 2007)<sup>13</sup> “Resistance develops naturally, in response to the selective pressure from drugs or from the body’s own immune system.” (World Bank 2003)<sup>14</sup>

- Vaccination programs are not available for many diseases that constantly undermine the health and development of developing countries. Homoeopathy can of great help for these populations.

Homoeopathy could play an important role in the treatment of these diseases, as supported by the data from history, and the current observations also confirm that for the epidemic diseases in current times Homoeopathy is still effective. Funds could be made available to study this further. There are several reasons why the homeopathic option for epidemic diseases deserves a serious consideration:

- Homoeopathic remedies create no side-effects
- Homoeopathy is safe for pregnant women, babies and elderly people
- Homoeopathic remedies are inexpensive
- Production, storage and distribution of homeopathic remedies is simple
- Homoeopathy does not induce therapy resistance
- Homoeopathic treatment does not create more dangerous viruses and bacteria
- Homoeopathy has been effective in many epidemics in the past and indications are very strong that it is effective in today's epidemics as well

In order to prepare future surveys, Kirkby R and Herscu P published the paper “Homoeopathic trial design in influenza treatment” in the journal Homoeopathy, 2010;99:69-75 reviewing the published studies on this topic.

### Some examples of contemporary publications on Homoeopathy in epidemic diseases:

**Cholera:** A pilot study of homoeopathic treatment of cholera during an epidemic in Peru appeared to show that it was effective. A subsequent double-blind study showed no difference between active homoeopathic treatment and placebo treatment. Various technical problems were encountered<sup>15</sup>. Further research is certainly needed.

We would remember here that results of such research depended largely upon the sample size. Looking at childhood diarrhoea, Dr J. Jacob demonstrated this very well and concluded: "Previous studies have shown a positive treatment effect of individualized homeopathic treatment for acute childhood diarrhoea, but the sample sizes were small and results were just at or near the level of statistical significance. Because all three studies followed the same basic study design, the combined data from these three studies was analysed to obtain a greater statistical power.

*Methods:* Three double blind clinical trials of diarrhoea in 242 children aged 6 months to 5 years were analysed as 1 group. Children were randomized to receive either an individualized homeopathic medicine or placebo to be taken as a single dose after each unformed stool for 5 days. Parents recorded daily stools on diary cards, and health-workers made home visits daily to monitor children. The duration of diarrhoea was defined as the time until there were less than 3 unformed stools per day for 2 consecutive days. A meta-analysis of the effect-size difference of the three studies was also conducted.

*Results:* Combined analysis show a duration of diarrhoea of 3.3 days in the Homoeopathy group compared with 4.1 in the placebo group ( $P = 0.008$ ). The meta-analysis shows a consistent effect-size difference of approximately 0.66 day ( $P = 0.008$ ).

*Conclusions:* The results from these studies confirm that individualized homeopathic treatment decreases the duration of acute childhood diarrhoea and suggest that larger sample sizes be used in future homeopathic research to ensure adequate statistical power. Homoeopathy should be considered for use as an adjunct to oral rehydration for this illness.<sup>16</sup>

**Leptospirosis:** Homoeopathy is associated with dramatic reduction in Leptospirosis infection in the Cuban population. This publication (July 2010) provides fascinating evidence that a highly dilute substance, prepared according to homeopathic principles, can contribute to the prevention of Leptospirosis, also known as Weil's Disease. In Cuba, Leptospirosis is recorded by an efficient national surveillance program. Its incidence correlates closely with heavy rainfall and subsequent flooding. In late 2007, in response to a developing epidemic, and with only enough vaccine to treat 15,000 high-risk people, the government decided to treat the entire population of the region, over one year of age, with a homeopathic medicine. This was prepared from the

inactivated causative organism provided by the Cuban National Vaccine Institute.

In a recent study, the effect of the homeo-prophylaxis interventions in 2007 and 2008 was found to be positive. The study involved huge population and the database was rigorously cleansed, the possible impact of vaccination and chemoprophylaxis campaigns were examined, and the possible impact of other confounders was also considered. No possible confounding factor appeared to have exerted any appreciable influence on the positive impact of the homeo-prophylaxis interventions in 2007 and 2008, although the vaccination campaign in late 2008 in intervened region, targeting approximately 4% of the population may have prevented some cases. The Cuban experience with homeo-prophylaxis against leptospirosis has been and remains a very positive one. It has given rise to further government-directed immunization against hepatitis A, swine flu, pneumococcal disease, and dengue fever using homeo-prophylaxis. The Cuban health system in general demonstrates how orthodox and complementary medicine can be usefully integrated, and their willingness to use both vaccination and homeo-prophylaxis as evidence-based immunization options is an excellent example of this.<sup>17</sup>

*"Infectious diseases are still the bane of humanity, particularly in the developing world", states Dr Sara Eames, President of the Faculty of Homoeopathy. "Anything which appears to reduce infection rates in a potentially fatal infection, particularly when it can be prepared and delivered quickly, safely and cost effectively, has to be taken seriously and studied further."*

Dr Peter Fisher, Editor of Homoeopathy, notes *"This is a very large study and its results, if confirmed, have huge potential impact. We need more research into the effectiveness of homeopathic preparations in preventing infectious diseases, complications, and the economic viability of a homeopathic approach."*

**Dengue:** The global incidence of dengue and chikungunya has grown dramatically in recent decades<sup>18</sup>. Dengue is an emerging threat to public health. At present, no clear modalities are available for the prevention and management of thrombocytopenia due to dengue. Homoeopathic medicines have been advocated for therapeutic use in dengue since the 19th century. During the dengue outbreak of 2015 in Delhi, patients at Dr. Hedgewar Aarogya Sansthan in-patient department (IPD) were given homeopathic treatment along with usual care

(UC) or UC alone. This study was conducted by Central Council for Research in Homoeopathy, (CCRH) New Delhi in association with Dr. Hedgewar Aarogya Sansthan.

Based on preference, 138 patients received homeopathic medicine along with usual care (H+UC), and 145 patients received usual care (UC) alone. Assessment of thrombocytopenia (platelet count < 100,000/mm<sup>3</sup>) was the main outcome measure.

There was a statistically significantly greater rise in platelet count on day 1 of follow-up in the H+UC group compared with UC alone (mean difference  $\frac{1}{4}$  12,337; 95% confidence interval [CI], 5,421 to 19,252;  $p \frac{1}{4}$  0.001). This trend persisted until day 5 (mean difference  $\frac{1}{4}$  14,809; 95% CI, 1,615 to 28,004;  $p \frac{1}{4}$  0.02). These results suggest a positive role of adjuvant Homoeopathy in thrombocytopenia due to dengue.

This study collected data from patients in routine practice; therefore, there was a possibility of not obtaining all the investigational values of all patients. Serology for dengue was not performed in 57% of patients. Randomized controlled trials may be conducted to add more insight into this integrative approach.<sup>19</sup>

**Acute encephalitis Syndrome/ Japanese Encephalitis:** Acute encephalitis syndrome (AES) is endemic to certain parts of India, with limited treatment options. CCRH conducted exploratory comparative observational study of 151 patients with AES, there was significantly reduced mortality with adjunctive Homoeopathy compared to institutional management protocol (IMP). Further to bring more statistical rigor to this research program, CCRH conducted randomized placebo-controlled trial. The recruits were among children admitted to the paediatric unit of Nehru Hospital attached to Baba Raghav Das Medical College, Gorakhpur, India. A total of 612 children were analysed (Homoeopathy [H] = 304; Control [C] = 308). The primary outcome, GOS, differed significantly between H and C groups. There was 14.8% death/neuro-vegetative state in the H group compared to 29.8% in the C group. Relative risk was 0.49 (95% confidence interval [CI]: 0.36 to 0.68), with absolute risk reduction of 15.0% (95% CI: 8.6 to 21.6%). Number needed to treat to prevent one additional death/neuro-vegetative state was 6.6 (95% CI: 4.6 to 11.6). Adjunctive homeopathic medicines may improve clinical outcomes associated with AES. Further randomized and controlled studies, using double-blinded trial design, are recommended to discover if the current findings may be corroborated<sup>20</sup>.

**Influenza:** Everybody is aware of the audit of the Cochrane organization about efficacy of a homeopathic medicine *Oscillocochinum* in the treatment of influenza. They updated the electronic searches on Cochrane Central Register of Controlled Trials CENTRAL (The Cochrane Library Issue 1, 2006); MEDLINE (January 1966 to February 2006) and EMBASE (1980 to February 2006). The manufacturers of *Oscillocochinum* were contacted for information. Seven studies were included in the review, three prevention trials (number of participants (n) = 2265) and four treatment trials (n = 1194). Only two studies reported sufficient information to complete data extraction fully. There was no evidence that homeopathic treatment can prevent influenza-like syndrome (relative risk (RR) 0.64, 95 % confidence interval (CI) 0.28 to 1.43). *Oscillocochinum* treatment reduced the length of influenza illness by 0.28 days (95 % CI 0.50 to 0.06). *Oscillocochinum* also increased the chances that a patient considered treatment to be effective (RR 1.08; 95 % CI 1.17 to 1.00). Influenza (the flu) is a highly infectious respiratory disease caused by viruses. Other than treatments for complications (such as pneumonia) conventional medical treatment is bed rest. Homoeopathy is a system based on 'curing like with like', often using highly diluted substances. *Oscillocochinum* is a homoeopathic preparation manufactured from wild duck heart and liver (common sources of influenza). It is claimed that *Oscillocochinum* (or similar homeopathic medicines) can be taken either regularly over the winter months to prevent influenza or as a treatment. Trials do not show that homoeopathic *Oscillocochinum* can prevent influenza. However, taking homoeopathic *Oscillocochinum* once one has influenza might shorten the illness, but more research is needed.

Recent Cochrane review (Cochrane Database Syst Rev. 2015 Jan 28;1:CD001957.) concludes that there is insufficient good evidence to enable robust conclusions to be made about *Oscillocochinum* in the prevention or treatment of influenza and influenza-like illness. Findings do not rule out the possibility that *Oscillocochinum*<sup>®</sup> could have a clinically useful treatment effect but, given the low quality of the eligible studies, the evidence is not compelling. There was no evidence of clinically important harms due to *Oscillocochinum*<sup>21</sup>

During winter 2009/2010 a flu pandemic situation was recorded and followed day by day by the W.H.O. and all national authorities. As international organization, the LMHI asked to report about the use of Homoeopathy

during this pandemic period. Following Countries reported the use of Homoeopathy medicines for treatment of flu during this pandemic.

**France:** Vincent S et al. published a survey on the management of Influenza-like illness by homeopathic and allopathic general practitioners (GP) in France during the 2009-2010 influenza season. 65 homeopathic GP and 124 allopathic GP participated, 461 patients were incorporated and patient's satisfaction is greater when Homoeopathy has been used alone<sup>22</sup>. Journal of Alternative and Complementary Medicine (New York, N.Y.)

**Belgium:** 92 patients were included in this report from only 3 physicians, 38 patients were between 15 and 40 years old. *Gelsemium* (headache, fever, asthenia, pain in muscles and bones) and *Anisum stellatum* (added to the same symptoms, deep and difficult cough, the disease seems to be more aggressive in Belgium than in France, this remedy is near Bryonia for general complaints) were prescribed 27 times each, followed by *Euphrasia* (11 times), *Arsenicum album*, *Baptisia tinctoria*, *Influenzinum*, *Oscillococcinum*. Only two complications developed, (bronchitis) one time easily treated with *Anisum stellatum*, antibiotics needed the other time. Most of the cases solved in 2 or 3 days. It has been quoted that none of the patients having asked for a preventive treatment (once a week during the epidemic period) with *Influenzinum*, *Mucococcinum* or *Oscillococcinum* did present flu symptoms.

**Austria:** The situation was evaluated and more than 300 patients were reported from 30 physicians. 27 different remedies were used adapted to the situation. Most quoted remedies were *Bryonia alba*, *Belladonna*, *Gelsemium*, *Influenzinum*, *Eupatorium perfoliatum*, *Arsenicum album*, *Oscillococcinum*, *Nux vomica*. Several times the intake of the known global personal remedy (simillimum) was sufficient to solve the case very fast. Most of the cases were solved in the 2 or 3 following days.

Of course, these flu reports are not controlled systematic recordings, more systematic and structured cases/collections would be needed to assess the real value of Homoeopathy in case of epidemic situation. But the daily practice includes specific attention and treatments for these cases looking at each patient' symptoms individually. This time no real *genus epidemicus* came out very clearly even if *Bryonia* (or *Anisum stellatum*) and *Gelsemium* seems to be the most frequently and efficiently used remedies.

## COVID-19 Pandemic & Homoeopathy

The recent outbreak of coronavirus disease or COVID-19, epi-centred at Wuhan City, Hubei Province of China was declared a global health emergency by World Health Organisation.<sup>23</sup> Fever, cough, myalgia or fatigue are the most common symptoms reported whereas less common symptoms include sputum production, headache, haemoptysis and diarrhoea.<sup>24</sup>

Keeping in view the positive role Homoeopathy in management of epidemics, Scientific Advisory Board of Central Council for research in Homoeopathy after detailed deliberation recommended *Arsenicum album* 30C as could be *Genus epidemicus* and as prophylactic against Coronavirus infection. Accordingly, Ministry of AYUSH, Government of India published public health advisory to use *Arsenic album 30c* as immune-booster & could be prophylactic for corona like infection.<sup>25,26,27</sup> People were also advised to follow all general preventive measures as advised per Government health advisory.

## Indian Initiatives for prevention and treatment of COVID-19

Post publication of advisory, in Gazette of India a notification was published on 21.4.2020, to approve and operationalise AYUSH research in various states/ UTs.<sup>28</sup> Interdisciplinary AYUSH Research and Development Task Force constituted by Ministry of AYUSH to guide research in AYUSH in COVID-19. Further to help practitioners, guidelines for homoeopathic practitioners was published by Ministry of AYUSH.<sup>29</sup> After expedited process for research in COVID-19, CCRH conducted various research activities.

CCRH has undertaken 02 prophylactic studies to understand effect of Arsenic album 30C in prevention of COVID-19 in COVID containment zones.<sup>30</sup> 04 Add on Homoeopathy studies involving moderate to Severe cases with Homoeopathic intervention as adjuvant to standard of care were undertaken in reputed hospitals all over India to assess effect of Add on Homoeopathy in comparison with standard of Care.<sup>31</sup> Post prophylaxis impact of distribution of *Arsenic album* with a follow up of 21 days has also been studied on more than 700000 individuals throughout the country. Details of studies can be assessed at Clinical Trial Registry of India.

## Global initiatives for COVID-19

**LMHI Project Collection Cases:** The Liga Medicorum Homoeopathica Internationalis (LMHI), in collaboration

with the European Committee for Homoeopathy (ECH), researchers, associations, and clinician members, has prepared a database of clinical experiences related to management of COVID-19 cases contributed by homeopathic practitioners all over the world. The database is regularly updated, the compiled data is scientifically analysed and peer-reviewed by international panel of experts and shared with practitioners to help them to draw an intervention plan for the management of this pandemic through Homoeopathy. LMHI regularly publishes a newsletter on COVID-19 data collected around the world. The newsletter and other information can be accessed at <https://www.lmhi.org/Home/COVID19>

Cases to the LMHI database can be contributed in the following ways:

- Via the spreadsheet of the American Institute of Homoeopathy (contact 'Peter Gold' [peter\\_gold@goldorluk.com](mailto:peter_gold@goldorluk.com))
- Via Clifcol (contact 'Frederik Schroyens' [frederik.schroyens@zeus-soft.com](mailto:frederik.schroyens@zeus-soft.com))
- Via Vithoukas Compass (contact 'Lefteris Tapakis' [etapakis@vithoukascompass.com](mailto:etapakis@vithoukascompass.com) or by email to [lmhi2020@vithoukascompass.com](mailto:lmhi2020@vithoukascompass.com)) using the template in Microsoft Word available at <https://www.vithoukascompass.com/en/Homoeopathy/LMHI2020>
- In text format using Robbert van Haselen's form (contact 'Robert van Haselen' [vanhaselen@wimforum.org](mailto:vanhaselen@wimforum.org))

**American Institute of Homoeopathy COVID-19 Database:** Data collection tool was launched on 22 March 2020 by the American Institute of Homoeopathy (AIH) to collect COVID-19 cases (managed with Homoeopathy) from around the world. The database can be accessed by practitioners at <https://www.Homoeopathyusa.org/>

**Clifcol Action2020+ Project:** Clifcol Action2020+ is a COVID-19 Support Project which has a Governance Committee representing 197 professional homeopathic associations around the world. The experiences of homeopaths from all over the world in the adjunctive homoeopathic treatment of COVID-19 cases are being systematically collected in a cloud-based database. The aggregated data is then scientifically analysed including

the prevalence of the most common remedies and rubrics. The database is visible for all participants in real time. The participants can register through link provided at <https://www.clifcol.net/en/Information-for-National-Clifcol-Coordiators>

**Homoeopathic Mini-repertory App!:** This application has been developed by Dr Lex Rutten and team using the experience of medical homeopaths worldwide. The application is based on clinical data and likelihood ratios of symptoms and supported by Bayesian computer algorithm. This app is designed to facilitate choice between five most indicated remedies, viz. *Arsenicum album*, *Bryonia alba*, *Gelsemium sempervirens*, *Phosphorus* and *Pulsatilla*. The application can be accessed at: <https://hpra.co.uk>

**Training Resource:** For improving the 'Quality of COVID-19 Homoeopathic Clinical Case Reports', webinars were conducted by Vithoukas Compass, which can be accessed at : <https://www.youtube.com/channel/UCRtCYcHewIZaPOUw2PPGdSw>

Some of the important publications on epidemic diseases using Homoeopathy during the last decade are as under:

## 2012 - PUBLICATIONS

Marino R. Flu pandemics: Homoeopathic prophylaxis and definition of the epidemic genius. *Indian Journal of Research in Homoeopathy*. June 2012; Vol 6:47-52.

Teerachaisakul M. A survey in Thailand suggest that *Eupatorium perfoliatum* 200C may be beneficial for reducing individual susceptibility to dengue virus. Confirmation is needed. *Proceedings of the 66<sup>th</sup> LMHI Congress in India*.

Nair K.R.J. *Bryonia alba* 30C was better than placebo in decreasing the incidence of this viral fever in Kerala (n=19750 *Bryonia* group, n=18479 placebo group). *Proceedings of the 66<sup>th</sup> LMHI Congress in India*.

## 2013 – PUBLICATIONS

Post Chikungunya Arthritis: Wadhvani G. Homoeopathic drug therapy. *Homoeopathy in Chikungunya Fever and Post-Chikungunya Chronic Arthritis: an observational study*. *Homoeopathy*. 2013 Jul;102(3):193-8. doi: 10.1016/j.homp.2013.02.001. PubMed PMID: 23870379.

Influenza Like Illness: Mathie RT, Baitson ES, Frye J, Nayak C, Manchanda RK, Fisher P. Homoeopathic treatment of patients with influenza-like illness during the 2009

A/H1N1 influenza pandemic in India. *Homoeopathy* 2013;102:187-92.

Influenza Like Illness: Chakraborty PS, Lamba CD, Nayak D, John MD, Sarkar DB, Poddar A, Arya JS, Raju K, Vivekanand K, Singh HB, Baig H, Prusty AK, Singh V, Nayak C. Effect of individualized homoeopathic treatment in influenza like illness: A multicenter, single blind, randomized, placebo controlled study. *Indian J Res Homoeopathy* 2013; 7:22-30

## 2014 - PUBLICATIONS

Chikungunya: Janardanan Nair KR, Gopinadhan S, Sreedhara Kurup TN, Kumar BJ, Aggarwal A, Varanasi R, et al. Homoeopathic Genus epidemicus 'Bryonia alba' as a prophylactic during an outbreak of Chikungunya in India: A cluster -randomised, double -blind, placebo- controlled trial. *Indian J Res Homoeopathy* 2014; 8: 160-5.

## 2015 - PUBLICATIONS

Acute Encephalitis Syndrome/Japanese Encephalitis: Manchanda RK, Oberai P, Roja V, Singh S, Singh N, Khan T, et al. Evaluation of homoeopathic medicines as add-on to institutional management protocol in Acute Encephalitis Syndrome: An exploratory observational comparative study. *Indian J Res Homoeopathy* 2015; 9:34-41.

## 2016- PUBLICATIONS

Influenza Like Illness: Marinone C, Bastard M, Bonnet PA, Gentile G, Casanova L. [Effectiveness of preventive treatment by Influenzinum in the winter period against the onset of influenza-like illnesses]. *Therapie*. 2017 Feb 17. pii:S0040-5957(17)30035-5. doi: 10.1016/j.therap.2016.12.011. [Epub ahead of print] French. PubMed PMID:28341159.

Epidemic Diseases: Milgrom LR. Genus epidemicus: Are Notions of Entanglement Relevant to the Homoeopathic Understanding of Epidemic Disease? *Forsch Komplementmed*. 2016;23(5):290-300. Epub 2016, Sep 28. PubMed PMID: 27811467.

Influenza & Respiratory Illness: Siqueira CM, Homsani F, da Veiga VF, Lyrio C, Mattos H, Passos SR, Couceiro JN, Quaresma CH. Homoeopathic medicines for prevention of influenza and acute respiratory tract infections in children: blind, randomized, placebo-controlled clinical trial. *Homoeopathy*. 2016 Feb;105(1):71-7. doi:10.1016/j.homp.2015.02.006. Epub 2015 Aug 4. PubMed PMID: 26828000.

## 2018- PUBLICATIONS

Epidemic Diseases: Jacobs J. Homoeopathic Prevention and Management of Epidemic Diseases. *Homoeopathy*. 2018 May 12. doi: 10.1055/s-0038-1649487.

Acute Encephalitis Syndrome/Japanese Encephalitis: Oberai P, Varanasi R, Padmanabhan M, Upadhyaya A, Singh S, Singh SP, Vikram D, Khan T, Prasad R, Gupta AK, Singh JR, Manchanda RK. Effectiveness of Homoeopathic Medicines as Add-on to Institutional Management Protocol for Acute Encephalitis Syndrome in Children: An Open-Label Randomized Placebo-Controlled Trial. *Homoeopathy*. 2018 Aug;107(3):161-171. doi: 10.1055/s-0038-1656715. Epub 2018 Jun 5. PubMed PMID: 29871023.

Lymphatic Filariasis: Gupta J, Manchanda RK, Debata LP, Payal G, Choudhary S, Prusty A, et al. A randomized comparative study to evaluate the efficacy of homoeopathic treatment -vs- standard allopathy treatment for acute adenolymphangitis due to lymphatic filariasis. *Indian J Res Homoeopathy* 2018; 12:64-74.

Dengue Fever: Seema Mahesh, Mahesh Mallappa, George Vithoulkas. Could Homoeopathy Become An Alternative Therapy In Dengue Fever? An example of 10 Case Studies. *Journal of Medicine and Life* Vol. 11, Issue 1, January-March 2018, pp.75-82.

## 2019- PUBLICATIONS

Dengue: Nayak D, Chadha V, Jain S, Nim P, Sachdeva J, Sachdeva G, Vivekanand K, Khurana A, Raheja SM, Manchanda RK. Effect of Adjuvant Homoeopathy with Usual Care in Management of Thrombocytopenia Due to Dengue: A Comparative Cohort Study. *Homoeopathy*. 2019 Aug;108(3):150-157. doi: 10.1055/s-0038-1676953. Epub 2019 Mar 5. PubMed PMID: 30836407.

Dengue: Padmalaya Rath, Bhopal Singh Arya, Anil Kumar Vichitra, Udaiveer Singh. Case Series of Dengue Treated with Homoeopathic Intervention. *Homoeopathic Links* 2019; 32(01): 031-035. DOI: 10.1055/s-0039-1688454

Upper Respiratory Ailments: Conde Diez S, Viejo Casas A, Garcia Rivero JL, Lopez Caro JC, Ortiz Portal F, Diaz Saez G. Impact of a homeopathic medication on upper respiratory tract infections in COPD patients: Results of an observational, prospective study (EPOXILO). *Respir Med*. 2019 Jan;146:96-105. doi:10.1016/j.rmed.2018.11.011. Epub 2018 Nov 16. PubMed PMID: 30665525.

**2020- PUBLICATIONS ON COVID-19**

To, Ka Lun Aaron; Fok, Yuen Ying Yvonne. Homoeopathic Clinical Features of 18 Patients in COVID-19 Outbreaks in Hong Kong. *Homoeopathy* 2020; 109(03): 146-162. Available at <https://www.thieme-connect.com/products/ejournals/abstract/10.1055/s-0040-1710545>

Masiello, Domenick J. The COVID-19 Pandemic: A View from New York City. *Homoeopathy* 2020; 109(03): 163-166. Available at

<https://www.thieme-connect.com/products/ejournals/abstract/10.1055/s-0040-1714052>

Rossi, Elio Giovanni. The Experience of an Italian Public Homoeopathy Clinic during the COVID-19 Epidemic, March–May 2020. *Homoeopathy* 2020; 109(03): 167-168. Available at <https://www.thieme-connect.com/products/ejournals/abstract/10.1055/s-0040-1713618>

Waisse, Silvia; Oberbaum, Menachem; Frass, Michael: The Hydra-Headed Coronaviruses: Implications of COVID-19 for Homoeopathy. *Homoeopathy* 2020; 109(03): 169-175. Available at <https://www.thieme-connect.com/products/ejournals/abstract/10.1055/s-0040-1714053>

Oberbaum, Menachem. Will We Miss the Opportunity Again? *Homoeopathy* 2020; 109(03): 176-178. Available at <https://www.thieme-connect.com/products/ejournals/abstract/10.1055/s-0040-1713082?issue=10.1055/s-010-49410>

Basu, Nilanjana; Das, Bhudev Chandra; Tandon, Simran. Interim Management of COVID-19 by Repurposed Homoeopathic Medicines. *Homoeopathy* 2020; 109(03): 182-183. Available at <https://www.thieme-connect.com/products/ejournals/abstract/10.1055/s-0040-1713004>

Prajapati, Suneel. Isopathic Remedy Prepared from Convalescent Plasma as a Therapeutic Option for COVID-19? *Homoeopathy* 2020; 109(03): 184-185. Available at <https://www.thieme-connect.com/products/ejournals/abstract/10.1055/s-0040-1714061>

Vaishampayan, Shailendra; Mutreja, Kirti; Lambe, Sunil; Shah, Jawahar; Shaikh, Gulnaaz. Mercurius solubilis as Genus epidemicus for the COVID-19 Pandemic. *Homoeopathy* 2020; 109(04): 271-272. Available at <https://www.thieme-connect.com/products/ejournals/abstract/10.1055/s-0040-1716336?issue=10.1055/s-010-49410>

Sharma, S.R. World Under Siege: Spanish Flu 1918 vis-à-vis COVID-19. *Homoeopathic Links* 2020; 33(02): 071-074. Available at <https://www.thieme-connect.com/products/ejournals/abstract/10.1055/s-0040-1712958>

Rozenchwajg, Joe. Homeoprophylaxis. *Homoeopathic Links* 2020; 33(02): 075. Available at <https://www.thieme-connect.com/products/ejournals/abstract/10.1055/s-0040-1710578>

Madsen, Ruy. COVID and Classical Homoeopathy. *Homoeopathic Links* 2020; 33(02): 104-106. Available at <https://www.thieme-connect.com/products/ejournals/abstract/10.1055/s-0040-1712954>

Usuf, Mass R. COVID-19 Pandemic: A Comparative Study of Oscilloccinum versus Arsenic Album. *Homoeopathic Links* 2020; 33(02): 107-108. Available at <https://www.thieme-connect.com/products/ejournals/abstract/10.1055/s-0040-1712524>

Golden, Isaac. COVID-19: Adversities and Opportunities. *Homoeopathic Links* 2020; 33(03): 145-146. Available at <https://www.thieme-connect.com/products/ejournals/abstract/10.1055/s-0040-1715603>

Rath, Padmalaya; Jana, Shib Narayan. A Brief Account of Homoeopathic Approach to Fight COVID-19 Disaster. *Homoeopathic Links* 2020; 33(03): 147-152. Available at <https://www.thieme-connect.com/products/ejournals/abstract/10.1055/s-0040-1715889>

Sharma, Bindu; Misra, Pankhuri. The Psychological Aspects of COVID-19: A Review. *Homoeopathic Links* 2020; 33(03): 153-170. Available at <https://www.thieme-connect.com/products/ejournals/abstract/10.1055/s-0040-1715820>

Dey, Joy Kumar; Dey, Sanjay Kumar; Sihag, Hitaishi. Current Insights into the Novel Coronavirus Disease 2019 (COVID-19) and Its Homoeopathic Management. *Homoeopathic Links* 2020; 33(03): 171-179. Available at <https://www.thieme-connect.com/products/ejournals/abstract/10.1055/s-0040-1715636>

Ram, Hanuman; Sharma, Rashmi; Dewan, Deepti; Singh, Anuradha. Insight View on Pandemic COVID-19: Worldwide Perspective with Homoeopathic Management through Repertorial Analysis. *Homoeopathic Links* 2020; 33(03): 180-195. Available at <https://www.thieme-connect.com/products/ejournals/abstract/10.1055/s-0040-1715865>

Macías, Á. Millán. The Intestinal Perspective of COVID-19: NOS2 and AOC1 Genes as Epidemiological Factors, and a Homoeopathic Approach to their Functional Improvement. *Homoeopathic Links* 2020; 33(03): 196-221. Available at <https://www.thieme-connect.com/products/ejournals/abstract/10.1055/s-0040-1715601>

Choubey, Gurudev; Banerjee, Abhiram; Nahar, Laijun; Saha, Subhranil; Roja, Varanasi. Standard Operating Procedure to Derive Homoeopathic Prophylaxis in COVID-19 through Prophylactic Clinical Trial—A Perspective. *Homoeopathic Links* 2020; 33(03): 222-227. Available at <https://www.thieme-connect.com/products/ejournals/abstract/10.1055/s-0040-1714374>

Gupta, Juhi; Gupta, Sanjay. COVID-19, Homoeopathic Immunomodulation and the Road Ahead: Perspective. *Homoeopathic Links* 2020; 33(03): 228-232. Available at <https://www.thieme-connect.com/products/ejournals/abstract/10.1055/s-0040-1715908>

Islam, Md Aminul. Role of Lachesis and Gripp Heel in the Treatment of COVID-19. *Homoeopathic Links* 2020; 33(03): 233-234. Available at <https://www.thieme-connect.com/products/ejournals/abstract/10.1055/s-0040-1715888>

Ponnam, Hima Bindu. Psychometric Assessment of Morbid Fear of COVID-19 and Its Homoeopathic Management—A Treatment Perspective through Case Reports. *Homoeopathic Links* 2020; 33(03): 235-240. Available at <https://www.thieme-connect.com/products/ejournals/abstract/10.1055/s-0040-1714375>

Kovilacar, Rajesh; Misra, Pankhuri. A Diagnosed Case of COVID-19 Treated with Homoeopathy: A Case Report. *Homoeopathic Links* 2020; 33(03): 241-243. Available at <https://www.thieme-connect.com/products/ejournals/abstract/10.1055/s-0040-1715902>

Sharma, Bindu. Homoeopathic Approaches in Acute Respiratory Epidemics. *Homoeopathic Links* 2020; 33(04): 247-248. Available at

<https://www.thieme-connect.com/products/ejournals/abstract/10.1055/s-0040-1721457>

Dixit, Ashish Kumar; Singh, Shishir; Singh, Subhas. Efficacy of Homoeopathy in Managing Respiratory Infections beyond Doubt!—A Narrative Review. *Homoeopathic Links* 2020; 33(04): 249-256. Available at

<https://www.thieme-connect.com/products/ejournals/abstract/10.1055/s-0040-1715635>

Mukherjee, Anupam; Sinha, Neeti; Dey, Joy Kumar; Jadhav, Arun Bhargav. Evidence for the Efficacy of Ultra-High Diluted Homoeopathic Medicines in the Management of Influenza-Like Illness: A Narrative Review. *Homoeopathic Links* 2020; 33(04): 257-262. Available at <https://www.thieme-connect.com/products/ejournals/abstract/10.1055/s-0040-1715602>

Dutta, Abhijit. Role of Homoeopathy in Epidemics: Paving Way for a Plausible Solution in the Management of COVID-19/SARS-CoV-2 Infection. *Homoeopathic Links* 2020; 33(04): 297-301. Available at <https://www.thieme-connect.com/products/ejournals/abstract/10.1055/s-0040-1717054>

Pareek, Kanupriya. Telemedicine and Its Scope in COVID-19: Commentary. *Homoeopathic Links* 2020; 33(04): 318-319. Available at

<https://www.thieme-connect.com/products/ejournals/abstract/10.1055/s-0040-1715909>

Dey Joy Kumar, Mukherjee Anupam, Dey Sanjay Kumar, Pramanik Abhishek, Giri Shashi, Pratap Mukut. A systematic review on the efficacies and therapeutic interventions of homoeopathic medicines in combating viral disorders with implications in the currently undergoing homoeopathic treatment efforts for SARS-CoV-2 infection (COVID-19). *International Journal of High Dilution Research* 2020; 19(3): 27-39. Available at <https://www.highdilution.org/index.php/ijhdr/article/view/1033/1059>

Mukherjee Sandeepan, Talele Gitanjali, Chowdhary Abhay, Vaidya Shashikant, Deshmukh Rajesh, Rawal Rakesh, Shah Rajesh. Preparation of Coronavirus Nosodes Sourced from a Clinical Sample of SARS-Cov-2 Positive Patient, Inactivated Strain, and Spike Glycoprotein. *International Journal of High Dilution Research* 2020; 19(4): 02-09. Available at <https://www.highdilution.org/index.php/ijhdr/article/view/1054/1061>

## 2021 – PUBLICATIONS ON COVID-19

Vol. 20 No. 1 (2021): Proceedings of COVID-19 meeting. Published: 2021-03-28. DOI: <https://doi.org/10.51910/ijhdr.v20i1>

da Costa Fujino, Fernanda Maria Simões; Olandim, Ana Amélia Campos Claro; Barnabé, Vagner Doja; Coggan, Jennifer Anne; Benites, Nilson Roberti. A Homoeopathic View of the Influence of Chronic Diseases in the Manifestation of COVID-19. *Homoeopathy* 2021; 110(01): 067-069. Available at <https://www.thieme-connect.com/products/ejournals/abstract/10.1055/s-0040-1718746?issue=10.1055/s-010-49410>

Tramontana, Alfonso. COVID-19 Pneumonia: A Potential Role of Homoeopathy. *Homoeopathy* 2021; 110(01): 070-071. Available at <https://www.thieme-connect.com/products/ejournals/abstract/10.1055/s-0040-1721063>

Rutten, Lex; Smedley, Tom; Ives, Galen; Gold, Peter; Merizalde, Bernardo; van Haselen, Robbert; Manchanda, Raj Kumar; Ross, Ashley; Cataldi, Gustavo; Agaoglu, Altunay; di Giampietro, Tiziana; Lilas, Theodore; Schroyens, Frederik; Eizayaga, José E. Data Collection during the COVID-19 Pandemic: Learning from Experience, Resulting in a Bayesian Repertory. *Homoeopathy* 2021. Published online on 4 January 2021. Available at <https://www.thieme-connect.com/products/ejournals/abstract/10.1055/s-0040-1718583>

Jethani, Bipin; Gupta, Meeta; Wadhvani, Parul; Thomas, Rekha; Balakrishnan, Thankaraj; Mathew, George; Mathur, Mohit; Rao, Bachha Pompe; Shukla, Dhananjay; Khullar, Aashima; Khera, Meghna; Sharma, Himani; Kumar, Ravinder; Kumar, Sudeep; Jaggi, Sayami; Sinha, Robin; Rawal, Kamal; Kapoor, Anu; Manchanda, Raj Kumar. Clinical Characteristics and Remedy Profiles of Patients with COVID-19: A Retrospective Cohort Study. *Homoeopathy* 2021. Published online on 10 February 2021. Available at <https://www.thieme-connect.com/products/ejournals/html/10.1055/s-0040-1718584>

Waisse, Silvia. Severe Acute Thromboinflammation:

Case Report of Individualized Homoeopathic Treatment. *Homoeopathy* 2021. Published online on 22 February 2021. Available at <https://www.thieme-connect.com/products/ejournals/abstract/10.1055/s-0040-1721064?issue=10.1055/s-010-49410>

Sharma, Bindu. In the Aftermath of COVID-19... *Homoeopathic Links* 2021; 34(01): 001. Available at <https://www.thieme-connect.com/products/ejournals/abstract/10.1055/s-0041-1725083>

Gupta, Vishwa Kumar; Mohanty, Niranjana; Sahoo, Amulya Ratna; Choudhury, Sujata; Nayak, Chintamani. Web-Based Survey on Depression and Anxiety during COVID-19 Pandemic in View of Homoeopathic Perspective. *Homoeopathic Links* 2021; 34(01): 017-025. Available at <https://www.thieme-connect.com/products/ejournals/abstract/10.1055/s-0040-1721058>

Dutta, Abhijit; Chatterjee, Bhargab. A Seminar on the Integrative Approach for COVID-19. *Homoeopathic Links* 2021; 34(01): 084-086. Available at <https://www.thieme-connect.com/products/ejournals/abstract/10.1055/s-0041-1725085>

## CONCLUSION

It would be irresponsible not to investigate seriously the observations made over two centuries by thousands of homoeopaths concerning the homeopathic treatment and prevention of a wide variety of epidemic diseases. The COVID -19 pandemic has given an opportunity to basic scientists and homoeopaths to validate the age old homoeopathic concept of *genus epidemicus* as well as use of *nosodes* in the prevention and treatment of epidemics. There is need to undertake well-coordinated efforts by all the stakeholders. LMHI is providing all support to the scientists working in this area.

1 Bedayn, Greg, 'As If One Patient', *The American Homeopath* 1998

2 Dr. Thomas L. Bradford's 'The Logic of Figures ...' (1900)

3 Saine, André, 'From its Roots Upwards', Interview with André Saine, N.D., D.H.A.N.P., Vienna January 1994

4 Stahl E., Hadulla M.M., Richter E., *Homöopathische Behandlung der Influenza – Vogelgrippe*, *Allgemeine Homöopathische Zeitung*, 2006

5 Gebhardt, A. v., *Handbuch der Homöopathie*, Leipzig, Germany 1929

6 Gebhardt, A. v., *Handbuch der Homöopathie*, Leipzig, Germany 1929

7 Humphreys, F., *Cholera and its homoeopathic treatment*, New York: William Radde Publisher, 1849

- 8 Winston, J., Some history of the treatment of epidemics with Homoeopathy by Julian Winston, 2006, [www.whale.to/v/winston.html](http://www.whale.to/v/winston.html)
- 9 Dearborn, Frederick M. MD, American Homoeopathy in the World War; 1923
- 10 Dewey, W.A., Homoeopathy in Influenza- A Chorus of Fifty in Harmony, Journal of the American Institute of Homoeopathy in 1921
- 11 Hoover, Todd A., Homoeopathic prophylaxis, The American Homeopath, October 2006
- 12 Saine, André, From its Roots Upwards', Interview with André Saine, N.D., D.H.A.N.P., Vienna January 1994
- 13 Marani, Dr Lyndon, (Ministry of Health): Nairobi, 8 October 2007 (PlusNews)
- 14 World Bank, Global HIV/AIDS Program of the World Bank 17-18 June 2003.
- 15 Gaucher C, Jeulin D, Peycru P, Pla A, Amengual C. Cholera and homeopathic medicine : The Peruvian experience. Br. Hom. J. 1993;82:155-163.
- 16 Jacobs J. Treatment of acute childhood diarrhoea with homeopathic medicine: a randomized clinical trial in Nicaragua. Pediatrics 1994; 93: 719-725. Jacobs J., Jimenez M., Malthouse S., Chapman E., Crothers D., Masuk M., Jonas W.B., Acute Childhood Diarrhoea – A Replication., Journal of Alternative and Complementary Medicine, 6, 2000, 131-139.
- 17 Golden I. and Gustavo Bracho G.; A Reevaluation of the Effectiveness of Homoeoprophylaxis Against Leptospirosis in Cuba in 2007 and 2008; Journal of Evidence-Based Complementary & Alternative Medicine 2014 19: 155 originally published online 11 March 2014; URL: <http://chp.sagepub.com/content/19/3/155>
- 18 World Health Organization. Dengue and severe dengue. Key facts; 13 September 2018. Available at <https://www.who.int/news-om/fact-sheets/detail/dengue-and-severe-dengue>
- 19 Nayak D, Chadha V, Jain S, Nim P, Sachdeva J, Sachdeva G, Vivekanand K, Khurana A, Raheja SM, Manchanda RK. Effect of Adjuvant Homoeopathy with Usual Care in Management of Thrombocytopenia Due to Dengue: A Comparative Cohort Study. Homoeopathy. 2019 Aug;108(3):150-157. doi: 10.1055/s-0038-1676953. Epub 2019 Mar 5. PubMed PMID: 30836407.
- 20 Oberai P, Varanasi R, Padmanabhan M, Upadhyaya A, Singh S, Singh SP, Vikram D, Khan T, Prasad R, Gupta AK, Singh JR, Manchanda RK. Effectiveness of Homoeopathic Medicines as Add-on to Institutional Management Protocol for Acute Encephalitis Syndrome in Children: An Open-Label Randomized Placebo-Controlled Trial. Homoeopathy. 2018 Aug;107(3):161-171. doi: 10.1055/s-0038-1656715. Epub 2018 Jun 5. PubMed PMID: 29871023.
- 21 Mathie RT, Frye J, Fisher P. Homoeopathic Oscillococinum® for preventing and treating influenza and influenza-like illness. Cochrane Database Syst Rev. 2015Jan 28;1:CD001957.
- 22 Stéphane Vincent, Antoine Demonceaux, Didier Deswarte, Daniel Scimeca, and Marie-France Bordet. The Journal of Alternative and Complementary Medicine. Feb 2013. 146-152
- 23 WHO. Novel coronavirus (2019-nCoV). <https://www.who.int/emergencies/diseases/novel-coronavirus-2019>
- 24 Huang C, Wang Y, Li X, Ren L, Zhao J, Hu Y, et al. Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. Lancet. 2020 Jan 24. pii: S0140-6736(20)30183-5. doi: 10.1016/S0140-6736(20)30183-5.
- 25 PIB. Advisory for Corona virus. <https://pib.gov.in/pressreleasepage.aspx?prid=1600895>
- 26 PIB. Advisory to recess the symptoms of respiratory tract in possible Corona virus infected cases <https://pib.gov.in/newsite/PrintRelease.aspx?relid=197727>
- 27 PIB. Clarification on Precautionary measures advised by Ministry of AYUSH in the context of Corona Virus <https://pib.gov.in/PressReleaseDetailm.aspx?PRID=1601815>
- 28 Ministry of AYUSH, Government of India. Notification on Rsearch in COVID-19. Available at <https://main.ayush.gov.in/tenders-vacancies-and-announcements/news-and-events/archive>.
- 29 Ministry of AYUSH, Government of India. Guideline for Homoeopathy practioners. Available at <https://main.ayush.gov.in/tenders-vacancies-and-announcements/news-and-events/archive>.
- 30 Clinical trial registry of India. Available at <http://ctri.nic.in/Clinicaltrials/advsearch.php>.
- 31 Clinical trial registry of India. Available at <http://ctri.nic.in/Clinicaltrials/advsearch.php>.

# MEDICINE WORD INDEX

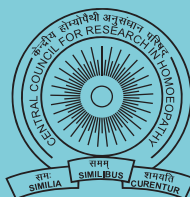
S.No.	Name of Medicine	Pg. No.
1.	Abroma augusta .....	148, 161
2.	Acalypha indica .....	148
3.	Achyranthes aspera .....	148, 163
4.	Acid butyricum .....	148
5.	Aconitum napellus .....	77, 114, 139
6.	Aegle folia .....	149, 164
7.	Aegle marmelos .....	149, 164
8.	Agave americana .....	149
9.	Agraphis nutans .....	93
10.	Alfalfa .....	157
11.	Allium cepa .....	135, 170
12.	Allium sativum .....	141, 160
13.	Alstonia constricta .....	155
14.	Amoora rohituka .....	139, 153
15.	Amygdalus persica .....	149, 165
16.	Andrographis paniculate .....	140, 149
17.	Anisum stellatum .....	189
18.	Anthrakokali .....	149, 164
19.	Aranea diadema .....	145, 148, 160, 166
20.	Aranea scinencia .....	149
21.	Arctium lappa .....	74
22.	Argemone mexicana .....	139, 149
23.	Argentum nitricum .....	83, 114, 135, 183
24.	Arnica .....	60, 62, 64, 69, 78, 94, 100, 111, 180
25.	Arsenic sulphuratum flavum .....	149
26.	Arsenicum album .....	76, 81, 81, 82, 84, 107, 114, 127, 131, 169, 172, 189, 190
27.	Arsenicum bromatum .....	149
28.	Arsenicum iodatum .....	93
29.	Asclepias currasavica .....	140
30.	Aspirin .....	169, 172
31.	Atista indica .....	149
32.	Azadirachta indica .....	139, 149
33.	Bacillinum .....	149, 164
34.	Bacopa monnieri .....	139, 140, 149
35.	Baptisia tinctoria .....	189
36.	Baryta iodata .....	149, 165
37.	Baryta muriatica .....	150
38.	Belladonna .....	76, 81, 136, 137, 141, 169, 170, 189

39.	<i>Bellis perennis</i> .....	49, 150
40.	<i>Benzinum nitricum</i> .....	150
41.	<i>Benzoicum acid</i> .....	132, 150
42.	<i>Berberis vulgaris</i> .....	150, 161
43.	<i>Blatta orientalis</i> .....	133, 154, 170, 172
44.	<i>Boerhavia diffusa</i> .....	150, 161
45.	<i>Bromium</i> .....	103
46.	<i>Bryonia alba</i> .....	81, 121, 122, 127, 161, 189, 190, 191
47.	<i>Buxus sempervirens</i> .....	140
48.	<i>Caesalpinia bonducella</i> .....	140, 0150, 161
49.	<i>Calcarea fluorica</i> .....	123
50.	<i>Calcarea phosphoricum</i> .....	49, 90
51.	<i>Calcium carbonicum</i> .....	122, 127, 182
52.	<i>Calotropis gigantea</i> .....	150
53.	<i>Cannabis indica</i> .....	150
54.	<i>Cannabis sativa</i> .....	150
55.	<i>Cantharis</i> .....	112, 170, 172
56.	<i>Capsicum</i> .....	115
57.	<i>Carbo Animalis</i> .....	129
58.	<i>Carica papaya</i> .....	139, 150, 162
59.	<i>Cassia fistula</i> .....	156
60.	<i>Cassia sophera</i> .....	150, 161
61.	<i>Caulophyllum</i> .....	175
62.	<i>Cephalandra indica</i> .....	139, 150, 160, 161
63.	<i>Ceratostigma willmottiana</i> .....	102
64.	<i>Chamomilla</i> .....	86
65.	<i>China rubra</i> .....	78
66.	<i>Chromium kali sulph</i> .....	150
67.	<i>Cimicifuga racemosa</i> .....	61
68.	<i>Coccus cacti</i> .....	135
69.	<i>Coffea cruda</i> .....	137
70.	<i>Conium</i> .....	133
71.	<i>Cuprum aceticum</i> .....	150
72.	<i>Curare</i> .....	118
73.	<i>Curcuma longa</i> .....	49, 156
74.	<i>Cuscuta reflexa</i> .....	139
75.	<i>Cynodon dactylon</i> .....	145, 147, 158, 166
76.	<i>Damiana</i> .....	153
77.	<i>Embelia ribes</i> .....	164
78.	<i>Ephedra vulgaris</i> .....	155
79.	<i>Erythrina Lysistemon</i> .....	138
80.	<i>Eupatorium perfoliatum</i> .....	121, 189, 190
81.	<i>Euphorbia lathyris</i> .....	151
82.	<i>Euphrasia</i> .....	189
83.	<i>Fagopyrum esculentum</i> .....	154
84.	<i>Ferrum phosphoricum</i> .....	149
85.	<i>Ficus religiosa</i> .....	139
86.	<i>Formic acid</i> .....	147, 159
87.	<i>Galium Aparine</i> .....	138
88.	<i>Gallicum acidum</i> .....	151
89.	<i>Galphimia glauca</i> .....	27

90.	Gelsemium .....	172, 181, 189, 190
91.	Glycyrrhiza glabra .....	156
92.	Gymnema sylvestre .....	140, 151
93.	Hecla lava .....	138, 151
94.	Helleborus Niger .....	81, 138
95.	Holarrhena antidysenterica .....	151, 170, 172
96.	Hydrocotyle asiatica .....	151, 162
97.	Hydrogenium peroxidatum .....	138
98.	Hygrophilla spinosa .....	151, 163
99.	Hypericum perforatum .....	61, 105
100.	Ichthyolum .....	157
101.	Influenzinum .....	189, 191
102.	Iris tenax .....	155
103.	Jaborandi .....	162
104.	Jacaranda caroba .....	151
105.	Jalapa .....	151
106.	Juglans regia .....	151, 163
107.	Justicia adhatoda .....	151, 161
108.	Kali muriaticum .....	151
109.	Kalium bichromicum .....	135
110.	Kalium muriaticum .....	93
111.	Lapis albus .....	152
112.	Latrodectus Mactans Tredecimguttatus .....	138
113.	Lava kilauea .....	140
114.	Liatris spicata .....	152
115.	Lobelia Cardinalis .....	138
116.	Lycopodium clavatum .....	76, 82, 84, 130, 147, 165
117.	Magnesia sulphurica .....	152
118.	Magnesium phosphoricum .....	49
119.	Malus communis .....	139
120.	Mangifera indica .....	145, 148, 152, 159, 166
121.	Melissa officinalis .....	116
122.	Mentha piperita .....	154
123.	Mercurius solubilis .....	76, 92
124.	Mimosa humilis .....	139
125.	Mucococcinum .....	189
126.	Mygale lasiodora .....	145, 146, 158, 166
127.	Neptunium muriaticum .....	138
128.	Nux vomica.....	76, 84, 88, 107, 131, 137, 168, 169, 172, 189
129.	Nyctanthes arbortristis .....	152, 162
130.	Ocimum canum .....	145, 147, 159, 166
131.	Ocimum sanctum.....	139
132.	Oscillococcinum .....	62, 188, 189, 192, 195
133.	Oxytropis lambertii .....	152
134.	Paraffin .....	139
135.	Phosphorus .....	82, 84, 114, 127, 129, 170, 172, 190
136.	Phytolacca decandra .....	116
137.	Plumbum metallicum .....	140,141
138.	Potentilla Anserina .....	138
139.	Pulsatilla .....	76, 88, 111, 122, 127, 132, 190
140.	Pyrogenium .....	111, 170

141.	<i>Pyrus americana</i> .....	152
142.	<i>Rauwolfia serpentina</i> .....	49, 152
143.	<i>Rhus toxicodendron</i> .....	90, 122, 130, 131
144.	<i>Ricinnus communis</i> .....	49, 158
145.	<i>Robinia</i> .....	131
146.	<i>Ruta graveolens</i> .....	79, 90, 103
147.	<i>Saraca indica</i> .....	139, 152, 162
148.	<i>Sarsaparilla</i> .....	152, 163
149.	<i>Sepia</i> .....	126, 131
150.	<i>Skookum chuck</i> .....	139
151.	<i>Stramonium</i> .....	81, 107, 114
152.	<i>Stannum metallicum</i> .....	127
153.	<i>Silicea</i> .....	122, 127
154.	<i>Strychnos henningsii</i> .....	139
155.	<i>Sulphur</i> .....	128, 183
156.	<i>Syzygium jambolanum</i> .....	152
157.	<i>Tarentula cubensis</i> .....	152
158.	<i>Tarentula hispanica</i> .....	155
159.	<i>Tela aranea</i> .....	152
160.	<i>Terminalia arjuna</i> .....	152
161.	<i>Terminalia chebula</i> .....	152, 163
162.	<i>Thea chinensis</i> .....	153
163.	<i>Theridion</i> .....	153
164.	<i>Thuja</i> .....	121, 170, 172
165.	<i>Thuya</i> .....	93
166.	<i>Thymulin</i> .....	170, 172
167.	<i>Tribulus terrestris</i> .....	49, 153
168.	<i>Tylophora indica</i> .....	156
169.	<i>Viscum album</i> .....	163, 170, 172
170.	<i>Ytterbium Nitricum</i> .....	138
171.	<i>Zincum metallicum</i> .....	170, 172, 183
172.	<i>Zingiber officinale</i> .....	90





## **CENTRAL COUNCIL FOR RESEARCH IN HOMOEOPATHY**

61-65, Institutional Area, Janakpuri, New Delhi- 110058 (India)

Tel: 011-28525523, Fax: 011-28521060; E-mail: [ccrhindia@gmail.com](mailto:ccrhindia@gmail.com)

Website: [www.ccrhindia.nic.in](http://www.ccrhindia.nic.in)