

A Review on Electrohomeopathic Medicinal Practice:

Origin, Principles, Medicinal Plants Used and Its Current Status in India.

ABSTRACT

Natural plant medicines have been used as remedies for various diseases since ages. Various medical systems have been established and practiced across the world, of which some are gained popularity and constitutional recognition while some are yet to find recognition in certain geographical areas. Electrohomeopathy is one such medical practice which is picking up on acceptance by the Indian population. The Electrohomeopathy or Electropathic system of medicine has a history of nearly 150 years of existence. In India, the system has been in practice for more than a century. This is a purely plant-based medical system, first started by C.C. Mattei of Italy during the 1850s. Extraction of electrals or phytoconstituents from different plants and recombining in appropriate proportions as per the requirement of the patient's disease condition forms the core principle of the system. In this review article, we briefly touch upon the origin, historical evolution, and basic principle, list of plants used, types of remedies used and current status in India and also throws light on what the future holds for the Electrohomeopathy medicine and treatment.

Keywords: *Electrohomeopathy, Electropathy, herbal preparation, Principles, CC.Mattei.*

1. INTRODUCTION

Nature is our teacher and guides us to the various needs so as to continue our existence on this planet Earth. Evidence exists for the use of medicinal plants up to 60,000 years ago but more recently, a 5000-year-old Sumerian clay slab was discovered verifying the utilization of medicinal plants for the preparation of drugs.^[1] Natural plant medicines are increasingly used as remedies for various diseases since ages. It is estimated that around 70,000 plant species, from lichens to flowering trees, have been

used as medicines for treating different human conditions.^[2] The medicinal plants have played a significant role in the most convenient and effective health care. Many of the currently available drugs were derived directly or indirectly from phytochemicals.^[3] Herbal(s) also referred to as herbal formulations, herbal drugs, herbal medicine, herbal extracts, or dietary supplements can be considered important in multimodal therapeutics. Herbals, often administered as powders or extracts, are mixtures of interacting compounds that can modulate multiple pharmacological targets and provide clinical efficacy which is beyond the reach of single-compound based drugs.^[4] Herbal products are complex mixtures of organic chemicals that may come from any raw or processed part of a plant, including leaves, stems, flowers, roots, and seeds. Under the current law, herbs are defined as dietary supplements.^[5] Rationally designed, carefully standardized, synergistic traditional herbals with robust scientific evidence can also be used as alternatives in certain chronic diseases.^[6] In fact, for most of history, herbal medicine was the only medicine. Even as recently as 1890, 59% of the listings in the US Pharmacopeia were from herbal products.^[7] Alternative treatment options offered by herbal plants and other natural products will reduce the burden and cost treatment. This is in line with the new 2014–2023 WHO goals to support Member States in harnessing the potential contribution of traditional medicine to health, wellness and people-centered healthcare promoting the safe and effective use of traditional medicine by regulating, researching and integrating traditional medicine products, practitioners and practice into health systems.^[8] The WHO emphasizes the importance of botanical medicines in the economic and effective management of various diseases.

The human body requires essential chemicals and minerals for metabolism and all these are obtained from plants which keep the blood and the lymph in the purified state. All plants receive and store energy from sun-light, rain and earth in lesser or greater quantity in the form of chemicals, minerals and charged ionic electrolytes which can be taken out from the plants in the form of extracts and spagyric essences and used to correct the metabolic activities.^{[9][10]} These plant extracts and spagyric essences are known as medicinal herbal drugs. There are various medicinal systems evolved and developed in different geographic regions of the world based on experience and observation on traditional usage of herbal medicine and medication over a period of time, such as Ayurveda, Siddha, Unani, Chinese, Homeopathy, Electro Homeopathy and other traditional or even folklore medical systems. While

medicinal plants were used primarily in simple pharmaceutical formulations such as macerations, infusions and decoctions, between the 16th and 18th centuries, the demand for compounded drugs was very much on the increase. These compounded drugs comprised medicinal plants along with drugs of animal and plant origin. If the drug was prepared from a number of medicinal plants, minerals and rare animals, it was highly valued and sold at a premium. ^[11]

Ayurveda is a medical system more than 5000 years old. Ayurveda means - life (Ayur) knowledge (Veda) and is a natural system of treatment which originated in India about 5 thousands of years ago. Ayurveda theory evolved from a deep understanding of the concept of creation itself. The great Rishis or Seers of ancient India studied and understood various intricacies of human creation and life through deep meditation and other spiritual practices. The Rishis sought to imbibe the deepest truths of human physiology and health. They observed the fundamentals of life, carefully organized them into an elaborate system, and compiled India's philosophical and spiritual texts, which eventually came to be called Veda or knowledge. Ayurveda was first recorded in the Veda, the world's oldest existing literature. Ayurveda greatly influenced health care practices in the east and the west. By 400 AD Ayurvedic works were translated into Chinese; by 700 AD Chinese scholars came and studied medicine in India at Nalanda University. Chinese medicine, herbal knowledge and Buddhist philosophy were also impacted by Ayurvedic knowledge. ^{[12][13]}

In 12th century, the drugs were prepared by spagyric extraction method in India, and in 16th century, 'Paracelsus'(1493-1541), a Swiss priest and a pioneer of chemical medicine, prepared the drugs by taking out their essence and found them very effective and declared that small doses of "what makes a man ill also cures him" anticipating homeopathy, but it was Hahnemann who gave it a name and laid out its principles in the late 18th century. At that time, mainstream medicine employed such measures as bloodletting and purging, used laxatives and enemas, and administered complex mixtures, such as Venice treacle, made from 64 substances including opium, myrrh, and viper's flesh. Such measures often worsened symptoms and at times even proved fatal. Hahnemann rejected such methods as irrational and not advisable. Instead, he favored the use of single drugs at lower doses and promoted an immaterial, vitalistic view of how living organisms function, believing that diseases have spiritual, as well as physical

causes. Hahnemann (1755-1843) believed that large doses of drugs that caused similar symptoms would only aggravate illness, and therefore advocated extreme dilutions of the substances.^[14] He also established a technique for making dilutions that he believed would preserve a substance's therapeutic properties while removing its harmful effects. He gathered and published a complete overview of his new medical system in his 1810 book, "The Organon of the Healing Art", whose 6th edition, published in 1921, is still used by homeopaths today. By 1900, there were 22 homeopathic colleges and 15,000 practitioners in the United States.^[15] In India a Central Council for Research in Homoeopathy was established in 1978. Uniform education in homoeopathy was enforced by the Indian government in 1983. Dr. Honigberger introduced homoeopathic method of treatment in India in 1839. On 16th Feb. 1867 Dr. Mahendra Lal Sircar, the then great allopathic physician and upholder of Indian science announced publicly about his conviction on homoeopathic system of medicine. In 1881 'Calcutta Homoeopathic Medical College' was established in Calcutta. This institution made a great name and its popularity spread all over India and the students used to come here to learn homoeopathy. Respectable persons and intellectual giants of India continued to support Dr. Hahnemann's new science of therapeutics. After Independence the Indian Government constituted a number of committees and commissions to recognize homoeopathy. In 1974 Central Council of Homoeopathy (CCH) was established to regulate homoeopathic education and practice. Various research and studies performed in India proved the efficacy of homoeopathy. Uniform education in homoeopathy was enforced by the Indian government in 1983. At present homoeopathic medical treatment is accepted far greater in India than any other country and co-exist with other medical systems.^{[16][17][18]}

In 19th century, Italian Count Ceaser Mattei (1809-1896), borrowed from Paracelsus, the process of preparing the vegetable substances by means of a more or less complicated mode of extraction, distillation, fermentation, cohobation and also the final combination of a number of ingredients with similar or supplementary effect to form a complex medicinal unity. Presently, hundreds of Electrohomeopathic institutions and lakhs of practitioners and millions of beneficiaries exist all over the world, including India. In the course of evolution of human medical and therapeutic experience and knowledge, different medicinal systems were developed. In the present article we have reviewed to provide history, principles,

medicinal plants used, fundamental difference between Homoeopathy and Electrohomeopathy and current status of Electrohomeopathic medicine in India.

2 ORIGINS AND DEVELOPMENT OF ELECTROHOMEOPATHY MEDICINE

Multiple remedies are essential to cure

complex individual (Human/Veterinary) Body's

multiple organ tissues with varied biochemical

constitutions to rebalance its normal status.

So the principle of Electrohomeopathy is

"Complexa Complexis Curantor"

Paracelsus was one of the most important renaissance naturalists. Paracelsus' full name is: Theophrastus Bombastus Von Hohenheim (1493 – 1541). He put forward the view that human diseases are a result of external environmental forces. He also believed that plants and natural substances held the key to healing and embraced the 'like can cure like' principle. One of his ideas, known as the Doctrine of signatures, was that the appearance of a plant, or the substances it contained, gave an idea of the disorders it could treat. As a youth Paracelsus worked in the nearby mines as an analyst. This gave him the background for his future work in chemistry and alchemy that, doubtless, laid the foundations of his later remarkable discoveries in the field of Homeopathy and Electrohomeopathy. ^{[19][20]}

Electrohomeopathy is the name given to a new system of medicine discovered by a famous Italian Count Cesare Mattei in the latter part of the 18th century. Count Mattei, the founder of Electrohomeopathy, was born on the 11th January 1809 in Bologna city in Italy. He belongs to one of the noblest families of Bologna, the town of the learned. After having studied natural science, he dedicated himself to understanding anatomy, physiology and pathology; then more exclusively to chemistry and botany. After long and patient research following a method of his own, he discovered how to extract active ingredients from certain plants. C.C. Mattei is even today considered as the father of

Electrohomeopathy. He studied and experimented these techniques and through Cohobation method, produced drugs from these medicinal plants by taking out spagyric essences in most purified way and mixing them in proper proportions. He tried them on many patients and cured their diseases in a very effective and successful manner. Count C. Mattei believed in the theories of famous Paracelsus, who introduced similar laws of treatment and cure and was convinced of their immense utility and of their perfectly innocuous character. Mattei applied these to all his patients with confidence.^{[21][22][23]} Further, in order to observe closely in innumerable cases of diseases and to study the effect of these remedies, he held his studies in his mansion at Bologna for more than ten years in public and private consultations, in the presence of physicians and surgeons who had attached themselves to him for the purpose of being present at the sitting. These sittings included persons of all ages and of all nations, physicians and even large medical bodies. During 1850's the philosophy observed by Cesare Mattei and influenced by the philosophy of 'Paracelsus', Swiss priest and pioneer of chemical medicine, studied natural science and conducted experiments with his modified new method of medicine preparation, diagnosis and treatment for various diseases. Mattei's medicines had speedy recovery and were highly effective. Due to its quickness of action and electrals of the plant extracts in rebalancing the abnormal conditions of the body tissue (Homeostasis) Cesar Mattei named his method as electro (Electrals) homeo (Homeostasis) pathy (treatment). Count Cesare Mattei's "Electro-homeopathic" remedies gained popularity in Britain in 1870s. In May 1890, the issue of "*The National Review*" not only reflected the growing popularity of "Mattei's cures" in Britain but also became a controversy between the Mattei partisans and the British medical professionals and medical faculties.^[24] Mattei wrote his first book in 1874 in Italian language, which was later translated and published in other languages such as German.^[25] French,^[26] English,^{[27][28]} Spanish,^[29] etc., He applied his entire lifetime to the discovery of Meteria Medica capable of modifying not only the manifestation or symptoms of disease, but also their principles to recover the cause of the disease.^[30] He put forth this by means of a simple theory with curative agents which he called Electricity in the remedies (Electro-Homeopathy), which was so elementary that everyone may cure himself. His theory of medicine is certainly the medicine of the future.^{[31][32][33]}

Count Mattei in the early year of 1880 set up *Consortium for Electro Homeopathy* for the sale and promotion of his remedies in Regensburg. In 1881, Theodore Krauss joined the *Consortium for*

Electrohomeopathy and remained there in contact with Count Mattei till the year 1890. ^{[34][35]} In 1909 Krauss received the title "Professor". In the year 1883 the Consortium was transferred to the Engel Pharmacy in Regensburg for selling the remedies. The Consortium remained responsible for publication of the literature and assistance for these remedies to the 7000 members of the Electrohomeopathic practitioners. In 1887, Count Mattei who was aged by then, handed over all his work to his adopted son Mario Venturoli Mattei. Count Mattei died on 3rd April 1896 at the magnificent castle of La Rochetta, situated in the heart of the Apennines. But after the death of Mattei in 1896, Theodore Krauss took over the *Consortiums for electro Homeopathy*, later on he expanded the system. Together with the pharmacist Johannes Sonntag he developed from 1917 the so-called JSO-complex-HeilweiseKrauß, or JSO Spagirik, a modification of spagyric and electrohomopathy. To better distinguish this Spagirik is written with an "i". The JSO complex healing method includes 55 pharmaceuticals of plant origin in the dosage form globules and five fluids and ointments. The preparations are produced by fermentation. The Electrohomeopathic method is described in the German Homeopathic Pharmacopoeia in Regulations 27 to 30. ^[36] The major fundamental differences of Electrohomeopathy and Homoeopathy are discussed in the table-3.

During the First World War the supplies from Italy were missing between the years 1914 to 1918. The first original medicines under the license were later produced under the scientific direction of Krauss and Dr. Johannes in the same way as the Mattei method and his system. The system later established by Theodore Krauss which became known as Electro Komplex Homeopathy and the principle of Mattei's Electrohomeopathy / Electropathy is adapted as "*Complexa Complexis curantor*". After Theodore Krauss' death, his work was taken forward and his first book on Electrohomeopathy was published as back as in 1920. Since then, the book has gone through 14 editions till date, in Germany. Following that, Spagyric had an official place in Europe and in the German Pharmacopoeia.

^{[37][38][39]}

In 1888, Bonqueval published a book "Theory and practice of Electrohomeopathy" from New York, L.O. Stickel New York and mentioned Electrohomeopathy as widespread in India, between the year of 1870 and 1880. ^[40] In the year 1885, Dr. Anna of Madras presidency of British India became the first

Electrohomeopathy physician and the stockiest and distributor of Electrohomeopathy medicines in India and South Asia. The major role of popularizing homeopathy in South India was played by Father Muller (1841–1910). Basically Father Muller was a German priest who studied homeopathy in USA and France. He then went to Mangalore in south India on 31 December 1871 with other missionaries. By virtue of his zeal, in 1880, a charitable dispensary was founded in Konkanari, Mangalore. During that period electro homeopathy was simultaneously gaining popularity throughout the world as a result of efficacy and speedy remedies of the Electrohomeopathic medicines. Dr. Father Augustus Muller went on to establish an Electro-Homeopathic Leprosy Hospital and Asylum in Mangalore, Karnataka, India, in the year 1890. This is the first record of evidence of introduction of Electrohomeopathy in India. In 1893 Dr. S Kennedy lectured in India on Mattei's treatment and gave abundant proof of its efficacy in treatment of various diseases. Dr. Beldeo Prasad Saxena of Lucknow had been practicing Electrohomeopathy since 1895. He was the first person to practice Electrohomeopathy in Northern India. In the year 1907, he also started a School of Electrohomeopathy in Lucknow.

Significant contribution for promotion and development of Electrohomeopathy in north India was made by Dr. N.L. Sinha. N.L. Sinha was born in Lucknow on 30.11.1889 in a reputed family of Kayesthas. Dr. Sinha had a keen interest in medicine. As a hobby he studied various systems of medicine, viz., Allopathic, Ayurveda, Homoeopathy, Naturopathy etc. He came in possession of one book titled as "Stepping Stone to Electrohomeopathy", written by A. J. L. Gliddon of London. In the year 1907, Dr. N.L. Sinha got influenced and self-motivated by treatment results of Electrohomeopathy, through sequential publications of many books written by Dr. A.J.L. Gliddon in the title "Stepping Stones to Electro-Homoeopathy" In the year 1908, he started Electro homeopathy medicine in Sultanpur district (U.P) He went on to study Electro Homoeopathy and completed his doctorate in Medicine in Electrohomeopathy from Superior Independent Institute of Applied Medical Sciences, London in 1911. He established Electrohomeopathic Institute in 1911 at Sitapur. After getting married, he shifted to Kanpur in 1918. Dr. Sinha wrote more than three dozen books on various medical subjects in English, Hindi and Urdu. His book 'Materia Medica and Fundamentals Laws' is considered a milestone in the principles and philosophy of Electrohomeopathy. Dr. Sinha was the first among all the authors who tried to explain the medical system through his book, in a most scientific way. This book has been translated into French and

German languages. ^[41]He then sent various copies of the book to expert physicians of Electrohomeopathy in Italy, France and Germany. The book was translated by them into Spanish, Arabic and Urdu and various other languages. ^{[42][43]} In 1919 he formed the Count Mattei Association and this association in its resolution of 28th December, 1920 established National University of Electro Complex Homoeopathy for education, research and development of Electrohomeopathy. For his contributions, Dr. Sinha was awarded certificate of merit by Prof. Theodore Krauss for composition of "Materia Medica" in Urdu poetry on 18th September, 1937, and was also awarded Doctor of Philosophy (Ph.D.) by The National University of Therapeutics, District of Columbia, U.S.A on 8th June, 1938.

During the Second World War the Import of Electrohomeopathic medicines fell short of supply and the physicians had to face serious trouble in meeting with patients' demands, which in turn affected their practice. Dr. Sinha started to prepare medicines and serve them to his followers. Meanwhile a revolution for the recognition of Homoeopathy was on the move. Dr. Sinha also appealed to our late Prime Minister Jawaharlal Nehru that Electrohomeopathy can cure all type of diseases and can help the ill people as it is a complete clinical examination like other systems of medicine like Ayurveda, Siddha, Homeopathy and Unani etc... On this appeal Nehru wrote a letter to the then Chief Minister of U.P. Late Pt. Govind Ballabh Pant to make an enquiry on the efficacy of the Electrohomeopathy system of treatment.

In 1948, Dr. N.L. Sinha started treatment to one patient Hidayat Ali, who was suffering from mixed Leprosy for the past 12 years and was admitted in the Hospital for six years. The patient was kept on trial under the treatment of Dr. N.L. Sinha and to see the efficacy of Electrohomeopathy. Dr. Sinha agreed to take up the treatment for six months with his medicines and at his own cost and started to treat Hidayat Ali. It was assured by Government that if the patient fully cured then steps would be taken for its recognition. Pathological investigation was done. The patient was cured cent-percent. But the government did not take any step in favor of this medical system. Ultimately, Dr. Sinha who was let down by the inaction of the government informed the then State Government of his decision to resort to hunger strike, from July 1, 1951, if his demand for the recognition of this system by trials and tests and financial aid to his institution were not met by June 30, 1951.

So, on 4th July, 1951, Director of Medical Health Services, of Uttar Pradesh A.N. Das directed the Civil Surgeon of Kanpur vide letter no. XI. F. 17687, to give half a dozen typical cases of Leprosy for treatment to Dr. Sinha for treatment. Since the government was reluctant to recognize Electrohomeopathy even after the cure of the leprosy patients, Dr. Sinha started his 'fast unto death' during July 1951, which continued for 30 days during which period, he lost forty-three pounds in weight. This news spread throughout the country and appeals were made by the medical men and general public to give a patient hearing to Dr. Sinha. After a complete one month's fast, the Government of U.P. promised to give six more cases of leprosy for treatment as a further trial to prove the treatment and on success promised to recognize and adopt the system in Government Hospital. Dr. Sinha broke the fast on this understanding.

The medical departments vide its letter No. 1459-v/B-103/1953 dated 27.3.1953 asked Dr. Sinha to get Electrohomeopathy generally recognized, only then recognition matter would be considered. Dr. Sinha was assured by U.P. Government that the matter would receive a sympathetic attention.^[44] Till the last moment of his life Dr. N.L. Sinha worked for the development of Electrohomeopathy and wrote several books on the subject in Hindi, Urdu, and English and completed the literature for the forthcoming disciples of Electro-Homoeopathy. Finally, Dr. N.L. Sinha, born on 30th August, 1889, died on 30th November 1979. In his death, India lost a great disciple, researcher and mentor of Electrohomeopathy.

In the language of Count Ceasre Mattei definition of Electrohomeopathy is as follows - "Electrohomeopathy is perfected homeopathy way, by the discovery of new therapeutic agents acting on the blood and giving an organism the power necessary to cast off the morbid elements which injure it. This materia medica, like homoeopathy which is the consummation, has been evolved by experiment, and it rests entirely on facts ascertained by experiment. It is therefore true, and it is as simple as truth itself. He chose the Name "Electrohomeopathy" because he thought that his remedies worked as fast as electricity due to presence of electrals / electrolytes of plant origin, which maintain homeostasis of the tissues, organs and organ systems of the body by removing the vitiation of blood and lymph. Mattei's healing system was based on the empiricism. The efficacy of a remedy was the most important aspect, while pathogenic and pharmacological considerations were seen as secondary. Electrohomeopathy was

not restricted to the functional level of human life, but took into account the essence of life processes, existential drives and the spiritual influences to which all of nature is subjected. He was therefore also interested in the principle of the "Vital Force". Mattei also acknowledged Hahnemann's Similarity Principle. "Experience had taught Mattei that one could only cure a disease that came out in various symptoms by using several substances in combination only. ^[45] Mattie postulated that the drug proving should be performed on a sick person. He demanded, moreover, to prescribe a remedy in direct relation to the disease with the quantity of the remedy being reciprocal to the severity of the disease; if more diluted, then more frequently it had to be taken. ^{[46][47]}

3 PRINCIPLE OF ELECTROHOMEOPATHY MEDICINE

There are various methods of preparation and processes of preparation of herbal medicines have been evolved along with the human evolution with respect to their knowledge technique, observation experience in diagnosis and treatment. Advancement in any science for the welfare of health is continuous never ending process in the medical research. Each alternative traditional medical practice has its unique principles. Most of the such alternative systems are not studied well scientifically but have been practicing. In 1839 homoeopathic method of treatment was introduced in India with its unique principles. At present homoeopathic medical treatment is accepted far greater in India than any other country Electrohomeopathy is much more advanced than the homeopathy with difference by various modification and found results more nontoxic, highly effectively and highly rapid or speedy recovery than the Homeopathy with its unique principles. In the present review uniqueness in Electrohomeopathy medicine principles, preparation, list of plants types of remedies drug selection and dosage are highlighted.

4 PREPARATIONS OF ELECTROHOMEOPATHIC MEDICINES

Plants or plant parts are collected in appropriate seasons. Spagyric essences are prepared by these plants or plant parts. The term 'Spagyric' is derived from Greek word spagyry (Spao + ageiro) which means separate and reunites. Electrohomeopathic spagyric essences are prepared by the following process. In the first step, the plant material is immersed in water in a container and wormed at a

temperature of 30 to 40 degree centigrade. Then the phyto constituents can be extracted in the water. This process needs to repeat by changing required fresh water to yield maximum concentrated essence. This process may require 3 to 30 days depending upon the plant parts used, i.e., fresh leaves, stem bark, seeds, roots etc.. This separated fresh water extract is collected in a separate collecting bottle. This extract is denoted as **A**. After this water extract is prepared, the plant material is distilled in water to separate more phytoconstituents such as volatile oils and oils from the plant materials. This extract is denoted as **B**. After this second step plant material is taken in a separate wide mouthed round bottom flask. The water left from the separation of volatile oils is poured over the plant material in a wide mouthed round bottom flask. The flask is then sealed with fermentation lock and placed in an incubator at 27-35 degree centigrade for two weeks. By that time, the plant material would have fermented and yielded up its spirit. This fermented spirit is also known as Mercury. The spirit is distilled off and rectified for at least seven times. This third extract is denoted as **C**. The remaining plant material is taken for separation of salts from the plant material in the fourth step. In this step, the material is dried to remove all the moisture, by keeping in an oven. When all the moisture is gone, the plant material begins to roast. Then it is incinerated. When the material turns ash grey color, heat is turned off and let to cool. Next step is to grind and weigh the ash and then extract using sohxlet extraction in water and collect in a Petri dish. Water is then evaporated in an oven overnight and salt is collected then. Salt content is weighed and heated in high temperature to obtain hygroscopic salts and collected it in air tight bottle. This extract is denoted as **D**.

After extraction, the extracted salt (**D**) is remixed with the rectified spirit (**C**) and the volatile oils (**B**) and then with water extract (**A**). This mixture is allowed to digest at 30 degree centigrade temperature for a week. This process is known as Cohobation. Shake the container slightly three to five times per day for a week. This process is known as digestion. After digestion decant the spagyric essence to remove undissolved salts. This essence is used for further medicinal preparation which is higher in quality and almost zero toxic. ^{[48][49][50]}

Mattei's method of procedure preparations underwent research with some modifications in the aim of more efficacy by individual eh practitioners and manufacturers and researchers, Since from the

Mattei's innovation, there are many 100's of books published across the world related to Electro homeopathy but lack of scientific publications in scientific journal publication. But Zimple and Krauss are disciples of the Mattei's were tried to improve the quality of remedies with respect to safety and efficacy with experiments. Both modified preparation of Electro complex homeopathy by Zimple & Theodor Krauss officially recognized and are included in German Pharmacopeia. ^[51] Quote from Theodor Krauss: "**complex may be cured by complex**". So this is the principle of Electrohomeopathy. ^{[52][53][54]} Theodor Krauss quote in German language book title "Zitat von Theodor Krauß: *"Komplexes möge durch Komplexes geheilt werden"*". From 1881 onwards, Krauss dealt with Cesare Mattei's electrohomeopathy. In 1909 Krauss received the title "Professor h.c. for the Chair of Occult and Hermetic Medicine" at the École supérieure libre. ^[55]

5 PLANTS USED IN ELECTROHOMEOPATHIC MEDICINES

In Electrohomeopathic Medicine there are about 114 plant species belonging to 87 families are used in Electro-homeopathic system of medicine, out of which 32 important plants species belonging to 19 families are commonly available in India. ^[56] Spagyric essences of each plant of Electrohomeopathic medicines are prepared by the above mentioned procedure. Then these individual essences are remixed to prepare Electrohomeopathic medicines in different dilutions and different quantities (proportions) and are used to prepare different Electropathic remedies for different diseases based on disease conditions and whether the patient's body temperament is lymphatic, sanguine or mixed temperament etc.. The medicinal plants used in the preparation of Electrohomeopathic medicines, the family of plants used in different Electropathic remedies are listed in **Table-1**. Among these, some are used in other alternative medical systems like Ayurveda, Homoeopathy, Unani systems. About 28 plants are used even in Russian recognized medical system phytotherapia.

TABLE -1: List of medicinal plants used in Electrohomeopathy medicines preparation their family and plants used in different remedies.

Sl. No	Plant Name	Family	Plant used in Different Remedies
1	<i>Artimisiium abrtanum</i>	Asteraceae	A-3
2	<i>Achilia millefolium</i>	Asteraceae	A-2 , W.E.

3	<i>Aconitum napellus</i>	Ranunculaceae	F-1,,P-4, R.E.,
4	<i>Adiantum capillus veneries</i>	Pteridaceae	P-1,2,3,4,W.E.
5	<i>Aesculus hippocastanum</i>	Sapindaceae	A-2, F-1,F2,S-10
6	<i>Agaricus muscarius</i>	Agaricaceae	W.E.
7	<i>Ailanthus glandulosa</i>	Simaroubaceae	C-13,
8	<i>Aloe capensis</i>	Liliaceae	Slass
9	<i>Ailiathea officinalis</i>	Simaroubaceae	Feb-1, Pet-4, RE
10	<i>Allium cepa</i>	Amaryllidaceae	P-1,2,3,4,Y.E.
11	<i>Allium sativum</i>	Amaryllidaceae	Verm 1,2
12R	<i>Anthemis nobilis / Chamaemelum nobile</i>	Asteraceae	W.E.
13R	<i>Artemisia cina</i>	Asteraceae	Verm-1, 2
14	<i>Arnica montana</i>	Asteraceae	A-1,A-3,P-4,C-6,W.E., APP
15R	<i>Atropa belladona</i>	Solanaceae	S-12, C-13
16	<i>Avena sativa</i>	Poaceae	A-1,2,3, W.E.
17	<i>Berberis vulgaris</i>	Berberidaceae	F-1,2, S-5,C-1
18R	<i>Betula alba</i>	Betulaceae	V-1
19R	<i>Capsella bursa pastoris</i>	Brassicaceae	A-1 B.E.
20	<i>Carduous Benedictus</i>	Asteraceae	C-1
19	<i>Caulophyllum thalictroides</i>	Berberidaceae	C-1
20	<i>Cetraria islandica</i>	Parmeliaceae	S-10, F-1,2,B.E.
22r	<i>Chelidonium majus</i>	Papaveraceae	C-10,W.E
23	<i>Chenopodium anthelminticum</i>	Amaranthaceae	Verm-1
24	<i>Cimicifuga racemosa</i>	Ranunculaceae	W.E.
25R	<i>Cannabis sativa</i>	Cannabaceae	V-1
26	<i>Cinchona calisaya</i>	Rubiaceae	S-10,F-1,2,B.E.
27	<i>Cinchona succirubra</i>	Rubiaceae	S-10,F-1,2,
28	<i>Clematis erecta</i>	Ranunculaceae	V-1
29	<i>Cochlaria officinais</i>	Brassicaceae	S-1,2,3,5,6,10,11,12
31	<i>Conium maculatum</i>	Apiaceae	C-1,2,3,4,5,6,10,13,C- 15,16, G.E.
32	<i>Dictamus albus</i>	Rutaceae	V-1,2
33	<i>Drosera rotundifolia</i>	Droseraceae	P-3
34	<i>Daphne mezerum</i>	Thymelaeceae	C-3
35	<i>Echinacea angustifolia</i>	Asteraceae	L-1

36	<i>Erythraea centaurium</i>	Gentianaceae	F-1,2, S-10,L-1
37r	<i>Eucalyptus globulus</i>	Myrtaceae	P-1,2,3,4 V-1
38	<i>Euonymus europaeus</i>	Celastraceae	A.P.P.
39	<i>Euphorbium arvense</i>	Euphorbiaceae	
40	<i>Eupharasia officinalis</i>	Scrophulariaceae	S-12
41R	<i>Equisetum arvense</i>	Equisetaceae	B.E.G.E
42	<i>Ervum lens</i>	Fabaceae	
43	<i>Fucus vesiculosus</i>	Fucaceae	L-1
44	<i>Galeopsis ochroleuca</i>	Lamiaceae	P-2
45	<i>Genista scoperia</i>	Fabaceae	W.E.
46	<i>Gentiana lutea</i>	Gentianaceae	SLASS
47	<i>Glechoma hederacea</i>	Lamiaceae	P-2
48	<i>Guaiacum officinale</i>	Zygophyllaceae	W.E
49	<i>Hammamelis virginica</i>	Hammamelidaceae	A-2, G.E.
50	<i>Humulus lupulus</i>	Cannabaceae	L-1
51	<i>Hydrastis canadensis</i>	Ranunculaceae	A1,2,3 P-3, S-1,2,3,5,6,10,12
52R	<i>Hyoscyamus niger</i>	Solanaceae	P-3
53	<i>Imperatoria ostruthum</i>	Apiaceae	V-1
54R	<i>Ledumpalustre / Rhododendron tomentosum</i>	Ericaceae	C-6
55	<i>Lobelia inflata</i>	Campanulaceae	S-11
56	<i>Lycopodium clavatum</i>	Lycopodiaceae	S-2
57	<i>Malvasylvestris</i>	Malvaceae	A-1,3
58R	<i>Matricariachamonilla</i>	Asteraceae	S-1,2,3,5,6,11,12
59	<i>Melissa officinalis</i>	Lamiaceae	S-11
60R	<i>Menyanthes trifoliata</i>	Menyanthaceae	L-1, W.E.
61	<i>Marsdinia condurango</i>	Apocynaceae	C-15
62	<i>Myrtus communis</i>	Myrtaceae	V-1
63	<i>Nasturtium officinale</i>	Brassicaceae	S-1,2,3,5,6,10,11,12
64	<i>Oxalis acetosella</i>	Oxalidaceae	L-1
65	<i>Petroselinum sativum</i>	Apiaceae or Umbelliferae	C-2, W.E
66	<i>Phelandrium aquaticum</i>	Umbelliferae	P-1,2,3,4
67	<i>Phytolaccadecantra</i>	Phytolaccaceae	C-5, G.E.
68	<i>Pimpinella saxifraga L.</i>	Apiaceae	C-1,2,3,4,5,6,10, C-13,15,17

69	<i>Pinus maritima</i>	Pinaceae	B.E
70R	<i>Pinus nigra</i>	Pinaceae	B.E., APP
71	<i>Podophyllum peltatum</i>	Berberidaceae	C-10 Y.E.
72	<i>Polygala amara</i>	Polygalaceae	P-1,2,3,4
73	<i>Populus alba</i>	Salicaceae	G.E
74	<i>Populus tremuloides</i>	Salicaceae	C-17, V-1,G.E.
75	<i>Pulmonaria officinalis</i>	Boraginaceae	L-1
76.	<i>Pulsatilla vulgaris</i>	Ranunculaceae	A-3
77R	<i>Rheum officinale</i>	Polygonaceae	S-3
78R	<i>Rhododendron ferrugineum</i>	Ericaceae	R.E.
79	<i>Rhus aromatica</i>	Anacardiaceae	C-17
80	<i>Rhustoxico dendron</i>	Anacardiaceae	C-1,2,3,4,5,6,10,C-13,15,17
81	<i>Rosa canina</i>	Rosaceae	V-1 R.E.
82	<i>Rosmarinus officinalis</i>	Lamiaceae	R.E.
83	<i>Ruta graveolens</i>	Rutaceae	V-1,2,W.E. Y.E.
84	<i>Salix alba</i>	Salicaceae	F-1,2, S-10
85R	<i>Salvia officinalis</i>	Lamiaceae	B.E.
86	<i>Salvia sclarea</i>	Lamiaceae	B.E.
87R	<i>Sambucus nigra</i>	Adoxaceae	F-1,2, S-10, VE GE
88	<i>Sanguinaria canadensis</i>	Papaveraceae	A-1,2,3, WE
89	<i>Sanguisorba officinalis</i>	Rosaceae	W.E
90	<i>Scrophularia nodosa</i>	Scrophulariaceae	S-1,2,3,5,6,10,S-11,12, APP
91	<i>Scolapendrium vulgare</i>	Aspleniaceae	F-2
92	<i>Simaruba amara</i>	Simaroubaceae	L-1
93	<i>Smilax medica</i>	Smilacaceae	S-1,2,3,5,6,10,11,12 V-1, APP

94	<i>Solidago vigurea</i>	Asteraceae	S-6
95	<i>Solanum deucaamara</i>	Solanaceae	V-1
96	<i>Spigelia anthelmia</i>	Loganiaceae	Verm-2
97	<i>Steffensia elongata</i>	Piperaceae	V-1
98	<i>Strychnousnux vomica</i>	Loganiaceae	S-1, C-15, Slass
99r	<i>Symphytum officinale</i>	Boraginaceae	C-4
100	<i>Tanacetum vulgare</i>	Asteraceae	Verm -1
101	<i>Taraxacum officinalis</i>	Asteraceae	W.E. APP
102	<i>Taxus baccata</i>	Taxaceae	W.E.
103	<i>Teucrims cordium</i>	Lamiaceae	P-2
104	<i>Thuja occidentalis</i>	Cupressaceae	V-1
105	<i>Thymus serpyllum</i>	Lamiaceae	Verm -1
106	<i>Tilia europaea</i>	Malvaceae	V-1
107	<i>Tussilago farfara</i>	Asteraceae	S- 1,2,3,5, 6,10,11
108	<i>Veronica officinalis</i>	Plantaginaceae	S-1,2,3,5,6,10,11 V-1
109	<i>Viburnum opulus</i>	Adoxaceae	V-1
110	<i>Vinca minor</i>	Apocynaceae	V-1 APP
112	<i>Viscum album</i>	Santalaceae	W.E.E
113	<i>Vitis vinifera</i>	Vitaceae	R.E. APP
114	<i>Vincetoxicum officinalis</i>	Apocynaceae	C-1,2,3,4,5,6,10,C-13,15,17

6 NAMES OF ELECTROHOMEOPATHY REMEDIES

The remedies which C.C. Mattei prescribed for treatment of patients with different temperaments were named to describe their "Numerous properties" for example Scrofoloso or Antiscrofoloso, Canceroso or Anti-canceroso etc. Each series of remedies were numbered in "the order in which they were discovered" by the founder C.C. Mattei. For example Scrofoloso-1 (S1) was discovered before Scrofoloso-2 (S2). These remedies were administered as globules, liquids and ointments. ^{[57][58]} List of different medicines used in the Electrohomeopathic medicine preparation are mentioned in the **Table 2**.

TABLE 2: NAME OF THE ELECTROHOMEOPATHY REMEDIES

SI.No.	English Name	German Name	Abbreviation	Number of Preparations
1	Angioiticos	Adermittel	A ₁ , A ₂ and A ₃	3
2	Canceroso	Gewebemittel	C C1 to C17	17
3	Febrifugos	Fieber - und Nervemittel	F1 and F2	2
4	Linfatico	Lymphmittel	L 1 and L2	2
5	Pectoral	Brusmittel	P 1 to P9	9
6	Scrofoloso	Stoffwechselformel	S 1 to S 12	12
7	Vermifugo	Darmmittel	Ver 1 and Ver 2	2
8	Venerios	Konstitutionsmittel	V 1 to V 5	5
9	Slass	NA	Slass	1
10	Synthesis	NA	SY	1
Electrals				
	English Name	German Name	Symbol/Abbreviation	TOTAL
1	Blue Electral	Capsella	BE	1
2	Green Electral	Populus	GE	1
3	Red Electral	Rhododendern	RE	1
4	Yellow Electral	Sambucus	YE	1
5	White Electral	Viscum album	WE	1

6	Aqua Perlla Perli (APP) / Slass		APP	1
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7 ELECTRALS AND THEIR IMPORTANT ACTIONS

In Electrohomeopathy the following five different kinds of electrals have been using. The liquid electrals are prepared as explained above by using different combinations of plants. These liquid “electrals” are grouped in the following three classifications. ^{[59][60][61][62][63]}

The positive Red and Blue Electrals.(RE)

a) *The Red Electrals* are applied externally, suited to lymphatic temperament patients and are highly effective in stimulating muscles and nerves. Used internally in three to five drops doses to regulate circulations of blood.

b) *The Blue Electrals (BE)*

The Blue Electrals are especially good for sanguine temperament patients when used externally for the stimulation of those nerves “controlled by blood vessels” as a coagulant. Used internally in three to five drops doses BE helps to regulate circulation.

1. *The Negative Yellow and Green Electrals.*

a) *The Yellow Electrals* are prescribed as especially good for Lymphatic temperament patients when used externally to calm agitation in the nerves and used internally in three to five drop doses as a laxative and stomach tonic.

b) *The Green Electrals* are recommended for sanguine temperament patients when used externally to calm nerves and relieve ulcers pain, gout and rheumatism. The GE is prescribed as antiseptic for blood purification.

2. The Neutral Electrals are prescribed for all temperament patients in the treatment of neurological pains, spasmodic disorders and congestion.

In addition to above three groups of “Electrals” *Aqua Per la Pella* (APP) was recommended as a “special water” (Special - Slass) and is used as laxative and for improvement of skin especially to remove blemishes, roughness and wrinkles Krauss. ^{[64][65]}

8 ELECTROHOMEOPATHY LITERATURES

There are number of books, journals, thousands of articles and literature published since from 1870's till date, in the field of Electrohomeopathic medical sciences. They also reflect life and career of the C.C. Mattei from various authors and practitioners in different languages like English, Spanish, Germany, French, Hindi, Urdu, Arabic and in various Indian languages. ^[66] Count Cesare Mattei's “Electro-Homeopathic” remedies not only reflected the growing popularity of the Mattei cures in Britain but also provoked a controversy between the Mattei partisans and the British Medical professionals and faculty. ^[67] The major fundamental difference between Homoeopathy and Electrohomeopathy are mentioned in the **Table -3**. Large number of data and information is available in public domain on internet and social media which has clinical results of the Electrohomeopathic treatments with success in many critical cases and many cases not successfully treated in other therapeutic medical systems. ^[68] By one or two individuals or organizations it is simply difficult for collection documentation and analysis of contemporary development in science and technology with all the literature of Electrohomeopathic medical system documented ever since the founder CC Mattei. ^[69] For this, there is a need for a government supported platforms, human resources and consideration under the government. Only then simultaneous research and development is possible to reach the need of world population with safe, effective and cost effective natural herbal Electrohomeopathic medicines. ^{[70] [71] [72]}

Table 3: Fundamental Differences between Homoeopathy & Electrohomeopathy.

Sl. No.	Details	Homoeopathy	Electrohomeopathy
1	Native of Invention	German	Italian
2	Founder		
3	Period of concept Invention	1790s	1860s
4	Founder	Homoeopathy was invented and Established by a German physician SCF Hahnemann	Electrohomeopathy was Invented and established by Italian Physician Count.Ceasre Mattie (1809–1896)

		(1755–1843)	
5	Year of Introduction to India	Introduced homoeopathic method of treatment in India in 1839.	Introduced homoeopathic method of treatment in India in 1890s
6	Basic Principle	<i>“Similia similibus curantor”</i>	<i>“Complexa Complexis Curantor”</i>
7	Brief Description of Basic Principle	Principle that “like cures like”. In simple words, it means that any substance, which can produce symptoms in a healthy person, can cure similar symptoms in a person who is sick. This idea is referred to as the “Law of Similars”.	<i>Multiple remedies are essential to cure Complex individual (Human/Veterinary) Body’s multiple organ tissues with varied biochemical constitutions to rebalance its normal status. So the principle of Electrohomeopathy is “Complexa Complexis Curantor”</i>
8	Using of double or multiple remedies	Homeopathy recommended the use of only one medicine at a time and prescribing only limited doses of it. Using of double or multiple remedies is against to the Hahnemann’s (1755–1843) Homoeopathy fundamental principle of single remedy treatment.	<i>Complexa Complexis Curantor indicates: Using of double or multiple remedies is fundamental principle of CC Mattie’s (1809–1896) Electrohomeopathy fundamental principle of multiple remedy treatment.</i>
9	Name of the Pathy	Homo = Same = Similar A system of treating diseases in which sick people are given very small amounts of natural substances that, in healthy people, would produce the same effects as the diseases produce. Dr. Hahnemann first coined the word “homeopathy” (“homoios” in Greek means similar, “pathos” means suffering) to refer to the pharmacological principle, the law of similars, that is its basis.	Homeo = Equilibrium A system of treating diseases in which sick people are given very small amounts of natural substances that in diseased individuals which has the tendency towards a relatively stable equilibrium between interdependent elements, especially as maintained by physiological processes. CC. Mattie explained as; Actual therapeutics is confined to act on the organism in a manner as to put it in a state to bring back. As mentioned by Mattie, in 1880 in his book pp 5-15.
10	Use of raw material	Both animals and plants	Only plants
11	After Independence of India	In 1974 Central Council of Homoeopathy (CCH) was established to regulate homoeopathic education and practice. Various research and studies performed in India proved the efficacy of homoeopathy.	No Central Council of Electrohomeopathy is established to regulate Electrohomeopathic education, research and practice till today in India.

9 CURRENT STATUS OF ELECTROHOMOEOPATHIC MEDICINE IN INDIA

In India, there are about 35-40 Electropathic private organizations imparting education and research under the Society or Trust Act, 1960. There are about 500 Institutions offering Diploma,

B.E.M.S., and M.D. in Electrohomeopathy course since 1920's. Presently there are about 5 lakh certificate holders practicing across the country according to the reports of the common proposal submitted to the IDC committee Department of Health Research, Government of India. Electrohomeopathy medical system is not a recognized medical system under Indian constitution. Consequently certificate holders are facing legal problems. In the recent decades there have been numerous legal issues with judgments. State and Central government orders have been issued in India including Supreme Court regarding practice research, development, promotion and recognition of Electrohomeopathic medical system in India. In year of 1950's Dr. N.L. Sinha struggled to get recognition of Electrohomeopathy or Electropathic medical system in India as we discussed above. In the year 2015 Indian Supreme Court issued an order on 22/01/2015 saying there is no ban on the Medical Practice of Electrohomeopathy. In the year 2017, Indian government under the Ministry of Health and Family Welfare Department of Health Research constituted an expert committee for the recognition of Electrohomeopathy in India as Inter Departmental Committee (IDC) for examination of viability of Electrohomeopathy for recognition as new medical system of medicine. IDC conducted 3rd meeting on 9th Jan 2018 under the chairmanship of V.M. Katoach, Director General of Indian council of Medical Research (ICMR) with 29 Electrohomeopathic Organizations of India in proper channel successfully and suggested to all organizations to provide references, books and scientific journal papers published till today in Electrohomeopathy available in the world as supplementary submission . On May 9th 2018, Rajasthan State government passed *Rajasthan Electropathy System of Medicine Bill 2018*. Rajasthan is the first state government in India to recognize Electrohomeopathy as a system of medical system with gazette notification No. 2(22) Sec/2/218 dated 11th April 2018. On 27th May 2019 Govt. of India IDC committee conducted 4th meeting with all organizations to provide common joint proposal seeking recognition of Electrohomeopathy as a system of medicine and opined that the basic and advanced research in this Electrohomeopathy is urgent need with the present advanced technologies.

10 DISCUSSION

The plants are indispensable primary source for the existence of living organism on this planet earth from time immemorial. For humans and animals, these plants are the fundamental

source of food to maintain homeostasis of tissue, organ and whole body and provide energy to conduct living activities in normal condition. That balanced state of the living condition is health. The need of these plants is essential as we consume food regularly. If any variations in the cells, tissues or organs to maintain homeostasis then there may be disorder of the body which we call the disease. When we consume plants products, either in raw or processed form it will undergo metabolism and supply nutrient chemical particles to the body tissue which are in nano size or we can say nano-phytochemicals. If there is any vitiation in the body tissue which expresses itself as abnormality, we call it pathogenesis or disease in modern terms. Plants have the capacity to supply what body tissue needs is the natural truth that we know since time immemorial. So since ancient time, plants have been used as medicine to combat many diseases as primary source of remedies. But as a food or remedy plants need to be taken in certain quantity (doses) with processed conditions. During 1850's these philosophies observed by Electrohomeopathy medical system founder Cesare Mattei from Italy and influenced by the *'Paracelsus* and studied natural science and conducted experiments for human in disease condition, with his modified new method of medicine preparation diagnosis and treatment for various diseases. Mattei's medicines showed fast recovery and were highly effective. Due to quickness in action, the electrals of the plant extracts to rebalance the abnormal conditions of the body tissues (Homeostasis) the founder Cesare Mattei named his method as electro (Electrals) homeo (Homeostasis) pathy (treatment). Count Cesare Mattei's "Electro-homeopathic" remedies became more popular in Britain in 1870s and in India since 1910's till date. But due to various reasons like organizational, Institutional, Financial and Skilled human resource hindrances, there is a huge dearth in advanced scientific and clinical studies in the field of Electrohomeopathy medical system. At present, there is high scope to undertake research in

Electrohomeopathic medicine, to investigate nature and characterize these electoral phyto-nanoparticles, efficacy, and mode of actions in metabolic pathways at tissue and cellular level. It is essential for revalidation or rediscovery of C.C.Mattei's Electrohomeopathy medical system, which will eventually for the benefit of society

11 CONCLUSION

The Electrohomeopathy or Electropathy is a purely herbal system of medicine has a history of nearly 160 to 170 years of existence with lots of differences among other existed medical systems in its unique principles, diagnosis, preparation and selection of remedies. There are lakhs of Electropathic practitioners are practicing across the globe to treat various acute and chronic disorders and millions of patients are benefiting. In India about five lakhs Electropathic medical practitioners practicing Electrohomeopathy. Recently some states like Rajasthan recognized Electrohomeopathy as medical system and some are under the process of constitutional recognition. Union of Indian government also took systematic efforts for recognizing the Electrohomeopathy as system of medicine. Varieties of new diseases have been evolving and are panic to whole society in all the time. For example as we observe in present pandemic cases of the COVID-19, whole world scared, WHO declared the outbreak as Public Health Emergency of International Concern on 30 January 2020 and is the current challenges to all the medical systems and scientists to find effective remedies to cure and prevention. The new medical systems like Electrohomeopathy may find solutions to such problems. We suggest that multiple drug based herbal complex remedies of Electrohomeopathic medicine may offer better routes to the discovery, development and delivery of new drugs with enhanced performance in terms of cost, safety and efficacy. To this end, we believe that the basic principles, experiential wisdom, holistic approach, efficient discovery and systematic database of Electrohomeopathy practice are immediate need for the society.

COMPETING INTERESTS DISCLAIMER:

We all the authors have declared that no competing interests exist. The products used for this research are commonly and predominantly use products in our area of research and country.

There is absolutely no conflict of interest between the authors and producers of the products because we do not intend to use these products as an avenue for any litigation but for the advancement of knowledge. Also, the research was not funded by the producing company rather it was funded by personal efforts of the authors.

Authors' contributions

This work was carried out in collaboration between all authors. Author PS.Babu designed the study, performed basic literature survey, wrote the first draft of the manuscript re-edited and corresponding author. Authors ESM and NLS wrote the protocol and re correction of the manuscript in systematic way. Authors BS. Rao and DC. Bhavya managed the survey of medicinal plants and editing of the article carried out review of literature. All authors read and approved the final manuscript.

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