Savely Yurkovsky*

Case Report

Smartphone Medicine in Solving Long COVID

Savely Yurkovsky MD

Assistant Professor (retired) with the Department of Cardiology, Winthrop University Hospital, Mineola, NY, USA.

*Corresponding Author: Savely Yurkovsky. Assistant Professor (retired) with the Department of Cardiology, Winthrop University Hospital, Mineola, NY, USA. info@yurkovsky.com

Received Date: February 15, 2025 | Accepted Date: February 25, 2025 | Published Date: March 03, 2025

Citation: Savely Yurkovsky, (2025), Smartphone Medicine in Solving Long COVID, *International Journal of Clinical Case Reports and Reviews*, 24(1); **DOI:10.31579/2690-4861/716**

Copyright: © 2025, Savely Yurkovsky MD. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

"Research and its methods and findings are always limited by the rules of paradigm within which they are conducted and produced." - Thomas Kuhn.

Abstract:

Despite dozens of studies and the American NIH's \$1.6 billion expenditure on research, 18 million people in the US and 65 million globally still have long COVID. The symptoms range from neuropsychiatric to somatic, and the ongoing variant infections will further the toll. Like other unresolved chronic infections, the exact reasons for the chronicity and pathophysiology of long COVID remain obscure. Unlike the prevalent biochemical and molecular research on chronic infections and diseases, the presented model explores pathogens and afflicted organs on an ontologically deeper level (submolecular or electromagnetic), for their detection and treatment. The applied diagnostic and therapeutic technology in this domain resembles the physics of Smartphone medicine, by applying a scan-like diagnosis and water-imprinted therapeutic signals. The latter constitutes the nature of homeopathic and other production platforms. Based on the reported reversals of long COVID through this specific treatment, that matches the identified pathogens and afflicted organs, this pathology appears to have a multifactorial nature consisting of multisystemic malfunctions, infections, toxicological agents, and other pathogens. The approach does not require knowledge of physics, is enrooted in prudent conventional medical knowledge, and can be implemented by physicians. Despite being ostracized as "alternative," these interventions have substantial scientific support and are free from scientific conflicts, further emphasizing the need for proper studies to validate this approach. If verified, it may prompt the development of novel medical technologies, including physics-based vaccines and treatments.

Key words: Long COVID; submolecular medicine; homeopathy; integrative medicine; programmed water; bioresonance testing

Introduction:

Currently, the American CDC reports 18 million long COVID cases in the US, and 65 million globally, with these numbers likely rising from the millions of developing COVID-19 cases, with thousands dying each month despite mass vaccinations [1]. The sources express concern that high long COVID-19 numbers highlight the puzzle of multisystemic pathology, the human and economic tolls, as well as the stress on healthcare systems. Despite the failure of the NIH, after spending

\$1.6B, and many studies to establish the responsible causes and effective treatments with drugs or alternatives, hundreds of more studies are in the process of using the same, pharmaceutically focused model of molecular biology [2]. As benevolent lawmakers, such as US Senator Bernard Sanders (VT) who seeks to appropriate 10 billion more dollars for the challenge, the medical community shuns reexamining this model which Auctores Publishing LLC – Volume 24(1)-716 www.auctoresonline.org ISSN: 2690-4861

besides long COVID-19, also fails other chronic infections. Among the latter are EBV, HSV-1, HSV-2, herpes zoster, HIV, H. Pylori, Lyme disease and co-infections. All of these carry essentially the same gaps as long COVID: unknown exact causes for their chronicity and failure of the antimicrobial drugs. While the pharmaceutical model emphasizes its rigor in applying the scientific method, it continues to overlook the need to reassess whether its critical initial stage—defining the research focus—is optimally inclusive of background research and knowledge that would offer superior solutions to problems. Concerning infections, including COVID-19, an extensive toxicological background indicates more severe outcomes and poor recovery due to compromised local and systemic immunity by toxicants [3-4]

These may also cause an overactive autoimmune response, with

dysfunction in multiple organs, which has also been detected in long COVID-19, as the overall pathogenicity of these agents in COVID-19 and other chronic infections was emphasized [5-11].

The data of medical toxicology and the US Environmental Protection Agency list these agents, particularly heavy and other metals, as direct and indirect immunosuppressants, through invasion of the immune system and ones that support it, such as endocrine, gastrointestinal, neurological, and others [12-13]. Additionally, the disruption of the cytoskeleton by toxicants, including the mitochondria, and epigenetic and intercellular communications, further perturb global homeostasis through the interconnectedness and interdependence of body systems [14]. Also considering the fact that thousands of pollutants commonly act in unpredictable and impossible for laboratory assessments to establish combinations, the consequent multisystemic pathogenesis eludes the ability of the specialty-confined research model to match it [15]. The problem of public protection from pollutants has failed as according to the Harvard University EPA Working Group 2007 Report, traces of hundreds of environmental pollutants have been found in the bodies of 100% of tested Americans, which can be extrapolated to all industrialized nations. The ubiquitous presence of toxicological agents in modern societies, with common internal presence from birth and increasing thereafter through nursing, in baby and regular food, air, and water, significantly raises their pathogenic potential in chronic infections and diseases [16-21].

The most ubiquitous toxicants, mercury, lead, and the rest of the heavy and other metals, carry the highest pathogenicity that can produce any of the immunological dysfunctions that have been encountered in long COVID and other chronic infections. Mercury, which is the most toxic non-radioactive element, exerts multisystemic, including immune pathologies, from common exposures to fossil fuels, seafood, and silver amalgam fillings [22-26]. The presence of mercury since childhood is correlated with silver amalgam fillings, whose utilization is global [27].

Metallic dental restorations, particularly silver amalgams, and metals in general that are widely present in modern populations are also electromagnetic conductors that act as internal receiving antennas for pervasive electromagnetic fields, resulting in mutually enhanced pathogenicity.

This further exacerbates stress on the immune, central nervous, and other systems [28-33].

Besides the ubiquitous exposure starting neonatally, the pathogenicity of metals is particularly ominous because these are not metabolizable, are only partially excreted, and cause deep, down to the DNA, cellular penetration [34].

In addition to this relevant toxicological research being essentially void in medical training, even when laboratory screening is performed for mercury, other metals, and toxicants it poorly correlates with their presence in the seed of pathologies, internal organs [24,34].

Relevant background information also lists other factors that compromise immunity, such as the perturbed gut microbiome and dysbiosis, linking them to complications and mortality in COVID-19 [35]. Subclinical opportunistic infections of the candida genus, with evasion from immune cells, their suppression and apoptosis, can be commonly present among not severely immunocompromised populations as the result of ubiquitous consumption of antibiotics and simple sugars [36-38]. Antibiotics

Auctores Publishing LLC – Volume 24(1)-716 www.auctoresonline.org ISSN: 2690-4861

themselves undermine host resistance by damaging immune cells and their response and have been associated with numerous chronic diseases, including cancer [39-41]. Another common subclinical infection, helminth parasitosis, is also prone to immunomodulation [42]. As a *Candida* species, it does not receive proper clinical vigilance, and stool diagnosis is compromised by varying laboratory sensitivity methods and irregular egg shedding. Chronically stressed and depleted by toxicants and infections, the endocrine system and limbic zone further contribute to immune deficiency and exacerbate the overall pathophysiology of long COVID, which also presents with associated cortisol deficiency [43].

Besides endocrine dysfunctions not being commonly suspected in chronic infections, even when obtained, the hormonal profiles falling in the low normal ranges may not necessarily correlate with a patient's individual physiologic normal range, leading to the potentially overlooked importance of hypofunctioning hypothalamic-pituitary-adrenal axis. To address these limitations in managing chronic infections and long COVID, the reported cases were examined through another critical background research factor: the submolecular ontological level of both living organisms and pathogens. Physicists refer to this level as depth that addresses the limitations of the specialty-focused molecular research model, by rendering the detection of disease etiology more accessible and treatment more successful [44]. This level is fundamental and formative to molecular structures, representing their very identity, and is clinically indistinguishable from the material ones being used in practice and research. Its noninvasive diagnostic ability to access the seed of diseases, the internal organs, via the phenomenon of resonance, offers great potential.

The reason Einstein referred to our visible material molecular reality as an "optical illusion," is based on the well-accepted matter-energy duality principle of all substances. By illusion, he implied that our eyes cannot discern the fact that matter is actually condensed energy fields, as his famous $E = mc^2$ equation postulated. This applies also to the living, microbes, and human organs, including the DNA. These possess electric, electromagnetic, magnetic, and electronic properties that are reflected in the sciences of quantum biology, magnetic biology, bioelectronics, and biophysics, among others. Physics, materials science, and water science deem water to be an ideal medium for the delivery of therapeutic signals at the level of depth. Due to its semiconducting and other physical and chemical properties, water is readily programmable with information of the molecular field, of any pathogen, organ, or cellular structure for which specific pharmaceuticals do not exist, rendering it to be "tomorrow's wonder drugs" [45]. Also, neither programming nor therapeutic actions require the addition of chemical, biological, or genetic agents that favor safety and its related shortened testing time. Water also constitutes an important internal biophysical regulator of the body.

Nobel laureate in physics, Brian Josephson, and Nobelists in medicine, Albert Szent-Györgyi and Luc Montagnier either supported the validity of programmed water or commented on the importance of the physics of water and organisms in biology and medicine. Szent-Györgyi warned that biology was studying dead matter without engaging the physics of organisms and water. Immunologist Benveniste, who first registered the immune response to water programmed through a homeopathic preparation platform, named this paradigm digital biology [46].

Referring to the submolecular level of the living that is innately receptive to energetic signals, physicists posited that biology and medicine are only

physics [47].

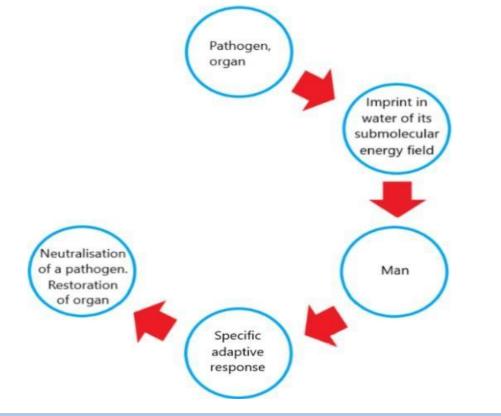


Figure 1: The scientific premise of neutralizing pathogens through the physics of organisms and substances.

The submolecular energetic domain is fundamental to all of the three vital components to address the resolution and prevention of disease: human organs, pathogens, and water. Fields of pathogens and organs can be detected diagnostically, and programmed in water. Humans, as fundamentally electromagnetic-quantum systems unconditionally respond to the delivered therapeutic fields.

This grants a wide versatility in producing energetic antidotes against any toxicant and programmed vaccines and therapeutics against infections. Likewise, submolecular fields of organs and their cytoskeleton may stimulate detoxification and restoration of their function.

The phenomenon of hormesis, as homeopathy is based on the similia principle, and the theory of chaos, indicates that natural systems can robustly respond to low-volume meaningful signals as in programmed water [48-52]. Arthritis patients experienced relief only from those water-programmed homeopathic remedies whose electromagnetic frequencies were similar to ones of their serums [53]. Physics emphasizes the role of the resonance phenomenon in the similia principle between energetic systems. Similia is also widely utilized in vaccinology, allergology, and Botox treatment for certain neurological disorders.

Scientific literature provides abundant support for the physics of living, humans, microbes, including coronaviruses, as macroquantum, biocomputer systems with magnetic components and energetic communication [54-77].

Modern medicine widely utilizes physical properties and magnetic elements of human tissues for common tests, ECG, EEG, MRI, and CT scans, yet scientists were baffled by the absence of the utilization of alternative biophysical tests and therapeutics such as homeopathy [78]. Specific submolecular fields also make each substance unique through the natural resonant frequency phenomenon, that can serve as the basis for programmed vaccinology, therapeutics, and scan-like diagnostic testing via resonance. Since viral mutations, such as SARS-CoV-2, with the corresponding change in their resonant frequency can be absorbed by water, it was proposed to create a library of submolecular microbial signatures in water samples, parallel to their molecular genomes [79]. Common diagnostic tools, biospectroscopy, vibrational spectroscopy, and mass spectrometry, are based on the same concept, the presence and detection of electromagnetic fields of microorganisms, such as coronaviruses, and chemicals, including pollutants [80-82].

All of these factors are based on the fundamental matter-energy duality concept and natural resonant frequency phenomenon for all living and nonliving, which offer a deeper parallel dimension of molecular biology and any pathogen that is more amenable to research, diagnosis, and specific and safe treatments [83]. Diagnostic possibilities at this level aim to overcome difficulty in identifying precise causes of pathophysiological terrain of disease-pathogens and key afflicted organs. These can be determined through field-to-field resonant interaction directly with the internal organs, including the immune, using samples of organs and pathogens. The response to this testing can be elicited through a change in the muscle tone of a patient, and possibly other neuro-reflexory reactions. The natural resonant frequency of the brain cells was already proposed for a new diagnostic method and resonance-based testing has been reported as sensitive and specific for early cancer detection [84-85]. Alternative medicine has used one of the bioresonance tests based on the resonance phenomenon, applied kinesiology [86-88].

Water programming in medicine and its alleged controversies:

One of the platforms for programming water is represented by its oldest prototype, which has established most of the scientific confirmations, the FDA-registered therapy, homeopathy. It uses manual serial dilutions and mechanical impacts or potentization of a substance that produces a rising

piezoelectric effect for programming the field of substance into water. Despite the substantial scientific support for this process and biological actions of homeopathy, the mainstream medical literature still misrepresents it, by stressing only a dilution part of the preparation. Since dilutions of many remedies may exceed the Avogadro number, the conclusion becomes "overdilution" rendering "impossible biological effects". However, materials scientists and physicists deem this notion as "ignorance in and distortion of science," and "unnecessary confusion", akin to confusing physics with chemistry, since the energetic nature of these solutions is not subjected to the Avogadro number [89-90]. The elucidated structure and properties of homeopathic preparations consisted of cluster networks, crystal growth, epitaxy, dissipative structures, ferroelectricity, and coherence based on quantum electrodynamics and quantum field theory (OFT) of superradiance [91-94]. The key programming process of delivering mechanical impacts, potentization correlated with an exponential rise in the remedies' electric voltage, with these registering individual electromagnetic signatures [95-96]. Nuclear magnetic resonance and other instrumentation registered different remedy patterns against the controls, and the physicochemical properties of these preparations were elucidated by other authors [97-102].

Many of the cited studies and those that registered gene expressions, EEG, and immune responses, abolition of infections, and cancer concerned remedies diluted beyond the Avogadro number

[103-110]. A simplified manual method, Korsakov, can be also used by physicians for preparing energetic vaccines-therapeutics from infected, and antidotes from intoxicated bodily fluids [111]. Other water programming platforms conduct it electronically or magnetically, producing homeopathic-like remedies [112-113].

Experiments, including those by Nobelist and virologist Montagnier, with bacteria and viruses, demonstrated their signal absorption in water and biological effects of even electronically transmitted information of programmed water samples, including antimicrobial and anticancer drugs [114-134].

The paramagnetic and overall plastic properties of this media make it an ideal liquid CD that can readily change its structure and information by mechanical, electromagnetic, or magnetic impacts. This renders a unique versatility for the recording and delivery of specific therapeutic information that can also be promptly provided in medical emergencies, in any setting. The notion of the water-mirror approach is based on evidence of the water molecular networks behaving as a matter and energy mirror for biological or aqueous systems [135]. To underscore the water's plasticity, its structure, pH, and dissolved DNA have been altered even by imponderable human intention, with the brain being known to emit electric and magnetic fields [136]. Biochemical and biological impacts were registered following the magnetic and electromagnetic transfer of molecular information in water [137-159].

Besides water being capable of delivering external therapeutic signals to the body, it is its major biological component that acts as an internal conductor of electromagnetic communications due to its colloidal, crystalline nature extending to DNA [160-172].

Studies of energetic water vaccines and therapeutics:

Immunological studies demonstrated the efficacy of homeopathic medicines in addressing immunity and inflammation [173]. Beneficial immune responses were induced by water- programmed homeopathic flu vaccines with influenza strains, and clinical trials displayed overall 90% efficacy and a 97% safety of homeopathic preparations in flu epidemics [173-176]. Among the registered immune markers were MDCK, TNF-*a*, and PFK-1, with TNF-*a* known to activate and provide protective immune responses against influenza [173]. One of the studies was a double-blind placebo-controlled trial of the homeopathic swine flu (H3N2) vaccine [174]. This virus caused up to 5 million deaths worldwide and 100 thousand deaths in the US in the 1968 pandemic. It has dominated

seasonal flu pandemics in the 21st century, causing the highest morbidity and mortality, before COVID-19. The study yielded a 30.5% flu incidence in the placebo group and only 1%, in the homeopathic vaccine recipients. COPD patients demonstrated significantly fewer upper respiratory infections when the homeopathic remedy, made from a reticuloendothelial system organ, was added to their drug regimen, in comparison to the group on the drugs, alone [177].

A recent study for alternatives to flu vaccines in pandemics, which was cosponsored by the NIH and conducted by virologists, recommended the use of homeopathic influenza vaccines, as "an ideal choice", in the absence of an effective pharmaceutical vaccine [178]. Scientists associated with the FDA and the Department of Defense issued a similar recommendation in the events of biological or chemical terrorism and underscored "little attention that has been given to this promising approach" [179]. Studies displayed the efficacy of homeopathic antidotes against toxicants and case reports of homeopathic-like remedies against infectious and toxicological agents. [111, 179-182].

In one of the largest studies in infectious diseases conducted by immunologists and infectologists from the Cuban counterpart of the NIH, on 2.4 million people, a leptospirosis homeopathic vaccine eliminated morbidity and mortality of this serious endemic with the mortality rate up to 15%, far exceeding that of SARS-CoV-2 [183]. It was well-tolerated, as effective as a conventional vaccine, while costing ten times less.

Sources of energetic vaccines and therapeutics:

Besides microbial cultures, the source for the energetic vaccines can be the infected bodily fluids and tissues— autoisopathy—with the FDA having registered many autoisopathic homeopathic remedies.

The cancerous homeopathic autoisode, Carcinosin, that produced apoptosis of cancerous cells, in a smallpox lesion became the first successful vaccine, and current personalized cancer vaccines validate the concept [104].

Saliva autoisodes were successfully used in the prevention and treatment of SARS-CoV-2 and variants using programmed water, with saliva containing significant viral load in COVID-19 [184-188].

Management of the presented cases of long COVID were based on the elucidated scientific premises and interventions.

Materials and Methods:

All of the patients were initially diagnosed with COVID-19 based on laboratory tests and treated by their primary care physicians.

Applied kinesiology testing was used to explore the putative causes of COVID chronicity. Samples of homeopathic organs and infectious and toxicological agents that were obtained from homeopathic pharmacies were utilized for bioresonance screenings of the internal organs to elicit their malfunction and responsible causes. Homeopathic-like remedies that were prepared from saliva or nasal swab of COVID patients throughout the pandemic, were used for the identification of the original SARS-CoV-2 and its variants. Determination of the different variants was conducted empirically, based on consistent curative responses to these remedies during the corresponding dominant periods of these infections. It is a well-known fact that laboratory COVID-19 antigen and PCR tests were generally unable to identify specific variants.

The test is performed with a patient in a supine position on an examining table, holding a metal rod that is connected to a metal platform through a cable that forms a conductive circuit between the patient and the platform. When glass vials with energetic imprints of body organs, toxicological, infectious, or other pathogens are separately placed on the platform, a person senses their corresponding fields and responds with an involuntary muscle stress response, if a tested substance is related to one's pathology. Muscle response manifests by a change in muscle tone and a slight upward

movement of the right leg. This reaction can be likened to acknowledgment of meaningful information, as in a lie detector test through stressful brain wave patterns. Due to the fact that multiple intertwined connections exist between the skin and internal organs representing biological conductors that form a conducting circuit, it is challenging to eliminate its exact confines. Among the tissues and phenomena are electrical signaling of the brain, spinal cord, sensory and motor nerves, and visceral reflexes of the autonomic nervous system, as well as widespread connective tissue and biological water [189]. A tester detects the muscle response by holding hands on the subject's ankles. In the event of a tested substance not being part of the pathology or stressful information, muscle response is absent. The test can also suggest the potential benefit, absence, or iatrogenicity of a therapeutic. A projected benefit is alleged when placement of a therapeutic on a testing platform alleviates a muscle stress response against a dysfunctional organ and/or its cause. A therapeutic substance that fails to produce this is deemed ineffective and if it enhances muscle stress response, iatrogenic. Remedy prescriptions were based on the findings of the bioresonance test, with the aim of neutralizing pathogens and stimulating recovery of the afflicted organs. In cases of a virtual service, prescriptions were based on the heuristic method that entailed addressing pathogens and malfunctioned organs, based on detailed medical, toxicological, and lifestyle history.

Results:

Perhaps, due to a positive preventative and curative experience of this method in this pandemic, long COVID was rarely encountered in this practice, with a total of five patients with this pathology having been treated and presented here. Three of these patients were new and two were established, who were last seen before the pandemic. Four of them promptly recovered, and another after three treatments, due to the supervened clinical circumstances. Multi-organ malfunctions, environmental causes such as mercury, excessive electromagnetic screen radiation, residues of antibiotics, and multiple infections, were determined either based on the test findings or clinically through symptomatology and history. Additionally, the harm of common medicinal substances or ones that are promoted as healthy, certain "mineral-rich" salts, were deemed to contain toxicants that were also supported by scientific literature.

Case 1:

A seventy-year-old female was fully vaccinated with the mRNA vaccine a year and a half before she contracted COVID in September 2022. Her mild flu symptoms subsided at the time after Paxlovid, but brain fog, irritability with bouts of anger, dizziness, depression, decreased memory, body imbalance, and fatigue worsened. Alternative treatments brought insignificant relief.

She was initially evaluated in January 2024 and received remedies that were made of a variant, mercury (history of 16 silver amalgam fillings containing 50% mercury) hippocampus, brain- capillaries, and kidney to aid mercury excretion. Five weeks later she reported complete recovery and confirmed it four months later.

Case 2:

A seventy-three-year-old alternative medicine practitioner who, following COVID in November 2020, complained of "sensing something inside of my head", a stuffy, foggy brain, impaired short- term memory, body imbalance, neuropathy with pain in the lower legs, and the overall feeling of falling apart with being on the verge of a nervous breakdown. Old, pre-COVID symptoms included tinnitus, arthritic knee pain, sciatica, and genital herpes. Her neurological diagnosis was brain COVID, but the prescribed physical therapy and self-administered alternative treatments helped marginally.

Following her initial evaluation in January 2023, she received combination remedies of two variants, brain-mercury (history of several

silver amalgam fillings) and multiple brain regions. Other remedies: the hippocampus, frontal lobe, imprinted computer rays to antidote the excessive computer radiation in the brain (prolonged computer use at work), peripheral nerve tissue, lymphatic system, musculoskeletal apparatus, and kidney to detoxify mercury. Her therapeutic response: "I feel like COVID is gone from my brain, like something was inside of my head and gone, my fear of highway driving disappeared because I no longer feel out of control." Other progress was the resolution of genital herpes, and much-improved balance that was confirmed by her physical therapist, decreased tinnitus, sciatica, and knee pain.

The second protocol contained combination remedies of frontal lobe mercury, multiple brain regions, and single remedies for another COVID-19 variant, brain, lymphatic system, and kidney. Following this she reported a further increase in balance, cessation of tinnitus, and that "my brain works so much better." She confirmed her lasting recovery and satisfaction, in July 2024, by "having my brain back" and stated that further treatment was unnecessary.

Case 3:

A fifty-six-year-old woman with decreased sense of taste and smell, excessive thirst, chronic cough, frequent colds, and low energy for three years following acute COVID in 2020, and chronic arthralgia from Lyme disease. She started her remedies in December 2023, against a variant, candida tropicalis, helminth parasites, mercury in the large intestine, salt (known to contain mercury and other toxic metals), strep pneumonia, and borrelia burgdorferi. Thyroid (history of nodules) and lymphatic system remedies were also prescribed, to aid detoxification of mercury and stimulation of function. Six weeks later she reported a near-complete recovery that became complete weeks after.

To note, homeostatic adjustments to homeopathic and like energetic signals may last up to several months.

Case 4:

A one-year-old male presented in April 2024 with neurological symptoms since being diagnosed with COVID-19 in January 2024, had involuntary head movements that were deemed partial seizures by a neurologist, OCD, and tiptoe walking with turning around. The preexisting health problems consisted of restless legs syndrome, regurgitating liquid food formulas, aversion to and spitting milk, intermittent diarrhea, bursts of energy at bedtime, and waking up 2-5 times, nightly.

Neurological and pediatric care failed to elicit the etiology of or mitigate these disorders. His blood tests indicated only a slight decrease in hemoglobin, and the brain MRI of March 2024 reported hyperintense signals in parietal white matter and toward the overlying cortex. He received separate remedies against helminth parasites and candida albicans infections (history of repeated antibiotics), and residues of antibiotics in the gut. A combination of small intestine mucosa-mercury remedies and separate ones, brain, and kidney were dispensed. Following this treatment, his regurgitations of formulas and milk, diarrhea, multiple nocturnal awakenings, and restless legs syndrome ceased. Yet, after the report contradicted the expected clinical progress in head movements, further questioning elicited the history of a new respiratory infection of unknown etiology, and sources of potential repoisoning with mercury through Himalayan salt that was used in cooking, and topical Vaseline applications prescribed by a dermatologist. The mother noted the increase of head movements during the days of the Vaseline use and that it is a petroleum derivative.

Toxicological literature indicates that all of the earth-derived products, such as mined salt and petroleum, commonly contain toxic metals, including mercury. Based on this information and clinical picture of the malfunctioned lymphatic system, brain, and colon, likely from mercury toxicity, he was given the corresponding remedies to stimulate their detoxification and function. Remedies of Himalayan salt antidote and COVID-19 variants to address his acute cold symptoms were also

prescribed and recommendations were made to abstain from Himalayan salt and Vaseline.

The follow-up, months later, indicated that the cold was promptly resolved, head movements and OCD remained, but he had another setback with a new COVID variant diagnosis by a laboratory, that he clinically recovered on his own. The mother stated that, overall, he was doing great.

His last protocol contained remedies of a COVID variant, brain, hippocampus-mercury, and lymphatic system. Following this regiment, the boy's grandfather emailed a statement that both OCD and abnormal head movements were resolved.

Case 5:

A 69-year-old male presented in October 2024 with the chief complaint of chronic fatigue and intermittent cold symptoms for some five months. Other relevant medical history contained complete Pfizer vaccination in 2021 with experiencing severe heart palpitations after the second injection, being diagnosed with COVID in 2022, and regularly consuming sweets. His remedies consisted of a chronologically recent variant, lymphatic system combined with mercury (history of amalgam fillings), Pfizer vaccine antidote, Epstein-Barr virus, thymus, combined candida strains, helminth parasites, large intestine mucosa, kidney, and hypothalamus.

After his return in January 2025, he stated that several days after his previous visit his home COVID-19 test confirmed him carrying the virus. He also stated that his fatigue started significantly lifting following the first three remedies and, consequently, his energy level was completely restored.

Discussion:

Based on the presented recovered cases that were managed through specific treatment matching pathogens and afflicted organs, long COVID appears to be a multifactorial chronic disease. The methodological limitations of the presented case management lack rigor due to a small group size, and difficulty in confirming most of the findings by laboratory assessments, largely because of their aforementioned limitations. Professional pressure to provide timely relief to patients, without waiting for tests with marginal clinical weight, was also a factor. However, dozens of rigorous research studies that failed to resolve long COVID and thousands of randomized clinical trials (RCTs) of other chronic infections and diseases, raise more important scientific issues than rigor. Even as the latter is necessary for confirming a scientific theory, it is the meaning or its scholastic weight that ultimately achieves the actual goal of sciencesolutions to complex problems. The second law of thermodynamics of physics edifies that no amount of rigor with its studies can ever accomplish a construction of timeless technology that is based on its internal energy source.

In this context, the NIH's admission, in the Road Map Initiative of 2004, that the pharmaceutical medical model failed in its "bench to bedside" strategy to solve chronic diseases, despite a century length of research and numerous studies, raises the notorious issue of Kuhnian paradigms and their theories [190]. There, questions of the necessity of more research must also concern the revision of a dominant paradigm, whenever failures to solve similar problems are common, particularly when it is deemed to be dated by its own scientists. They state its inability to match functional interdependencies between the vast molecular components with intracellular and intercellular networks in chronic diseases [191]. It concerns identifying and properly addressing etiologic factors of both chronic infections and diseases. In a search for answers, medical literature has also started revising the long-adopted "bench to bedside" strategy for medical practice, which long- - neglected the input of bedside servants, physicians. It encourages the cultivation of their capabilities in solving pathologies over the mere volume of dictated knowledge, by academia and studies, and deems the exclusion of physicians from participation in improving quality of care

Auctores Publishing LLC – Volume 24(1)-716 www.auctoresonline.org ISSN: 2690-4861

counterproductive [192-193]. Ultimately, both hypotheses of physicians and ones behind rigorous studies, produce the same scientific denominator-observation. Besides the fact that the weight of RCTs' generated observations has no priori over the one by physicians, the latter holds an advantage in displaying failure or success, faster. Considering the aforementioned complexity and multisystemic nature of chronic pathologies, interdisciplinary scientists suggested widening their epistemological match through broader sciences and their based interventions, at the interface of biology and physics that the presented cases reflect. This raises a divisive issue of conventional and alternative therapies that was addressed by an editorial that stated: "There cannot be two kinds of medicine, conventional and alternative, once a treatment has been tested rigorously and found to be reasonably safe and effective" [194]. Even as these authors displayed the aforementioned "distortion of and ignorance in science" concerning homeopathy, the latter was tested rigorously and produced reasonably safe and effective outcomes in infectious diseases.

Despite the prevailing view in medical training of alternative medical interventions as mere esoteric, the scientific evidence presented in this report concerning the ability of some of these interventions to act at a submolecular dimension of organisms and employ the programmable capacity of water, carries no discernible scientific conflicts. Additionally, the observed positive responses to long COVID through this method raise the question of its potential applicability in vaccinology, and the treatment of infectious and chronic diseases. This extrapolation may be relevant since the ubiquitous environmental pollutants, infections, and other pathogens that play a dominant role in chronic diseases in industrialized nations, can be addressed through the *similia* principle.

Besides the presence of immunosuppressive factors in long COVID patients, the prolonged pandemic, the evolution of variants, and the need for sufficiently specific and effective vaccines raise questions about its resolution [195-198]. Yet, recent observational studies in COVID-19 produced encouraging results of programmed water vaccines and therapeutics [184]. Physics- based programmed vaccines combine the benefits of live vaccines in specificity by delivering microbe-specific information and the safety of attenuated vaccines, by having no risk of infectivity, thereby optimizing the likelihood of maximum neutralizing immunity. Also, due to the same benefits and unlike pharmaceutical vaccines, they can also be used therapeutically, saving significant time and resources in developing new vaccines, and drugs in case of emergent pandemics and other infections.

Recent academic publications further support the vantage point of utilizing the interface of biology and physics in medicine, by presenting more positive results in addressing the variety of biological and environmental targets and calling for a "time to go quantum in medicine" [199-200]. This interface might also offer a real opportunity for far more productive utilization of relevant medical molecular research and knowledge, which often remain disjoined from solutions, by communicating these through a parallel submolecular domain of human physiology. This may lead to both uncovering the root causes of chronic infections and diseases and their successful therapies.

Conclusion:

As this case report suggests, long COVID presents a multifactorial disease that can be resolved at a deeper ontological level of nature. Well-designed studies are necessary to probe this approach on a larger scale for long COVID and other chronic infections, where positive results may lead to novel medical technologies in vaccinology, diagnosis, and treatment.

References:

- 1. Rustagi, V., et al. (2024). SARS-CoV-2 pathophysiology and post-vaccination severity: A systematic review. *Immunologic Research*. Advance online publication.
- 2. Munblit, D., et al. (2024). Interventions for the management of

long COVID (post-COVID condition): Living systematic review. *BMJ*, 387, e081318.

- Weaver, A. K., Head, J. R., Gould, C. F., Carlton, E. J., & Remais, J. V. (2022). Environmental factors influencing COVID-19 incidence and severity. *Annual Review of Public Health*, 43, 271– 291.
- 4. Barouki, R., et al. (2021). The COVID-19 pandemic and global environmental change: Emerging research needs. *Environment International*, *146*, 106272.
- 5. Sattler, C., et al. (2017). Nanoparticle exposure reactivates latent herpesvirus and restores a signature of acute infection. *Particle and Fibre Toxicology*, *14*(1), 2.
- Bilsma, R., & Cohen, M. (2016). Environmental chemical assessment in clinical practice: Unveiling the elephant in the room. *International Journal of Environmental Research and Public Health*, 13(2), 181.
- Burns, L., Meade, B., Munson, A., & Klaassen, C. (1995). Toxic responses of the immune system. In C. D. Klaassen (Ed.), *Casarett and Doull's toxicology*. McGraw Hill.
- 8. Adami, G., et al. (2022). Association between long-term exposure to air pollution and immune-mediated diseases: A population-based cohort study. *RMD Open*, *8*(1), e002055.
- 9. El-Rhermoul, F.-Z. (2023). Autoimmunity in long COVID and POTS. *Oxford Open Immunology*, *4*(1), iqad002.
- Kostoff, R. (2021). Prevention and reversal of chronic diseases: A protocol. *Public Health Toxicology*, 1(2), 10.
- Dean, J., Luster, M., Munson, A., & Kimber, I. (1994). *Immunotoxicology and immunopharmacology* (2nd ed.). Raven Press.
- 12. Zelikoff, J. T., & Gardner, D. E. (1996). Section VII: Immunomodulation by metals. In L. W. Chang (Ed.), *Toxicology* of metals (pp. xx-xx). CRC Press.
- 13. Chang, L. W. (1990). Toxicology of metals. CRC Press.
- Ijomone, O. M., Ijomone, O. K., Iroegbu, J. D., Ifenatuoha, C. W., Olung, N. F., & Aschner, M. (2020). Epigenetic influence of environmentally neurotoxic metals. *NeuroToxicology*, 81, 51–65.
- 15. Kostoff, R. N., Goumenou, M., & Tsatsakis, A. (2018). The role of toxic stimuli combinations in determining safe exposure limits. *Toxicology Reports*, *5*, 1169–1172.
- Peters, A., Nawrot, T. S., & Baccarelli, A. A. (2021). Hallmarks of environmental insults. Cell, 184(6), 1455–1468.
- 17. Li, Z., Dong, T., Pröschel, C., & Noble, M. (2007). Chemically diverse toxicants converge on Fyn and c-Cbl to disrupt precursor cell function. *PLoS Biology*, *5*(2), e35.
- Al-Saleh, I., Shinwari, N., Mashhour, A., Mohamed, G., & Rabah, A. (2011). Heavy metals (lead, cadmium, and mercury) in maternal, cord blood and placenta of healthy women. *International Journal of Hygiene and Environmental Health*, 214(2), 79–101.
- 19. Etzel, R., & Balk, S. (1999). *Handbook of pediatric environmental health*. Committee on Environmental Health, American Academy of Pediatrics.
- Rogan, W. J. (1996). Pollutants in breast milk. Archives of Pediatrics & Adolescent Medicine, 150(9), 981–990.
- Dórea, J. G. (2004). Mercury and lead during breast-feeding. British Journal of Nutrition, 92(1), 21–40.
- 22. Städtler, P. (1991). Dental amalgam. II: Exposure to mercury. International Journal of Clinical Pharmacology, Therapy, and Toxicology, 29(4), 164–167.
- Mutter, J., Naumann, J., Sadaghiani, C., Walach, H., & Drasch, G. (2004). Amalgam studies: Disregarding basic principles of mercury toxicity. *International Journal of Hygiene and Environmental Health*, 207(4), 391–397.
- Mutter, J., Naumann, J., Sadaghiani, C., Walach, H., & Drasch, G. (2004). Amalgam studies: Disregarding basic principles of mercury toxicity. *International Journal of Hygiene and*

Environmental Health, 207(4), 391–397.

- Huang, S. L., Li, D., Yu, X., & Li, B. (2014). Mercury poisoning: A case of a complex neuropsychiatric illness. *American Journal of Psychiatry*, 171(12), 1327–1329.
- Gardner, R., & Nyland, J. (2016). Immunotoxic effects of mercury. In *Environmental influence on the immune system*. Springer.
- Indu, M. V., Shetty, R., & Hegde, A. (2015). Mercury exposure levels in children with dental amalgam fillings. *International Journal of Clinical Pediatric Dentistry*, 7(3), 180–185.
- 28. Juutalainen, J., et al. (2006). Do extremely low-frequency magnetic fields enhance the effects of environmental carcinogens? A meta-analysis of experimental studies. *International Journal of Radiation Biology*, 82(1).
- Ansarihadipour, H., & Bayatiani, M. (2016). Influence of electromagnetic fields on lead toxicity: A study of conformational changes in human blood proteins. *Iranian Red Crescent Medical Journal*, 18(7), e28050.
- 30. Amara, S., Douki, T., et al. (2011). Effects of static magnetic field and cadmium on oxidative stress and DNA damage in rat cortex brain and hippocampus. *Toxicology and Industrial Health*, 27(2), 99–106.
- Shahidi, S. H., Bronoosh, P., Alavi, A. A., Zamiri, B., Sadeghi, A. R., et al. (2009). Effect of magnetic resonance imaging on microleakage of amalgam restorations: An *in vitro* study. *Dentomaxillofacial Radiology*, 38(7), 470–474.
- 32. Johansson, O. (2009). Disturbance of the immune system by electromagnetic fields: Potentially underlying cause for cellular damage and tissue repair reduction which could lead to disease and impairment. *Pathophysiology*, *16*(2–3), 157–177.
- Boscolo, P., Di Gioacchino, M., Di Giampaolo, L., Antonucci, A., & Di Luzio, S. (2007). Combined effects of electromagnetic fields on immune and nervous responses. *International Journal of Immunopathology and Pharmacology, 20*(2 Suppl 2), 59–63.
- 34. Chang, L. W. (Ed.). (1996). Toxicology of metals. CRC Press.
- 35. Schult, D et al., (2022). Gut bacterial dysbiosis and instability is associated with the onset of complications and mortality in COVID-19. Gut Microbes, 14(1), 2031840.
- Mavor, A. L., Thewes, S. and Hube, B. Systemic fungal infections caused by Candida species: epidemiology, infection process and virulence attributes. Current Drug Targets. 2005 Dec;6(8):863-74.
- 37. Calderone, R. A. (Ed.). (2002). Candida and candidiasis. ASM Press.
- Hernàndez-Chàvez, M., Pérez-Garcia, L. A., Niño-Vega, G., & colleagues. (2017). Fungal strategies to evade the host immune recognition. Journal of Fungi (Basel), 3(4), 51.
- Yang, J. H., Bhargava, P., McCloskey, D., Mao, N., Palsson, B. O., & Collins, J. J. (2017). Antibiotic-induced changes to the host metabolic environment inhibit drug efficacy and alter immune function. *Cell Host & Microbe*, 22(6), 757–765.e3.
- 40. Han, H., Yan, H., & King, K. Y. (2021). Broad-spectrum antibiotics deplete bone marrow regulatory T cells. *Cells*, *10*(2), 277.
- 41. Shane A. L. (2014). Missing Microbes: How the Overuse of Antibiotics Is Fueling Our Modern Plagues. *Emerging Infectious Diseases*, 20(11):1961.
- 42. Maizels, R. M., & McSorley, H. J. (2016). Regulation of the host immune system by helminth parasites. *Journal of Allergy and Clinical Immunology*, *138*(3), 666-675.
- 43. Frank, K., et al. (2024). SARS-CoV-2 S1 subunit produces a protracted priming of the neuroinflammatory, physiological, and behavioral responses to a remote immune challenge: A role for corticosteroids. *Brain, Behavior, and Immunity, 121*, 87–103.
- 44. Deutsch, D. (2011). *The fabric of reality*. London, England: Penguin UK.
- 45. Pollack, G. (2013). The fourth phase of water: Beyond solid,

liquid, and vapor. Seattle, WA: Ebner and Sons Publishers.

- Thomas, Y. (2015). From high dilutions to digital biology: The physical nature of the biological signal. *Homeopathy*, 104(4), 295-300.
- Dürr, H. (2002). Are biology and medicine only physics? Building bridges between conventional and complementary medicine. *Bulletin of Science, Technology & Society, 22*(5), 338– 351.
- 48. Mattson, M. P. (2008). Hormesis and disease resistance: Activation of cellular stress response pathways. *Human & Experimental Toxicology*, 27(2), 155–162.
- 49. Bellavite, P., Chirumbolo, S., & Marzotto, M. (2010). Hormesis and its relationship with homeopathy. *Human & Experimental Toxicology*, 29(7), 573–579
- 50. Wiegant, F., & Van Wijk, R. (2010). The similia principle: Results obtained in a cellular model system. *Homeopathy*, *99*(1), 3–14.
- 51. Del Giudice, E., & Tosi, M. (2019). The principle of minimal stimulus in the dynamics of the living organism.
- 52. Chattopadhyay, R, Sadhukhan M, Pal A, Sutradhar A, Syam P, et al. (2012) On electromagnetic signals from vastly diluted DNA solutions, potentized medicines and even metals. *Wesleyan Journal of Research* 5(1): 50-55.
- 53. Chattopadhyay, R., & Mahata, C. R. (2016). A fundamental study to observe the correlation at the molecular level between biosamples of patients and indicated homeopathic medicines. *International Journal of High Dilution Research*, 15(3), 11–17.
- 54. McFadden, J., & Al-Khalili, J. (2018). The origins of quantum biology. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, 474(2220), 674.
- 55. Cifra, M., & Fields, J. Z. (2011). Electromagnetic cellular interactions. *Progress in Biophysics and Molecular Biology*, 105(3), 223–246.
- Pollock, J. K., & Pohl, D. C. (1988). Emission of radiation by active cells. In H. Fröhlich (Ed.), *Biological coherence and response to external stimuli* (pp. 140–147). New York, NY: Springer.
- 57. Reguera, G. (2011). When microbial conversations get physical. *Trends in Microbiology*, *19*(3), 105–113.
- 58. Posfai, M., Dunin-Borkowski, R. E. Magnetic nanocrystals in organisms. *Elements 2009; 5*(4): 235-240.
- 59. Binhi, V. N. (2002). *Magnetobiology: Underlying physical* problems. San Diego, CA: Academic Press.
- 60. Chaturvedi, U., & Shrivastava, R. (2005). Interaction of viral proteins with metal ions: Role in maintaining the structure and functions of viruses. *FEMS Immunology and Medical Microbiology*, *43*, 105–114.
- 61. Smith, C. (1997). Is a living system a macroscopic quantum system? *Frontier Perspectives*, 7(1).
- 62. Tiller, A. (1976). Toward a future medicine based on controlled energy fields. *Presentation at the Association for Research and Enlightenment Medical Symposium*, Phoenix, AZ.
- 63. Kwiatkowska, M. Z., & Heath, J. K. (2009). Biological pathways as communicating computer systems. *Journal of Cell Science*, *122*(16), 2793–2800.
- Fröhlich, H. (1986). Coherent excitations in active biological systems. In F. Gutmann & H. Keyzer (Eds.), *Modern bioelectrochemistry* (pp. 241–261). Plenum Press.
- 65. Adey, W. R. (1988). Physiological signaling across cell membranes and cooperative influences of extremely low-frequency electromagnetic fields. In H. Fröhlich (Ed.), *Biological coherence and response to external stimuli* (1st ed., p. 148). Springer.
- Ćosić, I. (1994). Macromolecular bioactivity: Is it resonant interaction between macromolecules? – Theory and applications. *IEEE Transactions on Biomedical Engineering*, 14, 1101–1114.
- 67. Melkikh, A. V., & Khrennikov, A. (2015). Nontrivial quantum and Auctores Publishing LLC – Volume 24(1)-716 www.auctoresonline.org

ISSN: 2690-4861

quantum-like effects in biosystems: Unsolved questions and paradoxes. *Progress in Biophysics and Molecular Biology*, 119(2), 137–161.

- Press, W., Hawkins, J., Jones Jr, S., Schaub, J., Finkelstein, I., et al. (2020). HEDGES error- correcting code for DNA storage corrects indels and allows sequence constraints. *PNAS*, 117(31), 18489–18496.
- Bischof, M. (1998). Holism and field theories in biology nonmolecular approaches and their relevance to biophysics. In J. Chang, J. Fisch, & F. A. Popp (Eds.), *Biophotons* (1st ed.). Kluwer.
- Gariaev, P. P., Kaempf, U., Marcer, P., Tertishny, G., Birshtein, B., & Iarochenko, A. (2000). The DNA-wave biocomputer. Institute of Control Sciences, Russian Academy of Sciences, Moscow.
- 71. Gariaev, P. P. (2007). Theoretical models of wave genetics and reproduction wave immunity in the experiment. *New Medical Technologies, New Medical Equipment, 11*, 26–70.
- 72. Pokorny, J., & Wu, T. M. (1998). *Biophysical aspects of coherence and biological order*. Springer New Academia Praha.
- Del Giudice, E., Doglia, S., Milani, M., Smith, C. W., & Vitiello, G. (1989). Magnetic flux quantization and Josephson behavior in living systems. *Physica Scripta*, 40(6), 786–791.
- 74. Hong, F. T. (1999). *Molecular electronics, biosensors, and biocomputers*. Plenum Press.
- 75. Bischof, M. (2000). Field concepts and the emergence of a holistic biophysics. In L. V. Beloussov, V. L. Voeikov, & R. Van Wijk (Eds.), *Biophotonics and coherent structures*. Moscow University Press.
- Benveniste, J. (2014). A fundamental basis for the effects of EMFs in biology and medicine: The interface between matter and function. In P. J. Rosch (Ed.), *Bioelectromagnetic and subtle energy medicine* (pp. 31–33). Routledge.
- 77. Semiconductors in the human body? (1974). *Nature*, 248, 475.
- Durr, P., Popp, F., & Schommers, W. (2002). What is life? Scientific approaches and philosophical positions. World Scientific Publishing Company.
- Srivastava Y, Sassaroli E, Swain J, Widom A, Narain M, Montmollin G. (2020) Non-chemical signatures of biological materials: Radio signals from COVID-19? *Electromagnetic Biology and Medicine*; 39(4):340-346.
- 80. Khan, R., & Rehman, I. (2020). Spectroscopy as a tool for detection and monitoring of Coronavirus (COVID-19). *Expert Review of Molecular Diagnostics*, 20.
- Santos, M. C. D., Morais, C. L. M., Nascimento, Y. M., Araujo, J. M. G., & Lima, K. M. G. (2017). Spectroscopy with computational analysis in virological studies: A decade (2006– 2016). *Trends in Analytical Chemistry*, 97, 244–256.
- 82. Ho, Y-P., & Reddy, P. (2010). Identification of pathogens by mass spectrometry. *Clinical Chemistry*, *56*(4).
- Halliday, David; Resnick, Robert; Walker, Jearl (2005). Fundamentals of Physics. Vol. part 2 (7th ed). John Wiley & Sons Ltd.
- 84. Goto, T., & Furihata, K. (2019). Natural resonance frequency of the brain depends on only intracranial pressure: Clinical research. *SSRN Electronic Journal.*
- 85. Vanelli, A., Battaglia, L., & Leo, E. (2010). Diagnosis of rectal cancer by tissue resonance interaction method. *BMC Gastroenterology*.
- 86. Cuthbert, S. C., & Goodheart, G. J. Jr. (2007). On the reliability and validity of manual muscle testing: A literature review. *Chiropractic & Osteopathy*, *15*(1), 4.
- 87. Kendall, H. O., & Kendall, F. P. (1971). *Muscle testing and function*. Williams & Wilkins.
- Schmitt Jr., W. H., & Leisman, G. (1998). Correlation of applied kinesiology muscle testing findings with serum immunoglobulin

levels for food allergies. *International Journal of Neuroscience*, 96(3–4), 237–244.

- Roy, R., et al. (2005). The structure of liquid water: Novel insights from materials research; Potential relevance to homeopathy. *Materials Research Innovations*, 9(4), 98–103.
- Widom, A., & Srivastava, Y. (2010). The biophysical basis of Benveniste experiments: Entropy, structure, and information in water. *International Journal of Quantum Chemistry*, 110(1), 252– 256.
- 91. Del Giudice, E. (1994). Is the "memory of water" a physical impossibility? In P. C. Endler & J. Schulte (Eds.), *Ultra high dilution* (pp. 117–119). Kluwer Academic Publishers.
- 92. Mahata, C. R. (2017) Quantum electro-dynamics helps homeopathy achieve its scientific basis (paving the way for a generalized concept of medicine). *International Journal of High Dilution Research*
- Del Giudice, E., & Preparata, G. (1998). A new QED picture of water: Understanding a few fascinating phenomena. In E. Sassaroli et al. (Eds.), Macroscopic quantum coherence (pp. 108– 119). World Scientific Publishing Co. Pte. Ltd.
- Preparata, G. (1990). Quantum field theory of superradiance. In R. Chrubini, P. Dal Piaz, & B. Minette (Eds.), *Problems of fundamental modern physics*. World Scientific Publishing Co. Pte. Ltd.
- Bhattacharya, T., et al. (2019). Investigation of the origin of voltage generation in potentized homeopathic medicine through Raman spectroscopy. *Homeopathy*, 108(2), 121–127.
- 96. Hari, N., & Bhargaw, H., et al. (2023). Unraveling the lowfrequency triggered electromagnetic signatures in potentized homeopathic medicine. *Materials Science and Engineering: B*.
- 97. Smith, R., & Boericke, G. W. (1966). Modern instrumentation for the evaluation of homeopathic drug structure. *Journal of the American Institute of Homeopathy*, 59, 263.
- Sachs, A. D. (1983). Nuclear magnetic resonance spectroscopy of homeopathic remedies. *Journal of Holistic Medicine*, 5, 172–175.
- Demangeat, J. L. (2009). NMR water proton relaxation in unheated and heated ultrahigh aqueous dilutions of histamine: Evidence for an air-dependent supramolecular organization of water. *Journal of Molecular Liquids*, 144(1), 32–39.
- Rey, L. (2003). Thermoluminescence of ultra-high dilutions of lithium chloride and sodium chloride. *Physica A: Statistical Mechanics and Its Applications*, 323, 67–74.
- 101. Klein, S., Würtenberger, S., Wolf, U., Baumgartner, S., & Tournier, A. (2018). Physicochemical investigations of homeopathic preparations: A systematic review and bibliometric analysis – Part 1. *The Journal of Alternative and Complementary Medicine*, 25(9).
- 102. Tournier, A., Klein, S., Würtenberger, S., Wolf, U., & Baumgartner, S. (2019). Physicochemical investigations of homeopathic preparations: A systematic review and bibliometric analysis – Part 2. *The Journal of Alternative and Complementary Medicine*, 25(9), 890–901.
- Dei, A., & Bernardini, S. (2015). Hormetic effects of extremely diluted solutions on gene expression. *Homeopathy*, 104(2), 116– 122.
- Frenkel, M., Mishra, B. M., Sen, S., Yang, P., Pawlus, A., Vence, L., et al. (2010). Cytotoxic effects of ultra-diluted remedies on breast cancer cells. *International Journal of Oncology*, *36*(2), 395–403.
- Bell, I. R., Lewis II, D., Lewis, S., Schwartz, G., Brooks, A., & Scott, A. (2004). EEG alpha sensitization in individualized homeopathic treatment of fibromyalgia. *International Journal of Neuroscience*, 114(9), 1195–1220.
- 106. Jonas, W., & Dillner, D. K. (2000). Protection of mice from tularemia infection with ultra- low, serial agitated dilutions prepared from *Francisella tularensis*-infected tissue. *Journal of*

Scientific Exploration, 14, 35–52.

- Camerlink, I. (2010). Homeopathy as a replacement for antibiotics in the case of *Escherichia coli* diarrhea in neonatal piglets. *Homeopathy*, 99(1), 57–62.
- Castro, D., Galvao, & Nogueira, J. W. (1974). Profilaxis de la meningitis con meningococcinum. *Homeopathia*, 41(5), 6–11.
- Davenas, E., Beauvais, F., Amara, J., Oberbaum, M., Robinzon, B., & Miadonnai, A. (1988). Human basophil degranulation triggered by very dilute antiserum against IgE. *Nature*, 333(6176), 816–818.
- Belon, P., Cumps, J., Ennis, M., Mannaioni, P. F., Sainte-Laudy, J., & Roberfroid, M. (1999). Inhibition of human basophil degranulation by successive histamine dilutions: Results of a European multi-centre trial. *Inflammation Research*, 48(0), 17– 18.
- 111. Yurkovsky, S. (2003). Biological, chemical, and nuclear warfare: Protecting yourself and your loved ones: The power of digital medicine. Guided Digital Medicine Series, *Science of Medicine Publishing*.
- 112. Korenbaum, V., Chernysheva, T., Galay, V., Galay, R., Ustinov, A., et al. (2019). On the reliability of spectral evidence of the electronic copying phenomenon used to produce homeopathiclike preparations in complementary medicine. *Water: A Multidisciplinary Research Journal*, 11, 1–13
- 113. Therapeutic frequency imprinting device (U.S. Patent No. 10,941,061).
- Montagnier, L., Aïssa, J., Ferris, S., Montagnier, J., & Lavalléee, C. (2009). Electromagnetic signals are produced by aqueous nanostructures derived from bacterial DNA sequences. *Interdisciplinary Sciences, Computational Life Sciences, 1*(2), 81–90.
- 115. Montagnier, L., Del Giudice, E., Aïssa, J., Lavallee, C., Motschwiller, S., & Capolupo, A. (2015). Transduction of DNA information through water and electromagnetic waves. *Electromagnetic Biology and Medicine*, 34(2), 106–112.
- Heredia-Rojas, J. A., Torres-Flores, A., De la Fuente, A., Mata-Cárdenas, B., Rodríguez- Flores, L., & Barrón-González, M. (2011). *Entamoeba histolytica* and *Trichomonas vaginalis*: Trophozoite growth inhibition by metronidazole electrotransferred water. *Experimental Parasitology*, 127, 80–83.
- 117. Heredia-Rojas, J. A., Villarreal-Treviño, L., Rodríguez-De la Fuente, A. O., Herrera- Menchaca, L. I., Gomez-Flores, R., Mata-Cárdenas, B. D., & Rodríguez-Flores, L. E. (2015). Antimicrobial effect of vancomycin electro-transferred water against methicillinresistant *Staphylococcus aureus* variant. *African Journal of Traditional, Complementary and Alternative Medicines, 12*, 104– 108.
- 118. Heredia-Rojas, J. A., Gomez-Flores, R., Rodríguez-de la Fuente, A., Monreal-Cuevas, E., Torres-Flores, A., Rodríguez-Flores, L., et al. (2012). Antimicrobial effect of amphotericin B electronically-activated water against *Candida albicans. African Journal of Microbiology Research*, 6, 3684–3689.
- 119. Folletti, A., Ledda, M., D'Emilia, E., Grimaldi, S., & Lisi, A. (2011). Differentiation of human LAN-5 neuroblastoma cells induced by extremely low-frequency electronically transmitted retinoic acid. *The Journal of Alternative and Complementary Medicine*, 17, 701–704.
- 120. Folletti, A., Ledda, M., D'Emilia, E., Grimaldi, S., & Lisi, A. (2012). Experimental findings on the electromagnetic information transfer of specific molecular signals mediated through aqueous systems on two human cellular models. *The Journal of Alternative and Complementary Medicine*, 18, 258–261.
- 121. Folletti, A., Ledda, M., Piccirillo, S., Grimaldi, S., & Lisi, A. (2014). Electromagnetic information delivery as a new tool in translational medicine. *International Journal of Clinical and Experimental Medicine*, 7, 2550–2556.

- 122. Benveniste, J. (1993). Molecular signaling at high dilution or by means of electronic circuitry. *Journal of Immunology*, *150*, 146A.
- 123. Benveniste, J. (1993). Transfer of biological activity by electromagnetic fields. *Frontier Perspectives*, *3*(2), 113–115.
- 124. Benveniste, J. (1994). Transfer of the molecular signal by electronic amplification. *Federation of American Societies for Experimental Biology (FASEB) Journal*, 9, A398.
- 125. Benveniste, J. (1995). Direct transmission to cells of a molecular signal via an electronic device. *Federation of American Societies for Experimental Biology (FASEB) Journal*, 9, A227.
- 126. Benveniste, J., Aissa, J., & Guillonet, D. (1999). A simple and fast method for in vivo demonstration of electromagnetic molecular signaling (EMS) via high dilution or computer recording. *Federation of American Societies for Experimental Biology (FASEB) Journal*, *13*, A163.
- 127. Benveniste, J., Aissa, J., Jurgens, P., & Hsueh, W. (1998). Digital biology: Specificity of the digitized molecular signal. *Federation of American Societies for Experimental Biology (FASEB) Journal*, *12*, A412.
- Benveniste, J., Aissa, J., Jurgens, P., & Hsueh, W. (1997). Transatlantic transfer of digitized antigen signal by telephone link. *Journal of Allergy and Clinical Immunology*, 99(1).
- 129. Benveniste, J., Kahhak, L., & Guillonnet, D. (1999). Specific remote detection of bacteria using an electromagnetic/digital procedure. *Federation of American Societies for Experimental Biology (FASEB) Journal*, 13, A852.
- Citro, M., Smith, C., Scott-Morley, A., Pongratz, P., & Endler, C. (1994). Transfer of information from molecules by means of electronic amplification: Preliminary studies. In P. C. Endler & J. Schulte (Eds.), Ultra high dilution (pp. 209–214). Springer Netherlands, Kluwer Academic Publishers.
- 131. Aissa, J. (1993). Transfer of molecular signals via electronic circuitry. *FASEB Journal*, 7, A602 (3489).
- 132. Endler, P. C., Pongratz, W., Smith, C. W., & Schulte, J. (1995). Non-molecular information transfer from thyroxine to frogs with regard to 'homeopathic' toxicology. *Journal of Veterinary and Human Toxicology*, *37*(3).
- 133. Thomas, Y. (1995). Direct transmission to cells of a molecular signal (*Phorbol Myristate Acetate*, PMA) via an electronic device. *FASEB Journal, in press* (Abstract).
- Seneskowitsch, F., Endler, P., Pongratz, W., & Smith, C. (1995). Hormone effects by CD record replay. *FASEB Journal*, 9(Abstract 12161).
- 135. Tsenkova, R. (2008). Aquaphotomics: The extended water mirror effect explains why small concentrations of protein in solution can be measured with near-infrared light. *NIR News*, *19*(4), 12–13.
- 136. Tiller, W. A. (2001). *Conscious acts of creation: The emergence of a new physics* (1st ed.). Pavior Publishing.
- Fesenko, E. E., & Gluvstein, A. (1995). Changes in the state of water induced by radio frequency electromagnetic fields. *FEBS Letters*, 367, 53–55.
- 138. Otsuka, I., & Ozeki, S. (2006). Does magnetic treatment of water change its properties? *The Journal of Physical Chemistry B*, *110*(4), 1509–1512.
- 139. Ozeki, S., & Otsuka, I. (2007). Transient oxygen clathrate-like hydrate and water networks induced by magnetic fields. *ChemInform, 38*(4).
- 140. Grewal, H. S., & Maheshwari, B. L. (2010). Magnetic treatment of irrigation water and snow pea and chickpea seeds enhances early growth and nutrient contents of seedlings. *Bioelectromagnetics*, 32(1), 58–65.
- 141. Dotta, B. T., Karbowski, L. M., Murugan, N. J., & Persinger, M. A. (2013). Incremental shifts in pH spring water can be stored as "space-memory:" Encoding and retrieval through the application of the same rotating magnetic field. *NeuroQuantology*, 11(4), 511–518.

- 142. Gang, N., & Persinger, M. A. (2011). Planarian activity differences when maintained in water pre-treated with magnetic fields: A nonlinear effect. *Electromagnetic Biology and Medicine*, 30(4), 198–204.
- 143. Gang, N., St-Pierre, L. S., & Persinger, M. A. (2012). Water dynamics following treatment by one hour 0.16 Tesla static magnetic fields depend on exposure volume. *Water*, *3*, 122–131.
- 144. Binhi, V. N. (2001). Theoretical concepts in magnetobiology. *Electro- and Magnetobiology*, 20(1), 43–58.
- 145. Norman, R., & Dunning-Davies, J. (2017). The informational magnecule: The role of aqueous coherence and information in biological dynamics and morphology. *American Journal of Modern Physics*, 6, 17.
- 146. Binhi, V., & Prato, F. (2017). Biological effects of the hypomagnetic field: An analytical review of experiments and theories. *PLOS ONE*, *12*(6), e0179340.
- 147. Cardella, C., Magistris, L., Florio, E., & Smith, C. (2001). Permanent changes in the physico-chemical properties of water following exposure to resonant circuits. *Journal of Scientific Exploration*, 25(4), 501–518.
- 148. Tsouris, P. A. (1995). *Investigation of coherent signals in water* (Doctoral dissertation). University of Surrey, Guildford, Surrey.
- 149. Toledo, E. J. L. (2008). Influence of magnetic field on physicalchemical properties of liquid water: Insights from experimental and theoretical models. *Journal of Molecular Structure*, 888(1– 3), 409–415.
- Pershin, S. M. (2013). Effect of quantum differences of ortho and para H₂O spin isomers on water properties: Biophysical aspect. *Biophysics*, 58(5), 723–730.
- Jerman, I., Ruzic, R., Krasovec, R., Skarja, M., & Mogilnicki, L. (2005). Electrical transfer of molecule information into water, its storage, and bioeffects on plants and bacteria. *Electromagnetic Biology and Medicine*, 24(3), 341–353.
- 152. Smirnov, J. V. (2003). *BioMagnetic hydrology: The effect of a specially modified electromagnetic field on the molecular structure of liquid water* (pp. 122–125). Global Quantec Inc.
- 153. Pang, X. F., & Deng, B. (2007). The changes of property of water under action of magnetic field and its mechanism of change [In Chinese]. *Chinese Journal of Atomic and Molecular Physics*, 24, 281–290.
- 154. Coey, J. M. D., & Cass, S. (2000). Magnetic water treatment. *Journal of Magnetism and Magnetic Materials*, 209, 71–74.
- 155. Colic, M., & Morse, D. (1999). The elusive mechanism of the magnetic 'memory' of water. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 154(1–2), 167–174.
- 156. Wang, Y., & Li, Z. (2018). Effect of magnetic field on the physical properties of water. *Results in Physics*, *8*, 262–267.
- 157. Chang, K., & Weng, C. (2006). The effect of an external magnetic field on the structure of liquid water using molecular dynamics simulation. *Journal of Applied Physics, 100*, 043917–043922.
- 158. Yang, D., & Yang, L. (2000). Magnetization of water and magnetized water [In Chinese]. *Biological Magnetism*, *3*, 20–25.
- 159. Higashitani, K., Oshitani, J., & Ohmura, N. (1996). Effects of magnetic field on water investigated with fluorescent probes. *Colloids and Surfaces A: Physicochemical and Engineering Aspects, 109*, 167–173.
- Del Giudice, E., & Tedeschi, A. (2009). Water and autocatalysis in living matter. *Electromagnetic Biology and Medicine*, 28, 46– 52.
- 161. De Ninno, A., Castellano, A. C., & Del Giudice, E. (2013). The supramolecular structure of liquid water and quantum coherent processes in biology. *Journal of Physics: Conference Series*, 442, 012031.
- Cho, C. H., Singh, S., & Robinson, G. W. (1997). Understanding all of water's anomalies with a nonlocal potential. *The Journal of Chemical Physics*, 107(19), 7979–7988.

Copy rights @ Savely Yurkovsky MD,

Clinical Case Reports and Reviews.

- Chaplin, M. F. (2006). Information exchange within intracellular water. In G. H. Pollack, I. L. Cameron, & D. N. Wheatley (Eds.), *Water and the cell* (pp. 113–124). Springer.
- 164. Cabane, B., & Vuilleumier, R. (2005). The physics of liquid water. *Comptes Rendus Geoscience*, 337(1–2), 159.
- 165. Ho, M. (2015). Life is water electric. *Electromagnetic Biology and Medicine*, 34(2), 113–122.
- 166. Ho, M. (2012). *Living Rainbow H*₂O. Institute of Science in Society.
- Del Giudice, E., & Preparata, G. (1998). Electrodynamical likecharge attractions in metastable colloidal crystallites. *Modern Physics Letters B*, 12(21), 881–885.
- Ho, M., Yu-Ming, Z., Haffegee, J., Watton, A., Musumeci, F., & Privitera, G. (2006). The liquid crystalline organism and biological water. In G. Pollack (Ed.), *Cell biology* Springer Dordrecht.
- 169. Sunnerhagen, M., Denisov, V. P., Venu, K., Bonvin, A. M., Carey, J., & Halle, B. (1998). Water molecules in DNA recognition I: Hydration lifetimes of trp operator DNA in solution measured by NMR spectroscopy. *Journal of Molecular Biology*, 282(4), 847–858.
- 170. Karbowski, L. M., & Persinger, M. A. (2015). Variable viscosity of water as the controlling factor in energetic quantities that control living systems: Physicochemical and astronomical interactions. *International Letters of Chemistry, Physics and Astronomy*, 43(January), 1–9.
- 171. Del Giudice, E., Voeikov, V., Tedeschi, A., & Vitiello, G. (2015). The origin and the special role of coherent water in living systems. *Research Signpost*, *37*(2).
- 172. Del Giudice, E., & Preparata, G. (1995). Coherent dynamics in water as a possible explanation of biological membranes formation. *Journal of Biological Physics*, 20(1–4), 105–116.
- 173. Bellavite, P., Conforti, A., Pontarollo, F., & Ortolani, R. (2006). Immunology and homeopathy. 2. Cells of the immune system and inflammation. *Evidence-Based Complementary and Alternative Medicine*, 3(1), 13–24.
- 174. Siqueira, C. M., Siqueira, C., Costa, B., Amorim, A., Gonçalves, M., & Veiga, V. (2013). H3N2 homeopathic influenza virus solution modifies cellular and biochemical aspects of MDCK and J774G8 cell lines. *Homeopathy*, 102(1), 31–40.
- 175. Ferley, J. (1989). A controlled evaluation of a homeopathic preparation in the treatment of influenza-like syndromes. *British Journal of Clinical Pharmacology*, 27(3), 329–335.
- 176. Siqueira, C. M., Homsani, F., Veiga, V., Lyrio, C., Mattos, H., & Passos, S., et al. (2016). Homeopathic medicines for prevention of influenza and acute respiratory tract infections in children: Blind, randomized, placebo-controlled clinical trial. *Homeopathy*, 105(1), 71–77.
- 177. Conde Diez, S., et al. (2019). Impact of a homeopathic medication on upper respiratory tract infections in COPD patients: Results of an observational, prospective study (EPOXILO). *Respiratory Medicine*, 146, 96–105.
- Saxena, S. K., & Chitti, S. V. (2016). Complementary and alternative medicine in alliance with conventional medicine for influenza therapeutics and prevention. Future Virology, 11(10), 661–664.
- 179. Szeto, A. L., & Rollwagen, F. (2004). Rapid induction of protective tolerance to potential terrorist agents: A systematic review of low- and ultra-low dose research. *Homeopathy*, 93(4), 173–178.
- 180. Linde, K., Jonas, W. B., Melchart, D., Worku, F., Wagner, H., & Eitel, F., et al. (1994). Critical review and meta-analysis of serial agitated dilutions in experimental toxicology. *Human & Experimental Toxicology*, 13(7), 481–492.

- 181. Yurkovsky, S. (2023). Overcoming antibiotic resistance through a different paradigm? Documented cases of resolved pneumonia and H. pylori infection without the use of antibiotics. *Journal of Clinical Trials and Case Studies, 1*, June.
- Yurkovsky, S. (2023). Solving epidemics of Lyme and other vector-borne infections through the immune system. *Infectious Diseases and Therapeutics* 4(1), 415.
- 183. Bracho, G., Varela, E., Fernández, R., Ordaz, B., Marzoa, N., & Menéndez, J. (2010). Large-scale application of highly diluted bacteria for Leptospirosis epidemic control. *Homeopathy*, 99(3), 156–166.
- 184. Yurkovsky, S. (2022). Can immunity be digitally guided to defeat COVID-19 and future pandemics? *Journal of Immunology and Inflammation Diseases Therapy*, 5(2).
- 185. Najjar, D., Rainbow, J., Sharma Timilsina, S., et al. (2022). A labon-a-chip for the concurrent electrochemical detection of SARS-CoV-2 RNA and anti-SARS-CoV-2 antibodies in saliva and plasma. *Nature Biomedical Engineering*, 6, 968–978.
- 186. Butler-Laporte, G., Lawandi, A., Schiller, I., Yao, M., Dendukuri, N., & McDonald, E. (2021). Comparison of saliva and nasopharyngeal swab nucleic acid amplification testing for detection of SARS-CoV-2. JAMA Internal Medicine, 181(3).
- 187. To, K. K., Tsang, O. T., Leung, W. S., et al. (2020). Temporal profiles of viral load in posterior oropharyngeal saliva samples and serum antibody responses during infection by SARS- CoV-2: An observational cohort study. *The Lancet Infectious Diseases*, 20(5), 565–574.
- Zou, L., et al. (2020). SARS-CoV-2 viral load in upper respiratory specimens of infected patients. *The New England Journal of Medicine*, 382(12), 1177–1179.
- Kandel, E. R., Schwartz, J. H., & Jessell, T. M. (1991). Principles of Neural Science. Appleton & Lange.
- Kuhn, T. S. (1966). *The structure of scientific revolutions* (3rd ed.). The University of Chicago Press.
- 191. Barabási, A. L., Gulbahce, N., & Loscalzo, J. (2011). Network medicine: A network-based approach to human disease. *Nature Reviews Genetics*, 12, 56–68.
- Deilkås, E. T., et al. (2022). Physician participation in quality improvement work—interest and opportunity: A cross-sectional survey. BMC Primary Care, 23, 267.
- 193. Fraser, S. W., & Greenhalgh, T. (2001). Coping with complexity: Educating for capability. *BMJ*, *323*(7316), 799–803.
- 194. Angell, M., & Kassirer, J. P. (1998). Alternative medicine—the risks of untested and unregulated remedies. *The New England Journal of Medicine*, 339(12), 839–841.
- 195. Morens, D., Taubenberger, J., & Fauci, A. (2023). Rethinking next-generation vaccines for coronaviruses, influenza viruses, and other respiratory viruses. *Cell Host & Microbe*, *31*(1), 146–157.
- 196. Wang, R., Chen, J., Wei Wei, G. (2021) Mechanisms of SARS-CoV-2 Evolution Revealing Vaccine-resistant Mutations in Europe and America. *J Phys Chem Lett.* 12(49): 11850-11857.
- 197. Robinson, P. C., et al. (2022). COVID-19 therapeutics: Challenges and directions for the future. *Proceedings of the National Academy of Sciences of the United States of America*, 119(15), e2119893119.
- Panahi, Y., Gorabi, A. M., Talaei, S., et al. (2023). An overview of the treatments and prevention against COVID-19. *Virology Journal*, 20,23.
- 199. Bonamin, L., & Waisse, S. (2019). Transdisciplinarity and transnationality in high dilution research: Signals and images. Cambridge Scholars Publishing.
- Bisiani, J., Anugu, A., & Pentyala, S. (2023). It's time to go quantum in medicine. *Journal of Clinical Medicine*, 12(13), 4506.



This work is licensed under Creative Commons Attribution 4.0 License

To Submit Your Article Click Here:

Submit Manuscript

DOI:10.31579/2690-4861/716

Ready to submit your research? Choose Auctores and benefit from:

- ▶ fast, convenient online submission
- > rigorous peer review by experienced research in your field
- > rapid publication on acceptance
- > authors retain copyrights
- > unique DOI for all articles
- immediate, unrestricted online access

At Auctores, research is always in progress.

Learn more <u>https://auctoresonline.org/journals/international-journal-of-clinical-case-reports-and-reviews</u>