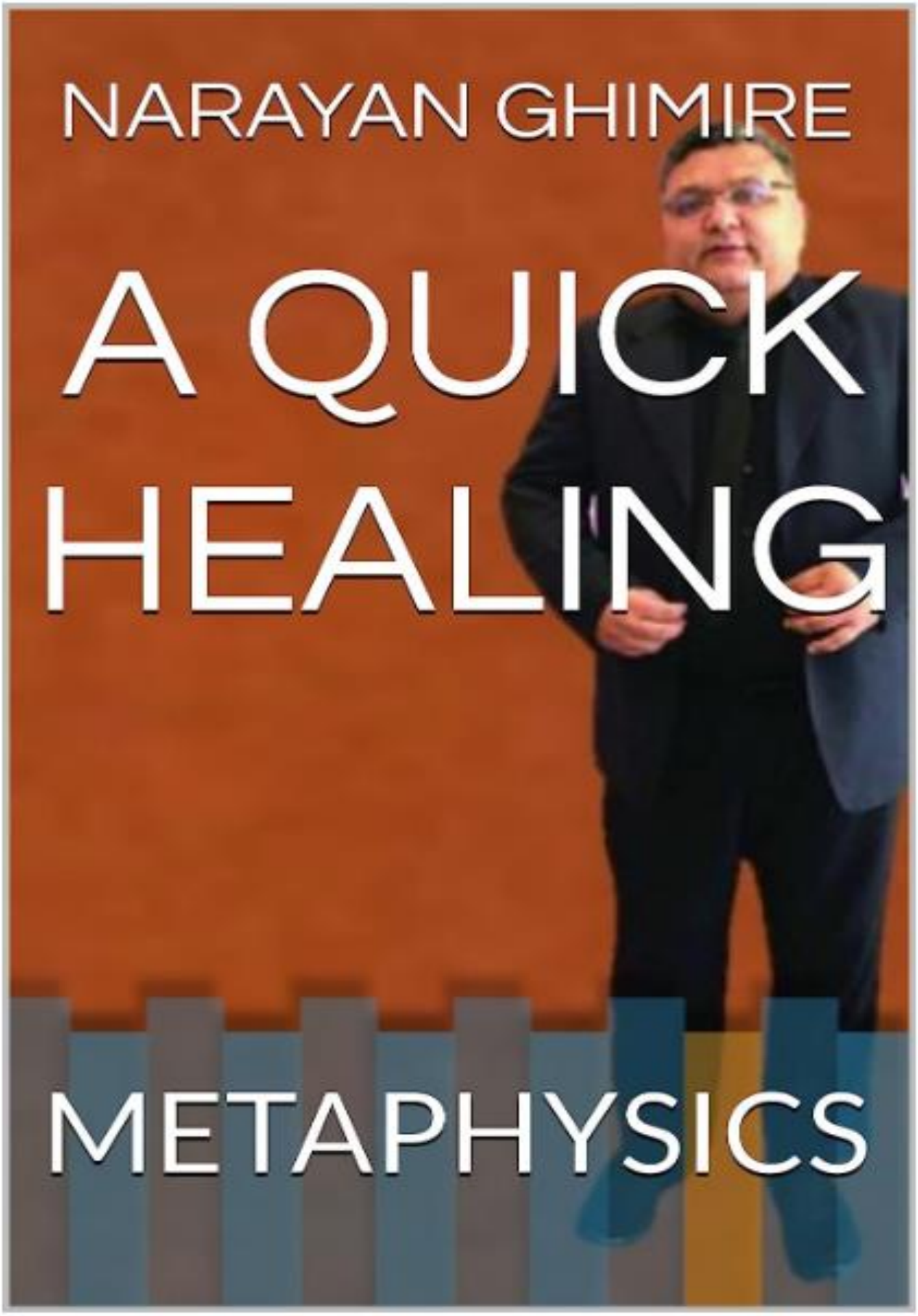
NARAYAN GHIMIRE

A QUICK HEALING



METAPHYSICS

About the Book

Author Ghimire, a renowned and knowledgeable Canadian food and drug scientist, delves into the profound connection between consciousness and physical well-being, emphasizing the crucial role of willpower in healing. In this research-based book, he unveils metaphysical principles, explicitly focusing on polyherbal ayurvedic formulations. From metaphysical insights, Ghimire bridges Vedic philosophy and modern science, guiding healing professionals and herbal drug discovery enthusiasts. Experience transformative healing and herbal innovation with "Healing Metaphysics: Transformative Herbal Formulations," revolutionizing natural health practices.

निरपेक्षो निर्विकारो निर्भरः शीतलाशयः।
अगाधबुद्धिरक्षुब्धो भव चिन्मात्रवासनः।।

Alchemy of the Mind:

Unveiling Metaphysical Philosophy and the Art of Quick Healing through Polyherbal Formulations.

Narayan Ghimire, Food & Drug Scientist

Canada

2023

Declaration

This is to certify that the work presented in this book is original and incorporates the result of an independent investigation through critical realism, Interpretivism, and adopting a post-structuralist approach.

Disclaimer:

I want to dedicate this research-based book, "Alchemy of the Mind: Unveiling Metaphysical Philosophy and the Art of Quick Healing through Polyherbal Formulations," to my beloved wife, Kalpana Rijal. Her unwavering support, love, and encouragement have been instrumental in creating this work.

It is important to note that the contents of this book are based on research, personal experiences, and the author's understanding of metaphysical philosophy and polyherbal formulations. The information provided within these pages is intended for educational and informational purposes only.

Readers are advised to consult with qualified healthcare professionals or experts before implementing any concepts, practices, or polyherbal formulations discussed in this book. Every individual's health condition is unique, and what may work for one person may not necessarily work for another.

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The reader should use discretion and judgment when interpreting and applying the concepts discussed in this book. It is always recommended to seek professional advice and conduct further research to supplement the knowledge gained from this publication.

In conclusion, this book is meant to inspire, educate, and provide a perspective on metaphysical philosophy and the potential benefits of polyherbal formulations for quick healing. However, it is not a substitute for personalized medical advice or professional guidance.

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Abstract मूर्त

This research-based work explores the importance of a self-organizing, multilayered, complex, and integrated system with more area for interactions for optimal body and mind functioning. The review examines two case studies, The self-organization and complex multi-layer self-assembly of DNA and the complex multilayer structure of silicon chips that mimic the behavior of neurons in the human brain to achieve a larger interacting area bearing complex and parallel processing capability, to demonstrate how a balanced constitution of doshas, and a multilayered structure can support healthy functioning.

The research finding suggests that active principles that support such a complex, self-organizing, multilayered structure with sufficient activity surface area contribute to quick and holistic rehabilitation of the body's balance required to achieve fast healing objectives.

The thesis also highlights the challenge of achieving quick delivery with non-violence while rehabilitating uninterrupted tridoshic bioenergy balance using active medicinal principles.

Quick rehabilitation and maintenance of tridoshic bioenergy balance require quick bridging of mind-body harmony. Quicker rehabilitation

of mind-body harmony triggers quicker self-healing processes, resulting in healing with a non-violence cure. Medicinal active principles facilitating multilayered, self-organizing, integrated matrices can effectively aid the adequate mind-body harmony bridging process.

Based on the research finding, future researchers can focus on formulating herbal medicines based on the principles of multilayered, self-organizing, and integrated matrices to achieve quick and harmless self-healing characteristics.

To successfully formulate such herbal medicines, it is crucial to consider the mind-body harmony bridging and compatibility of the active medicinal principles with similar constructs in the body.

Additionally, researchers should develop methods to achieve quick delivery with non-violence while rehabilitating uninterrupted tridoshic bioenergy balance using active medicinal principles.

Experimental studies can test the compatibility of different active principles with multilayered, self-organizing, and integrated matrices to achieve successful formulation and lab acquisition of disruptive herbal medicines.

CHAPTER 1 INTRODUCTION

परिचय

Veda of āyus (science of life) is called Āyurveda (आयुर्वेद). It has critically bifurcated objectives. Cure the illness of the ill while preserving the health of the healthy. A Vedic medical science that relies on the balancing three doshas theory for healthiness. Based on this, when three doshas are in equilibrium, the purified Vayu establishes harmony among human bodies and the surrounding resulting in a healthy state.

Ayurveda, a vigorous and expanding scientific tradition since the 16th century, is rooted in Veda. The dominant intellectual influences on Ayurveda are the Samkhya and Vaisheshika philosophies derived from Veda.

Modern science successfully describes nature and maintains an influential appearance in all fields, including biology, chemistry, physics, computing, mathematics, neuroscience, and linguistics. However, telling the world about physical properties limited its scope in recognizing the type of materials and how they work. The inability of modern science to recognize materials themselves has created a gap in scientific advancements.

In this context, the Sankhya philosophy recognized two types of matters, namely the subtle and gross, and offers how they work together to manifest materials world prima facie. Unbelievably, the Samkhya and Vaisheshika philosophies

based on the Veda view have remained consistent with how modern science has developed its capability to verify and validate. Only those areas into which modern science has yet to build their capacity to test, the other details of those philosophies still need to be confirmed by science status.

Under modern medicine, patients suffering from uncontrolled pain get quick relief medication under the philosophy that only a person suffers; bodies do not. That practice is responsible for developing medical conditions that are not responsive to medication, resistant to treatment, or persisting after healing. Failure to diagnose the exact cause of the pain and follow a combined treatment approach can cause unnecessary suffering.

Ayurveda accommodates a novel doctrine of harmless total cure. The holistic approach of Ayurveda usually takes time for recovery. However, on several occasions, modern medicine is ahead of Ayurveda for treating the symptoms and quick relief from the pain. Ayurveda helps patients get rid of the root cause of a disease, while modern medicine assists in effectively addressing symptoms.

Ayurveda and modern medicinal practice are combined on several occasions to work collaboratively to achieve the best health treatment outcomes. That approach, however, still violates the core sentiment of humanity that anticipates the treatment and cure procedure integrated with non-violence and harmless remedies.

The Ayurvedic system always follows evidence-based diagnostic and medication procedures like modern science. Additionally, it has a well-founded body of knowledge to translate epistemology-based know-how to develop and adopt medicinal formulations and methods that the current medical system lacks. However, the translation of the philosophical doctrines of Ayurveda still needs to be adequate to extract applied sense to advance Ayurvedic medicinal development initiatives.

The world is anticipating holistic, non-violence, and harmless remedies with uncontrolled pain system temporary relief quality accommodations. We can observe several earlier attempts to enhance therapeutic strength and combine it with polyherbal formulations to accomplish anticipated efficacy.

In the past, drug developers have attempted different techniques. Their focus was adding cost-effective efficacy. The ayurvedic and traditional herbal medicinal formulations under review were reworked and tested exhaustively during those attempts.

Some works focused on cost-effective formulation, and some focused on changing the route of administration to acquire better results. A few were for experimental tests on how drugs behave to the body and how the body behaves to the drug. A few other projects' works are as follows. Using polyherbal with the extracts; following reverse pharmacology technique; combining polyherbal formulation with active ingredients

(both in synthetic and natural forms); using modified release forms; adding placebo; using a different route of administration; top noting polyherbal formulations with the phytochemicals of interest or other actives as the target compounds.

Modern medicine believes in quantum chemistry to develop a drug. Chemistry reduces the chemical structure to a bond. Bond to atomic or molecular orbitals. Orbital to eigenfunction states. The eigenfunction states further decline to the Hamiltonian function that assumes quantum objects have mass and charge.

It believes molecular behavior and property are understood based on mass and charge. Modern drug chemistry follows the law of chemical combination; based on that, it develops the active ingredients with the assumption that it works following the principle of chemical combination to deliver anticipated therapy.

Unfortunately, our body follows the DNA phenomena that define how DNA replicates while translating and transcribing genetic information. That procedure follows the Vedic principle. In that principle, the data is superimposed and serialized into the objects. During the serializations, the information aligned one over another, encoding them into different layers while creating a complex structure working together in a natural harmony. That follows the principle of Vedic Microbiology or quantum metaphysics.

How we develop drugs and our modern science-based assumptions on specific biochemical interactions through which a drug substance produces its pharmacological effect in the targeted area of the body need completing. It seems doubtful that it follows the principle of how bodily constituent has formed and work together to develop a natural harmony.

All the attempts for corrective measures and advancements in drug discovery continue without understanding and following the philosophy and techniques in compliance with those laws of nature. If we uncover them, it might add significant breakthroughs in future drug discovery initiatives.

It needs an additional body of knowledge and advancements in the field of Ayurvedic medical therapy. We require a philosophy to develop quick healing polyherbal formulations for holistic care under quantum metaphysics to mitigate this gap.

Whatever the findings, the outcomes of this work will be helpful for future ayurvedic medicine and drug developer to better integrate no-harm and non-violence aspects to their effective doses form. A detailed search has not found any work to fill this gap and thus concluded to attempt the same in this project work.

The following is the purpose (शोधमहात्म्य) of this project works.

4.1) Understand the Samkhya and Vaisheshika philosophies

4.2) Decoding and translating those philosophies within the applied scope of Ayurveda and the potential polyherbal medicinal development procedures.

4.3) Review and recognize available modern scientific methods akin to the pathway identified by the abstract.

4.4) Compare, review, and benchmark those procedures to identify suitable logic that can apply to polyherbal formulations.

4.5) Review thus reformulated philosophy and finalize the philosophy that suits developing quick healing polyherbal formulations for holistic care through critical realism.

CHAPTER 2 LITERATURE REVIEW

सिंहअवलोकन न्याय

The simplified goals of all medicine are to cure, care for, and have comfortable lives (Singh A. & Singh S., 2006). It includes activities that help to relieve pain and suffering. Most actions prevent sickness and promote healthy states. Examples are preventive, corrective, curative, and rehabilitation activities typically found under preventive, curative, chronic, palliative care, and spiritual well-being (Boorse, 2016).

Ayurveda is a holistic system of medicine related to the symptomatic and causative state, the science of life or Veda of āyus. It combines the Sanskrit words Ayur (life) and Veda (science or knowledge). That means "the science of life," aiming to bring harmony and balance among Mind, body, Aatma, and nature, a holistic approach to understanding life science. People have practiced Ayurveda for over 5000 years (Staff, 2021).

Āyurvedic literature such as the Carakasaṃhitā and the Suśrutasaṃhitā accounts for ten pharmaceutical properties (Parādiguṇa, परादिगुण) for clinical practices in treatment. They are Paratva (excellence), Aparatva (non-excellence), Yukti (rationale), Saṃkhyā (enumeration), Saṃyoga (conjunction), Vibhāga (disjunction), Pṛthaktva (separateness), Parimāṇa

(measurement), Saṃskāra (processing), and Abhyāsa (practice) (Hiemstra, 2021, definition / Parādiguṇa).

Vaisheshika philosophy is a metaphysical theory developed around the 2nd century B.C. by Kaṇāda (Kana-bhuk, literally meaning atom-eater) states that all things that exist can be perceived are called padārthas (Objects of experience). The six categories of perceivable padārthas are dravya (substance), guṇa (quality), karma (activity), sāmānya (generality), viśeṣa (particularity), and samavāya (inherence) (Hiemstra, 2021, vaisheshika - sutra - commentary).

The Vaisheshika Sutra is also called a moksha-shastra. A doctrine of liberation that describes different aspects of suffering. It explains the law of karma-based revolving acts of Atma (similar to the soul) around the wheel of births, deaths, and re-births. It also deals with physics, metaphysics, and the atomic theory of nature (Hiemstra, 2021, definition/vaisheshika).

The dominant intellectual influences in Ayurveda are Samkhya and Vaisheshika philosophies. The Sanskrit word Samkhya consists of "Sam" and "Khya. Sam (short form of samyak) means balance. Moreover, 'Khya' means knowledge or declaration. Samkhya appropriately stands for a school of thought that analyzes the principles governing the cosmos to explain the totality of human experience. Being or pure existence is the

reality or truth in Ayurveda. According to Samkhya philosophy mind (Mana) is reality (Talwar, 2001).

Furthermore, the matter is the description of that reality. That means the Mind manifests all physical objects. Furthermore, the physical thing is the description of mental states. The term properties of an object in modern science are the Mind. The mind concept is fundamental to the Ayurvedic philosophy (Talwar, 2001).

The Vaiśeṣika system, founded by the sage Kaṇāda, deals with the analysis of nature. More significantly, the viśeṣa doctrine is eternal and distinct. It deals with the nine substances of nature: Atma, time, space, Mind, ether, air, fire, water, and earth. It upholds a philosophy that the eternally distinct nature of these nine substances is the atomic structure of the universe. They never destroy, even when the world ends (Kaṇāda, 1650; Sinha, 1923).

Four Vedas, namely Rigveda, Yajurveda, Samaveda, and Atharvaveda, are dated between 4000 B. C.- 1500 B. C. The treatment of the disease is called Chikitsa. Ayurveda primarily relies on medicinal knowledge found in Atharvaveda (Bajracharya, 1995, p. 5).

According to ancient mythology, the knowledge of Ayurveda came directly from lord Brahma, the world's creator. Prajapati

learned Ayurveda from Brahma and transferred his Ayurvedic know-how to Aswinis. Twin Aswinis were physicians of gods. From them, the god Indra knew Ayurvedic medicine. However, Sushruta Samhita mentioned that Indra transferred the knowledge to Dhanvantari and Bhardwaj Atharvaveda (Bajracharya, 1995, p. 6).

It is a common belief that around 1700 BC, Bharadwaja was a top and renowned learned sage (Rishi) and a physician of Aryavatra. Atreya Punarvasu was one of the devoted students of Bharadwaja. Atreya Punarvasu has mentioned that a substantial medical conference of veteran Rishis and Munis hold under the chairmanship of Bharadwaja (Bajracharya, 1995, p. 6). The positive discussion, debate, and constructive work through creative communications contributed to developing compiled Ayurvedic texts with different branches of Ayurveda. For example, the result of the historical conference was Charaka Samhita (1000 BC), the internal medicine text; Susruta Samhita (100 AD), the surgery text; Kashyapa Samhita, the text of pediatrics; Bhela Samhita, the complete form of internal medicine. Ayurveda materia medica describes over 1500 herbs and 10,000 formulations (Patwardhan, 2009).

Agnivesha tantra was even earlier than Charaka Samhita (Murlidhar & Byadgi, 2011). Similarly, other notable contributions in the field of Ayurveda are Ashtanga Hrdya of Vagbhata (600 AD) and Madhav Nidhana (800 AD, a diagnostic

classic that provides over 5000 signs and symptoms). Sage divided Ayurveda into eight sections. They are internal medicine, surgery, cranial organo-medicine, pediatrics, toxicology, rejuvenating remedy, aphrodisiac remedy, and spiritual healing. These eight sections are called Astanga Ayurveda (Lele, 2001).

Modern medical science mainly deals with drugs called pharmacology. Pharmacology constitutes two Greek words: pharmacon, an active principle, and logons, which means discourse or treaties. The oldest one is Chinese material medica from 2735 BC. It deals with formulating drugs of herbs, plants, vegetables, minerals, and animal-based raw inputs. Egyptians introduced their medicinal literature around 1900 B.C., Papyrus with 700 herbal (including opium) remedies was from 1500 BC. Babylonian clay tablet with 3000 drugs formula was from 700 BC (Lele, 2001).

A Greek physician, Hippocrates, is the father of modern medicine from 450 BC. Hippocrates introduced a concept that adopted a systematic observation, analysis, and deduction approach. Those three components, namely experience (empirical observation), religion/magic, and speculations, were beneficial to start an investigation to find the true causes of health and diseases and lay the foundations for the diagnosis, prognosis, and treatment of modern medicine (Nishteswar & Karra, 2020).

German Physician Samuel Hahnemann 1796 developed another system called Homeopathy. It outlines a therapy for various bodily disorders or chronic diseases with drugs in very high dilutions. In this concept, infinitely diluted preparations of unpleasant toxic substances are considered effective in curing illness (Lotha, 1998). Samuel Hahnemann, the inventor of homeo-pathy, coined the term allopathy in 1810 when the ideas of Homeopaths felt inadequate. It introduces the concept of treating disease by administering substances that produce opposite symptoms (when given to a healthy human) than the symptoms produced by a condition (Thomas, 2013).

The Greek word allopathic came from allos, meaning opposite, and pathos, meaning to suffer. It means treating the symptom with its opposite. For example, a constipated person may benefit from using suitable laxatives (official, 2022).

According to allopathic philosophy, it is possible to identify a single organic or inorganic compound that can introduce into a complex human biological system to influence the activation pathway of disease progression. Those influences can interrupt and even eliminate such progression by delivering opposite activities to disease conditions posing no significant risks, i.e., patient side effects (Stoppler, 2021).

However, getting specific single compounds chemicals with only beneficial and no adverse outcomes is improbable. The pathways of disease progression conditions in most cases are unknown. Thus the term allopath was rejected by mainstream medicine. Some physicians unknowingly still apply the term that suggests different practices (Modern Medicine) they follow (Oppel, 2010).

Modern medicine still relies on active pharmaceutical components. They focus on clinical examinations. Prioritize adequate lab tests and screening for diagnosis. They also focus on a person's symptoms and signs and usually follow an evidence-based approach to the treatment. They rely heavily on current literature guidelines and may request additional diagnostic tests before deciding on the best course of therapy, which occasionally stays only within their practice (Yuan et al., 2016).

The science of modern medicine relies upon the interdependent chemistry of food components and medicinal treatment in which absorption of protein, carbohydrates, fats, minerals, vitamins, and micronutrients are sufficient to support the human immune system and energy. However, herbal remedies and foods generally comprise numerous phytochemicals and natural compounds of other than nutritional significance inherent to foods to fulfill the broader physiological and

homeostasis system balance requirements (Ramalingum et al., 2014).

The oldest known pharmacological or therapeutic writings are medical descriptions in Rigveda (3000 B.C.). Rigveda-based Ayurveda (Charaka described 300 herbal drugs classified according to their effects), the Chinese material medica (Pan Tsao), probably written in 2735 B.C. contains many plants and metallic preparations with few animal products) (Kothiyal et al., 2019, p. 5).

Herbs are plants that have savory or aromatic properties. Their leaves, roots, flowers, seeds, root bark, inner bark (and cambium), resin, and pericarp are the source of medicine, food flavoring, fragrances, and spiritual offerings. Medication is a drug or other preparation used to treat and prevent injury and disease (Kothiyal et al., 2019, p. 5).

The national cancer institute, an official website of the united states government NCI Dictionary of Cancer, has defined the terms drug. According to that definition, any substance, other than food, that prevents, diagnoses, treats, or relieves symptoms of a disease or abnormal condition is a drug. Drugs can also affect how the brain and the rest of the bodywork and cause mood, awareness, thoughts, feelings, or behavior changes. Some drugs, such as opioids, may be abused or lead to addiction" (NCI, 2020).

The source of drugs is natural (Microbial, Plant, Animal, Mineral, Petrochemicals), synthetic (Chemical Synthesis), and other (Genetic Engineering, Hybridoma. A drug is a single (sometimes more than one) active chemical entity/compound/substance in medicine targeted for the diagnosis/treatment/cure/prevention of one or more diseases. This disease-focused concept of drugs does not include contraceptives or health improvement (Kothiyal et al., 2019, p. 5).

A drug needs Food and Drug Administration (FDA) approval for marketing authorization. For that, it needs to demonstrate safe and show some efficacy. FDA never requires an understanding of the mechanism by which a drug acts. A drug can quickly move into clinical trials without knowledge of its mechanism of action. Many highly prescribed drugs are on the market without a clear idea of what processes they alter, how they work, which targets they hit, and which actions deliver true therapeutic efficacy (Kirkpatrick, 2010, p. 347).

Even when we can understand the drug's mechanism of action, it is often difficult to predict the side effects of the drug. It gets its approval without critical know-how of processes a drug alters, how it works, which targets it hits, and which actions it delivers. It adds complexity to food and drug scientists to predict the side effect of a drug before it receives marketing

authorizations and is tested in real-time with the patients for an extended period (Kirkpatrick, 2010, Editorial).

Aiming to eliminate the root cause of the disease by restoring balance, creating a healthy lifestyle, and preventing the recurrence of imbalance, Ayurveda uses single or multiple herbs. The Sarangdhar Samhita has highlighted the concept of polyherbal formulations. It combines various plants and minerals in a particular ratio to compensate for active phytochemicals in individual herbs while achieving desirable therapeutic effects with superior therapeutic effects and reducing toxicity at the level of clinical significance (Parasuraman et al., 2014)

Many active compounds from traditional medicine as part of routinely used traditional medicines are relatively safe at the level of their tolerances. Unlike isolated compounds, whole plants or their mixtures are used in conventional medicine (Mishra et al., 2020).

Most ingredients derived from the plant of traditional medicines are drug candidates in clinical medicine today (Li-Weber, 2009). It is evident now that many valuable plant-derived drugs result from the successful application of conventional medicine (Fabricant et al., 2001).

Herb's Prevalent phytochemicals are tannins, sesquiterpene-lactones, terpenoids, saponins, alkaloids, flavonoids, alkenyl

phenols, and phorbol esters. Those constituents generally in herbs are responsible for pharmacological activities. A single herb-derived component may contribute to one or a few phytochemicals. Combining more than one herb might work synergistically (Bisht & Ram, 2017).

Manipulated synergistic effects of multi-actives phytoconstituents in formulation enhance effectiveness at a lower dose with unwanted side effects removed. In that way, the phytopharmaceuticals obtained from traditional medicines can make them safer for human consumption. The phytochemicals found in individual plants are active ingredients. On several occasions, active constituents may not be adequate to attain desired therapeutic effects. When polyherbal and herbs-mineral formulations combine into multiple herbal formulations in an adequate ratio, it enhances the therapeutic effect in decreases toxicity (Bisht & Ram, 2017).

Polyherbal synergism brings high effectiveness in numerous diseases with safe, high doses. Their known absorption, distribution, metabolism, and elimination behavior help deliver desired therapeutic activities. Their proven ability to target the intended receptor or physiological system makes them suitable active constituents to provide purposeful therapeutic roles (Karole et al., 2019).

3.1 Fundamentals Idea Behind Ayurveda

The basic idea behind Sankhya's philosophy is that before the creation of the universe, the matters are there, but they are not in perceivable form. The creation process transformed those matters into objects (Dalela, 2014c, p. 2).

Four kinds of space in Vedic philosophy are awaking (vaikhari), dreaming (madhyama), deep-sleep (pasyanti), and transcendent (para), which represent the location of bodies, minds, personality, and aatma, respectively (Dalela, 2014b, p. 12).

The Vedas state that sense manifested matter during the creation of the universe. Similar to how the Mind creates ideas. As per Vedic philosophy, there are three aspects of consciousness – drasta (observer), anumanta (approver), and purusa (enjoyer). The unconscious repository of impressions from experience is called Chitta. Ideas generate when Chitta reconciles its impression.

The five-unconscious instruments successively help to develop thoughts. These are Chitta (thinking), Prakrit (feeling), Mahattattva (willing), ahamkara (knowing), and Sakti (acting). Under the influence of time, the Chitta generates all thoughts called thinking. That thought is either liked or disliked, called feelings. When an idea is judged suitable, it is accepted. That is

the willingness to generate desire. To fulfill that desire, one must find a plan called knowing. Acting is the road map followed to satisfy that plan (Dalela, 2014a, p. 17).

Each successive conscious activity has an unconscious counterpart influencing the same. The boundary of unconsciousness is the choice of consciousness. The consciousness allows thought by approving its existence. The thought we become aware of is not the product of the conscious will. They automatically produce from the unconscious. The consciousness has no control over the production of thoughts but can control to allow or disallow the thought continuation. That is called free will (Dalela, 2014a, p. 16).

Consciousness can withdraw thought at any stage of thinking, feeling, willingness, planning, and acting. The Withdrawal of consciousness (pushing the unwanted idea into the unconscious part of the Mind) stops the development of the thought process at the stage it occurs. Free will and consciousness are different. It will not be easy to recognize free will till one is under material influences. Free will is visible when consciousness rejects ideas (Dalela, 2014b, p. 215).

At the moment when a conscious free choice goes against belief and desire created by the unconscious Mind, we start losing

attachments. The further progression of thought in the Mind depends on conscious free will and not vice versa. For example, neurological experimentation has proven that brain firing comes before saying yes during lust or addiction. Nevertheless, when not in urge or obsession, the brain still fires, and firing ceases if someone says no. Brain firing is the effect of five unconscious instruments (Dalela, 2014a, pp. 19-20).

As the essence of consciousness, free will is just existential and not the creator of thought. Chitta creates ideas before their approval by consciousness. Only those thought approved by free will moves further. Free will creates ideas; however, matter cannot. The information can be made and destroyed. However, matter & energy cannot be created or destroyed; instead can transform from one state to another. Thus, free will cannot matter but represents quality (Dalela, 2014a, p. 17)

The free will of consciousness is called a person. Due to innate free will, the Atma (similar to the soul) transforms into an individual. When Atma loses free will, an individual's individuality is lost. That time Atma merges into a single individual existence. Material objects follow material laws. However, consciousness works per the law of morality called humanity or ethics (Dalela, 2014a, pp. 45-48).

The Vedic view states that consciousness controls the Ego controlling the intelligence managing the Mind (Mana), where the Mind controls the sense. Adding tanmantra (five elements) to space-time creates a matter into which sense addition develops actual rupa (form). This process transforms a non-matter into a physical expression, i.e., Rupa called objectification (Dalela, 2014b, pp1610).

Consciousness itself is under the influence of time. In the unconscious body, time serializes information and creates multiple not yet developed latent ideas. The serialization of hidden opinions continues into the ether as dormant desire as Chitta. The dormant desire serializes into tanmantra as vibrations. The vibration of dormant desires (non-matter) transforms into desires (non-matter) as Mind (Mana). In this way, space-time establishes a communication channel for information (non-matter) exchange between observers (non-matter) (Dalela, 2014b, p. 160).

The space-time fusion with tanmantra creates a physical form of expression, i.e., Rupa. That contained serialized information heavily influenced by time. Once the serialized information from that physical manifestation emerges as vibration, its physical form, rupa, is perceivable. Perceived serialized information generates an idea of information. Based on that, we

can sense the form (Rupa). We perceive anything as a serialized set of information in space-time and objectify them as a symbol of the shape of the specific object. It is called sensation. That is why the study of material science in modern physics ends in space-time-matters (Dalela, 2014b, pp.160-164).

The information is serialized and stays intact with all manifestations within the space-time domain. It needs to decode and encode various sensations to objectify them. The body utilizes multiple senses, sound, touch, sight, taste, and smell, to extract information in vibrating space-time forms. The shape is perceived as vision, denoting the meaning as symbols. These forms' movement, rotation, vibration, contraction, expansion, translation, and revolution also represent some meanings. The sensation of smell, touch, taste, sound, and light also denotes the same things' valuable meanings (information) (Dalela, 2014b, p. 161).

In the Vedic philosophy, the name of information that generates sensation and cognition of smell is earth elements. Similarly, touch is air, taste is water, sound is ether and form & sight are fire elements. Space-time is medium, and its modification generates a message.

The tanmantra, i.e., the ayurvedic elements, are not individual, single, or separate. Elements are not substances or quantitative

things but are qualitative things that objectify the tanmantra. They are distinctly different sets of information manifested by adding a sub-type quality (a typical combination of five elements) differently into other sub-type (other distinctive combination of five elements) qualities. Superimposing serialized information on the insensible rupa in vibrational mode makes it sensible. The message is created in the medium and disappears into it. Space-time remains void medium or carrier without superimposed data (Dalela, 2014b, p. 161).

Filling the void space medium with superimposed information creates its' qualities. If the time effect destroys the information, the objects become unmanifest and cannot sense. However, the Atma is immortal and can create information. When the universe is manifest and does not exist, the total amount of matter is always equal. It is only because of superimposed information that transforms unmanifested into manifested. Thus, the difference between existence and non-existence in the universe is the total amount of information added to the unmanifested (Dalela, 2014a, p. 48).

The connection between a living being's subtle body and the gross material is the job of prana. Prana converts sensations into space-time forms and space-time forms into sensations (Dalela, 2014b, p. 171).

The human body contains 30 trillion human cells and, on average, about 39 trillion microbial cells. By that measure, humans are only about 43% human (Lee, 2019 4:00:00).

The world trusted the concept of classical physics for a long time that microscopic particles like electrons are solid spherical balls. Later quantum physics shows electrons in a diffuse cloud of probabilities rather than in one place. In i926, Austrian-Irish physicist Erwin Schrödinger recognized an electron in a denser cloud region and mathematically represented it by the wave function. Furthermore, at the heart of quantum physics, Schrödinger's equation governs how a wave function evolves. Later, quantum physics helps to a great extent to eliminate the gap between the observer and the observed (Kulkarni, 2020).

Veda believes in the Tree of Life concept. The root is called Brahma, and the branches represent all species. Our body has several bacteria, and those bacteria can cause damage to our bodies. However, our life, as a bigger life than bacteria, can kill harmful bacteria and modify the behavior of others to allow only particular life types to allow in. The bacteria in our body may think that they are the only ones alive and that no bigger bodies exist (Dalela, 2016, p. 208).

Similarly, as per Vedic philosophy, the ecosystem is an enormous body. All the entire planet's ingredients and materials are living beings (Dalela, 2016, p. 208). Schrödinger's view of quantum theory connects with some of life's fundamental mechanisms (Trevors et al., 2011). Vedic microbiology thus deals with quantum metaphysics (Kak, 2016).

Based on the Vedic view founded on a justified belief derived from opinion (epistemology), the world is not sensible to our perception because of its' innate habit of simplification (called Prakriti). The consequence of these habits (called karma) is suppressing certain parts of reality (Dalela, 2016, p. 13).

Ayurveda is the Vedic science of health and physiology with three fundamental modes: Kapha, Vata, and Pitta. The term Kapha stands for Mind and ideas. Furthermore, the cause of Mind and ideas is the body, muscle, bone, and fat. Those creations result from superimposing information into the abstract form (rupa). The tern Vata stands for prana, which causes objects to move and change. Examples are ingestion, digestion, circulation, and elimination. The term Pitta is associated with metabolism and breaking things down. The breakdown of food and complex ideas into smaller memes. A

suitable example is information passing from generation to generation) (Dalela 2016, pp. 90-91).

From a modern scientific perspective, thus matters of science is Kapha, the mana represented by particle waves, electrons, protons (two up quarks and one down quark), and neutrons (one up quark and two down quarks), with numerous properties. The systematic algorithm of Vata and Prana by which change must happen to represent force. What we call the energy that is responsible for the property of division and organizing is called Pitta. The prana that is moving is not material particles but the observer. In material science, the particle goes from one state to another (old school), and its successions (inherent properties) follow its trajectory (a typical path). Modern science confirms that a particle is not going from state to state; instead, the observer moves from one state to another. In Sankhya, the observer goes from one state to another, and the observer's trajectory is called life history. (Dalela 2016, pp. 92-93).

Mass = Khapa. Acceleration = Mana

Force = Vata = Prana. Energy = Pitta.

What science calls fermions (particles with an anti-symmetric wave function) or matter particles are Kapha or ideas. What science calls bosons (Particles with a symmetric wave function)

of force particles is Pitta, the energy that divides the whole into smaller parts. This energy is the information added to the abstract to create contingent objects that an observer observes (Dalela, 2016, pp. 93-94).

Again, atomic energy's trajectories, processes, or paths no longer exist. The 'trajectory' without objects is the prana that causes nerve impulses (electrons) to move the body, the nutrients to circulate through the bloodstream, waste product elimination, and breathing to occur. We can visualize prana through the Mind and experience the effects by viewing the change (Dalela, 2016, p. 94).

Ayurveda keeps focusing on balancing Kapa, Vata, and Pita, balanced by nature during birth. For example, more than regular matters or structures creates rigidity, and Khapa dosa like difficulty moving due to being overweight. Too much pita develops overly breakdown and dysfunctions like excessive digestion. Excessive Vata can result in frequently changing mental and physical states, causing instability like losing body harmony. The predominance of any of the three or their combinations causes the disease. The Kapa, Vata, and Pitta models apply to alive bodies, minds, and consciousness (Dalela, 2016, pp. 94-95).

Hot-and-cold is a single object; like zero is a combination of equally positive and negatives number, a coin has a head and tail. As per Veda, all material information carries at least two kinds of information called duality. The duality gives distinction and maintains contradictions between opposites. Like the presence of hot as opposed to cold, the red spot is not black. The material world is external energy, into which dualism exists. The spiritual world is called internal energy; the same person has a multi-faceted self-contradicting persona in those jurisdictions (Dalela, 2014c, pp. 69-71).

To manage a tridoshic constitution based on the philosophy that maintains tridoshic balances into a natural equilibrium state. That is needed to balance the energy that balances the body and Mind's superimposed information. Information properties before the existence of a DNA molecule to create new DNA molecules and make the template needed to make DNA, again and again, involve complex information translation and transcription mechanisms (Dalela, 2014c, pp. 188-200).

We can see that the amino acids as the constituents of DNA line up in a particular way that forms a different level of information one over another to make a clone from the information of structure and cloning. The information flow is

atoms to amino acids, genes, and DNA. The lower-level information encodes in amino acids, a piece of higher-level information in genes, and even higher-level information in DNA sequencing containing hundreds or thousands of genes (Dalela, 2014c, p. 200).

The idea is not changed when a DNA molecule is modified; different information reflects in another space-time zone. Even though both DNA carry the same type of eternal ideas, they manifest in other locations and space-time. The replication is a motion that incarnates ideas into different space-time locations (Dalela, 2014c, p. 202).

The real reason for the inheritance of biological traits is not cloning DNA. It is, instead, the consciousness of the child entering the father's body and then the mother's body. The consciousness comes in contact with the father and mother. The parents' genes influence the body of the baby. In this process, consciousness creates its own body because it is the mirror in which the idea reflects and creates the objects. The presence of Atma is thus needed to clone the DNA because, without Atma (consciousness), there is no mirror in which DNA information can reflect for replications (Dalela, 2014c, p. 202).

In summary, the Vedic philosophy, matter, and Atma are two modes of language that employ different forms of logic. Mysticism (spiritual) is non-dualistic, and materialism is dualistic logic. Again, the matter is a communication medium between observers; the Kapa, Vata, and Pitta models apply suitable strategies to work toward medicinal development initiatives. The same model is also ideal for developing winning therapeutic development strategies for maintaining health, curing diseases, and healing the mind-body. (Dalela 2014c, pp. 71-72).

The novelty in Sankhya is that the space and time position is hierarchical, and the associated ideas are hierarchical. The DNA molecules are a combination of thought and role. An additional part is attached to the same information during replication, making the picture appear as a molecule. It creates only one information structure in the form of a mirror image. Space-time is the mirror that reflects information (Dalela, 2014c, p. 201).

Ayurveda and Sankhya have different goals. Ayurveda has accepted Sankhyas's guna theory, which characterizes nature by its quality. More importantly, putting gunas in perfect balance to maintain harmony and health. Transcendence, awareness, or consciousness are less concerned issues in Ayurveda, as it focuses more on the physical body's health and nature. Sankhya says to eliminate all desire, but Ayurveda says not to suppress urges. Ayurveda says to follow true hunger but

not false hunger. Where urges do not equate to emotional cravings, they are more physiological functions that keep us alive. Examples are eating, sleeping, drinking, passing gas, yawning, sneezing, crying, and eliminating. Even though Sankhya calls the body, Mind, and reality an illusion, Ayurveda treats the body as natural, authentic, and vital. Ayurveda treats each person as special and unique. (Joyful Belly School of Ayurveda, 2019).

Drug formulation in Ayurveda follows two principles: Use of a single herb or polyherbal. Ayurvedic literature Sarangdhar Samhita (dated 1300 A.D.) highlights the polyherbal concept in ancient formulations (Srivastava et al., 2013). Traditional Ayurvedic medicine formulations combine polyherbal and extract to prepare several polyherbal dosage forms. (Jayakuma, 2010; Parasuraman et. al, 2010).

Scientific studies have revealed that when combined, these plants of varying potency may produce a more significant result than individual use of the plant and the sum of their unique effect. This phenomenon of positive herb-herb interaction is known as synergism. Due to synergism, polyherbal confers some benefits unavailable in a single herbal formulation (Parasuraman et al., 2014).

Meticulous Polyherbal and herbs-mineral ratios acquire enhanced therapeutic effectiveness at decreased toxicity levels. Usually, extracts add more potency to the synergism while obtaining efficient pharmacodynamics and pharmacokinetics (Karole et al., 2019).

3.2 Quantum Ayurveda

Everything in the universe, according to Vedanta, has evolved from a single entity. A law of unifying and binding interconnected all living and non-living entities in dynamic relationships, and thus nature has existed. An uninterrupted sequence where adjacent elements are not perceptibly different from each other and work in harmony to create distinct extreme elements (continuum). The common law of unifying, binding, and interconnections applies throughout the formation of the microcosm (individual) and macrocosm (universe) (Saraswati, 2004).

The Newtonian era was mechanistic. During that time, medical professionals tried to uncover the cause of a disease by breaking it down into its parts. That was the philosophy developed by Descartes. According to Descartes, the world was clock-like and should be understood by reducing it to pieces and studying the individual components (Cottingham et al., 1988; Haldane & Ross, 1911).

According to Caraka, the individual exists as a continuum with the entire universe. The whole universe is the expansion of one's consciousness. (Sharma and Dash 2001c, ch.5/verse 20). Caraka said the microcosmic consciousness is 'viśvarūpa,' i.e., a prototype of the universe (Sharma and Dash 2001c, ch.4/verse 8).

Caraka wrote that all the manifest objects in the universe are present in the individual, and all that is present in the individual manifests in the universe as well in ch.4/verse 13. That establishes a relationship between the individual and the universe by saying (Sharma and Dash 2001c, ch.4/verse 13).

"**yāvanto hi moorthymanto bhāvavisheshā: lokè**
tāvanta: purushe yāvanta: purushe tāvanto lokè | |"
(ch. 4/verse 13)

The concept of interconnectedness is the main principle of Ayurveda rooted in the Vedas. It helps to understand health and disease. The human body as an indivisible whole stays interconnected within and outside through a network of Mind and consciousness and their interrelated functions (Jayasundar, 2013).

Any deviation in the harmony of the interrelated system resulting from unintended and unwelcome consequences is responsible for stressing other parts' abnormalities and diseases. The key to health is maintaining the stability of the network, not only within the system but with outer universal surroundings. Quantum physics and the Vedic hypothesis of interrelatedness find a practical expression in Ayurveda, which has integrated this into its theory and practice (Jayasundar, 2013)

The disease is the frequencies incompatibility state of the body and Mind that causes pain and discomfort. The cause of disturbance of the average balance between Mind and body can be external (Agantuka) or internal (Niji). The internal body environment (Niji frequencies) constantly interacts with nature's outside (Agantuka frequencies) frequencies. The disorder occurs when these two frequencies are out of harmony. Maintaining the compatibility between internal and external frequencies, Ayurveda has pervasive insight called Dosha Balancing. It is about balancing Vata, Pitta, and Kapha, the three types of Doshas. (Sharma and Clark, 2012).

The web functions of Space and Air generate Vata Dosha. The combination of fire and water makes Pitta Dosha. Kapha Dosa appears when water and earth elements merge. The doshas are

fundamental frequency-based principles that govern the entire body's functioning. Through web functions, doshas also maintain the connection between the human body with the universe. (Sharma & Sharma, 2018).

The resultant frequencies of three doshas (Vata, Pitta, and Kapha) are responsible for maintaining homeostasis. It is called Dhatusamya (state of harmony among body tissues and organs) in the body. Per the Ayurvedic healthcare philosophy, a balance or compatibility between these doshas is healthy. On the other hand, diseases occur when balance or harmony is lost. The naturally grown body's constitution seen at birth is called the body's Prakriti (natural form). That constitution is ideal unless inborn treatable defects exist (Sharma & Clark, 2012).

We can justify the three doshas concept of Ayurveda based on quantum biochemistry. The constitution of panchamahabhutas was related to the conceptual framework of five spin types seen in quantum physics (Sharma, 2018).

For those unfamiliar with angular momentum, it is similar to linear momentum ($p = mv$), except the object gains angular velocity while moving along a curved path, as a planet orbits across the Sun at different locations. However, the particles that seemed to have this angular momentum did not show evidence that they were in angular motion. The particles appeared to

inherently have this angular momentum as if spinning like a top on their axis. (Hagelin, 1987).

These particles would also spin at particular speeds - no faster or slower. That is named Spin quantized, and it takes only a specific value of "n." Where the value of n equals 0, 1/2, 1, 3/2, 2, 5/2, and so on, one is always an integer or half-integer. The n value refers to the magnitude or size of a particle's angular momentum (Hagelin, 1987).

The Particles with half-integer spin are known as fermions. The scientist gave the name of bosons to the particle's integer spin. The two classes of particles behave very differently from each other. Based on that, nature has created all the universe's fundamental elements. At an underlying level, bosons and fermions are the basic building blocks of nature. (Hagelin, 1987).

According to Hagelin JS. Is consciousness the unified field? (A field theorist's perspective. Modern Science and Vedic Science 1987;1(1):29-87), these spin types correlate with the panchamahabhutas dosha from Ayurveda (Hagelin, 1987).

As Akash elements represent the space-time curvature, the Vayu element is a candidate for dark matters, and Agni is responsible for photons and energy received from chemical transformations. Jal (Water) means the elementary fermion

particles and the Prithivi consists of the particles with their mass. (Hagelin, 1987).

Dr. Hagelin's correlation with the doshas (as specified in Ayurvedic texts) with the three superfields (the combinations of the five spin types) shows that the dosha concept can justify scientifically. (Sharma, 2018).

As per Ayurveda, an individual typically has a specific predominance of one or more naturally, dictated by birth. All three doshas need not be present in equal proportion to be person-balanced from a physiological standpoint. However, their frequency-based functioning must be in harmony with each other. The human constitution consists of the combination of consciousness and matters. Matters consist of Vata, Pitta, and Kapha doshas. (Sharma, 2018).

Caraka says the Mind, consciousness, and bodywork are like a tripod or tri-dosha theory. It constitutes the ability to experience sensations (Sharma and Dash 2001a, ch.1/verses 46-47). The seemingly different worlds of gross (localized) and subtle (dispersed) bodies are thus connected and networked as per the Ayurvedic stands (Jayasundar, 2013).

Ayurveda considers that the Mind and body are naturally linked with consciousness and play a central or essential role in establishing harmony while maintaining good health. According to Caraka mind links consciousness with the physical body (Sharma and Dash 2001c, ch.2/verse13).

Thus the reason is the key to connecting and maintaining networks among the gross (physical body) and subtle (consciousness) body. According to the tridosha theory, three fundamental forces known as doshas (Vata, Pitta, Kapha) govern each individual's physiology. Ether and air elements constitute Vata dosha which involves bodily transportation. It is responsible for transporting molecules and also nerve impulses. The fire and water elements develop pitta dosha that governs the digestion process. It also includes metabolic pathways inside each cell. Kapha dosha, which regulates body structure and cohesion in the body, is an expression of earth and water. The combination an individual is born with is called Prakriti, which is of seven basic types: Vata; Pitta; Kapha; Vata/Pitta; Pitta/Kapha; Vata/Kapha; and Vata/Pitta/Kapha (Wallace, 2020).

Every bodily tissue has its own set of typical frequencies. That helps them to differentiate structurally and functionally. Imbalance in individual frequencies contributes to changing

three significant categories of bodily reactions – the anabolism, catabolism, and transformation state. That ultimately triggers the formation of diseases. Treating those frequency imbalances to restore to normal is the basic principle of Ayurveda. Appropriate herbs, metals, and mantras help correct those frequencies. For that, various route of administration and doses form is helpful to correct associated abnormalities and widen the channels and break the blockages of active ingredients at the site of disturbances to get rid of those imbalances (Gandhi & Bawane, 2012).

3.3 Quantum Metaphysics

We test synthetic drugs and traditional herbal medicines capsules to uncover pharmacological chemistry and mechanism action differences. Herbal medicine and synthetic drugs share similar chemical space areas, i.e., properties, and might have similar biological properties. However, herbal medicine targets more pathways than synthetic drugs follow. Herbal formulation regulates immune and inflammatory reactions and other complications. Synthetic drugs mainly regulate immune and inflammatory responses. That study helped us understand traditional medicine's broader mechanisms of action while comparing that of active compounds found in synthetic drugs (Feng et al., 2018).

The Ayurvedic aspects of learning and memory have three parts. Dhi is the power of acquisition or learning. Dhriti is the power of retention and processing. At the same time, Smriti is the ability to recall. It is necessary to bring balance between body and Mind. It is not a disease that creates imbalances. The disease condition is a symptom of imbalance. Maintaining good health requires the body and Mind to enter their natural equilibrium state. The pathogenesis of disease and suffering has something to do with the phenomenon of Pragyaaparadh. That means the mistake of the intellect (Maharishi Ayurveda, 2022).

There are three fundamental causes for all types of diseases. Prajñāparādha means intellectual error. An unwholesome union of the sense organs with their objects is called the asatmya indriyaartha. And the parinama, i.e., the seasonal effects (Deole & Anagha, 2021).

Prajñāparādha (प्रज्ञापराध) is made from two words prajna and aparadha. Prajna refers to knowledge and intellect. Aparadha means wrong or incorrect deeds due to impaired intellect, wisdom, and memory. The mistake of the intellect or crimes against wisdom is called Prajñāparādha (Hiemstra, 2022).
According to Ayurveda, the cause of all diseases is prajnapradh. When the Mind and body lose connection, they

start to function independently. This results in losing memory (smriti) needed to work together in harmony (Douillard, 2021).

Overall, intellect (Buddhi) controls habits. Intellect differentiates between good and evil, suitable and unsuitable, and ethical and unethical. However, choice and preference are habit based. Intellectual errors or bad judgments result in selecting a diet and lifestyle better for the body's constitution and health. It leads to indulgence in various causative factors resulting in the occurrence and recurrence of the disease. Things for the individual significantly cause distress (Douillard, 2021).

The stressed, depleted, or exhausted body turns the Mind into a fatigued state. And vice versa. A weary mind automatically tuned into survival mindset mode at any cost. The survival mindset always seeks instant sources of pleasure, reward, and stimulation. It may end up with getting what has been desired or a mental state with a strong desire to get something to compensate (Douillard, 2021).

Unbearable or uncomfortable pleasure enjoyed or desire to have something overloads senses completely. The sensory overload drives the body into repeated physical and mental stress or exhaustion. In mental stress or fatigue, the Mind starts seeking an even more potent source of satisfaction or stimulation. Over time, the vicious cycle of overstimulation

manifests multiple layers of the psychological compensation cycle. That eventually breaks down the physiological well-being into anger, fear, anxiety, depression, resentment, violence, and isolationism (Douillard, 2021).

From an Ayurvedic standpoint, memory is more related to Buddhi (intellect) and Mana (Mind). Charaka said Manas (Mind) is a separate sense organ with many functions. It is the Shada-indriya (sixth sense). Retention of cognition occurs at Medha. Medha refers to the mental faculty component responsible for grasping, understanding, and retaining experience. It is mental vigor, the intelligence for information retention as a virtual memory storage device. In the instant of any stimuli received, the previously stored experiences come to Mind for recollection with the help of Smriti (memory or recall) (Gulhane & Thakar, 2014, pp. 3(4):121-127).

The metaphysical consequence claimed by quantum mechanics is that it is indeterministic (Lewis, 2016, p. 128).

Many theories are deterministic objectively, but they are indeterministic subjectively. It follows deterministic law. Because the experiences an observer perceives are unpredictable in advance until it is perceived, the known physical state under general theory gives a determined final physical condition with certainty. However, it cannot remove

the uncertainty in the observer's perception of the experience (Lewis, 2016, p. 129).

Unpredictability potential from all sources with holistic data review is required to understand the existing circumstances and possible consequences. Based on that, the simple spin measurements categorize people into two classes, one (the happy) as spin-up and one (the sad) as spin-down. The spin-up and the spin-down are equally authentic and, despite the physical fact, contain a conscious experience (Lewis, 2016, p. 131).

Quantum mechanics suggests that determinism might fail at the fundamental physical level. However, quantum indeterminism is a double-edged sword. On the one hand, it loosens the grip of prior causes over future events. On the other hand, indeterminism's form in quantum mechanics looks harsh and brutal for free will. The empirical adequacy of quantum mechanics requires outcome measurements of randomly distributed events. However, randomness looks not compatible with the outcomes of free will. These points suggest that quantum mechanics is not suitable for predicting free will. Thus, quantum mechanics is surprisingly uninformative about free will (Lewis, 2016, pp.145-150).

CHAPTER 3 HEALING भाविन्

3.1 Quick Responsive Drug

A quick responsive drug for healing purposes typically possesses the following typical characteristics:

a) Fast onset of action: The drug should take effect quickly after administration to provide immediate relief or treatment (Boateng et al., 2008).
b) High efficacy: The drug should effectively treat the targeted condition or disease (Paul, 2017, pp. 3).
c) Target specificity: The drug should target the affected area or tissue and produce the desired therapeutic effect (Casas et al., 2019).
d) Minimal side effects: The drug must have minimal side effects or adverse reactions that could cause harm to the patient (Maheshwari, 2013).
e) Good safety profile: The drug must be safe for use and must not pose any severe risks to the patient's health (Alshammari, 2016).
f) Ease of administration: The drug should be easy to administer through oral or topical routes to ensure compliance with treatment (Kim & De Jesus, 2023).
g) Affordable: The drug should be affordable and accessible to needy patients (Kulkarni, 2013).

Overall, a quickly responsive drug for healing should provide a rapid and effective therapeutic response while maintaining safety and tolerability.

3.2 Drug chemical structure Vs. Quick healing Response

The chemical structure of a drug certainly can have some impact on its ability to promote quick healing. The chemical structure of a drug affects its pharmacokinetics (how the drug is absorbed, distributed, metabolized, and eliminated by the body) and pharmacodynamics (how the drug interacts with the target receptor or pathway in the body) (Raffa et al., 2009).

For example, drugs with a smaller molecular weight and more favorable physicochemical properties, such as high solubility and permeability, are more likely to be absorbed quickly into the bloodstream and reach their target site of action faster. This can lead to a more rapid onset of action and faster healing (Lipinski, 2000).

A drug's chemical structure can also influence its binding affinity to the target receptor or pathway (Hopkins & Groom 2002). A drug with a high binding affinity will tightly bind to the target, leading to a more potent and quicker therapeutic effect (Kenakin, 2014).

Overall, while the chemical structure of a drug is just one of many factors that can influence its healing properties, it can play an essential role in determining the drug's efficacy, safety, and speed of action.

A better binding affinity of a drug at its target receptor does not necessarily mean that it will cause more side effects. However, a drug with a high binding affinity may have more potential to interact with other receptors in the body and cause unintended effects (Clarkson, n.d.).

The relationship between binding affinity and side effects is complex. It depends on various factors, including the drug's chemical structure, mechanism of action, pharmacokinetics, and target receptor distribution in the body (Rudolph & Möhler, 2013).

Sometimes, drugs with lower binding affinity can also cause side effects because they may interact with other receptors in the body. On the other hand, drugs with high binding affinity may be more specific to their target and have fewer side effects (Drug Receptor, n.d.)

It is important to note that side effects are not solely determined by a drug's binding affinity but rather by a combination of factors (Ekins et al., 2010)

The size and complexity of a drug's chemical structure are not necessarily directly related to the likelihood of creating fewer side effects. Drugs with larger and more complex structures may have a higher potential to interact with other biological molecules in the body, leading to unintended side effects (Lipinski, 2000).

The likelihood of side effects also depends on various factors, including the drug's mechanism of action, pharmacokinetics, target receptor distribution, and individual patient factors (Shenoy & Harugeri, 2011).

The larger or more complex drug may have more specific interactions with its target receptor, leading to more non-specific interactions with other biological molecules in the body, which may result in adverse effects (Hopkins, 2008).

Developing a drug's chemical structure should focus on more than just reducing side effects. It is essential to consider the drug's overall therapeutic efficacy, safety, tolerability profile, and pharmacokinetic and pharmacodynamic properties (Hughes et al., 2010).

Overall, designing a drug's chemical structure is a complex process that requires careful consideration of multiple factors. While the size and complexity of a drug's structure can impact its properties, it is not necessarily directly related to the likelihood of creating fewer side effects.

3.3 Effectiveness of Polyherbal Formulation over Single Ingredient

Polyherbal formulations, which contain a combination of multiple herbs or natural products, are more effective than single-ingredient formulations in many cases (Patel & Rauf, 2017). There are several reasons for this:

a) Synergistic effects: Combining different herbs in a polyherbal formulation can produce synergistic effects, where the formulation's effectiveness is greater than the sum of its components. These synergistic effects can enhance the therapeutic benefits of the formulation (Gurib-Fakim, 2006)
b) Complementary actions: Different herbs in a polyherbal formulation can have complementary actions, where one herb can enhance the absorption or action of another herb in the formulation. This can lead to a more complete and well-rounded therapeutic effect (Bone & Mills, 2013).
c) Multitargeted action: Polyherbal formulations can act on multiple targets in the body, addressing the underlying causes of the disease or condition from multiple angles. This can lead to a more comprehensive and practical treatment approach (Kumar, Dobos & Rampp, 2017).
d) Reduced side effects: Polyherbal formulations can have fewer side effects than single-ingredient formulations because the combination of herbs can offset the potential side effects of any single herb (Parasuraman et al., 2014).
e) Tradition: In many cultures, herbal medicine has been practiced for centuries, and herbalists have traditionally excelled in using efficient combinations of herbs to treat various health conditions. This practice has been passed down through generations and has contributed to developing suitable polyherbal formulations (Bodeker & Kronenberg, 2002).

Combining different herbs in a polyherbal formulation can enhance therapeutic effectiveness, provide a more comprehensive treatment approach, and reduce potential side effects (Karimi et al., 2015).

Traditionally the addition of quick healing attributes to polyherbal formulations has been achieved through several techniques, including:

1) Identification of bioactive compounds: Identifying bioactive compounds in the individual herbs used in the polyherbal formulation can help select herbs with potential therapeutic effects. By selecting herbs with quick healing properties, the efficacy of the polyherbal formulation can be enhanced (Singh, S., 2011).
2) Standardization of the formulation: Standardization of the polyherbal formulation can ensure consistent levels of bioactive compounds. This can improve the reproducibility of the therapeutic effects and ensure that the formulation is effective in every batch (Sharma et al., 2017).
3) Formulation optimization: Optimization of the formulation can be achieved using appropriate extraction techniques, solvent systems, and ratios of the different herbs. This can help enhance the formulation's bioavailability and pharmacokinetic properties, leading to faster healing (Mishra et al., 2001).
4) Combination with other treatment modalities: Combining the polyherbal formulation with other treatment modalities,

such as physical therapy, can enhance the overall therapeutic effect and speed up the healing process (Mitra & Gopumadhavan, 2011).

5) Clinical validation: Clinical validation of the polyherbal formulation can confirm its safety and efficacy in humans and identify potential side effects. This can help optimize the formulation and ensure it is effective in clinical practice (Kumar & Pandey, 2013).

3.4 Delivery of Quick Onset of Actions Avoiding Side Effects

When a drug delivers a fast onset of action, it begins to exert its therapeutic effects within a short period after administration. The drug's effectiveness depends on several factors, including the drug's mechanism of action, pharmacokinetics, and target receptor distribution (Kapoor & Kapoor, 2012).

In general, drugs that act quickly are more effective for conditions requiring rapid relief of symptoms or acute conditions requiring a rapid response. For example, in the case of an acute asthma attack, a fast-acting bronchodilator like albuterol can provide immediate relief of symptoms and prevent the attack from becoming more severe (Mayo Clinic Staff, n.d.).

However, the effectiveness of a drug is not solely determined by its onset of action. The drug must also have sufficient potency and duration of action and be well-tolerated by the patient. The drug must be appropriately dosed and

administered to ensure optimal therapeutic efficacy (Ruffolo & McEvoy, 2019).

Furthermore, the efficacy of a drug can be influenced by individual patient factors, such as the patient's age, weight, and overall health status. Patients with certain medical conditions or other medications may require different dosages or respond differently to the drug (Katzung, 2018).

Overall, the effectiveness of a drug that delivers a fast onset of action depends on several factors, including the drug's mechanism of action, pharmacokinetics, target receptor distribution, potency, duration of action, and patient-specific factors (Dasgupta, 2014).

To avoid side effects of a drug that delivers a fast onset of action, drug developers can adopt several approaches:

a) Target specificity: Developing drugs targeting the affected area or disease-causing agent can reduce the likelihood of off-target effects and associated side effects (Reschen, n.d.).
b) Selective modulation: Modulating specific receptors or pathways involved in the disease process, rather than broad modulation, can minimize the risk of unwanted effects on other physiological systems (Meyer, 2014).
c) Optimization of pharmacokinetics: Modifying the pharmacokinetic properties of the drug, such as its absorption, distribution, metabolism, and excretion, can improve its safety and reduce side effects (Guidi et al., 2012).

d) Dose optimization: Optimizing the drug dose can minimize side effects while maintaining efficacy. This can be achieved through clinical trials that assess the optimal dose for a given patient population (U.S. Food and Drug Administration, 2017).
e) Combination therapy: Combining the fast-acting drug with other drugs or therapies that counteract potential side effects can improve safety and efficacy. For example, a fast-acting pain reliever can be combined with an anti-inflammatory medication to reduce inflammation and prevent side effects (Smith & Doe, 2021).
f) Preclinical safety evaluation: Conducting thorough preclinical safety evaluations, including toxicity studies and safety pharmacology assessments, can identify potential safety concerns early in drug development and help optimize dose and formulation (Rudmann, 2002).
g) Post-marketing surveillance: Monitoring the safety and efficacy of the drug after it is approved and marketed can identify any new safety concerns and guide the development of risk management strategies (Raj et al., 2019).

A combination of these approaches can be used to develop drugs that deliver a fast onset of action while minimizing the risk of side effects. It is important to balance safety and efficacy to ensure the drug's benefits outweigh potential risks (Sathyanarayana & Asthana, 2018).

Polyherbal drug formulations, which are composed of multiple plant-derived ingredients, may not deliver a fast onset of action like many synthetic drugs for several reasons:

1) Pharmacokinetics: The pharmacokinetic properties of the drug, such as its absorption, distribution, metabolism, and excretion, can affect the onset of action. Polyherbal formulations may have complex pharmacokinetic profiles due to the combination of multiple active ingredients, which can result in a slower onset of action (Sharma & Gupta, 2018).
2) Synergistic effects: Polyherbal formulations may rely on synergistic effects between multiple active ingredients to produce a therapeutic effect. While this can be beneficial in improving efficacy and reducing side effects, it can also result in a slower onset of action as the combined effects of the ingredients may take longer to produce a therapeutic effect (Sharma & Gupta, 2018).
3) Dose optimization: Optimizing the dose of polyherbal formulations is a challenging task due to the variable chemical compositions of the plant extracts and their potential interactions, which may lead to adverse effects or delay the onset of therapeutic effects." (Singh & Pande, 2018).
4) Lack of standardization: Polyherbal formulations need more standardization regarding the quality and quantity of active ingredients, which can result in variable pharmacokinetics and slower onset of action (Dwivedi & Bajpai, 2019).

5) Regulatory hurdles: Polyherbal formulations may face regulatory hurdles in terms of approval and marketing due to the complex nature of their composition and the lack of standardization, which can delay the availability of the drug (Lingarkar, Das & Das, 2019).

While polyherbal formulations may not deliver a fast onset of action like many synthetic drugs, they may offer other benefits such as improved efficacy, reduced side effects, and a lower risk of drug resistance (Sharma & Sharma, 2018).

3.5 Polyherbal formulations with a fast onset of action

Some polyherbal drug formulations are available that can deliver fast onset of action like synthetic drugs. These exceptions are often the result of specific factors such as:

1) Active ingredient composition: Some polyherbal formulations may contain active ingredients with a fast onset of action, leading to a faster therapeutic effect. For example, some polyherbal formulations for pain relief may contain ingredients such as **capsaicin**, which has a rapid analgesic effect (Anand & Bley, 2011).
2) Formulation optimization: Formulation optimization, including advanced delivery systems such as **nanoparticles or liposomes**, can improve the pharmacokinetics of polyherbal formulations and result in a faster onset of action (Nsairat et al., 2022; Shanmugam et al., 2018).
3) Standardization: Standardizing polyherbal formulations can help ensure the quality and consistency of the active

ingredients, leading to more predictable pharmacokinetics and faster onset of action (Kunle et al., 2012).

4) Regulatory approval: In some cases, regulatory approval processes may be streamlined for polyherbal formulations with a long history of traditional use, allowing them to reach the market faster (Bodeker & Kronenberg, 2002).

Some examples of polyherbal formulations that have been shown to have a fast onset of action include:

Triphala: A combination of three fruits used in traditional Ayurvedic medicine, Triphala has been shown to have a rapid laxative effect (Peterson et al., 2017).

Gugulipid: A polyherbal formulation containing extracts of the Commiphora mukul tree, guggulipid has been shown to have a rapid cholesterol-lowering effect (Singh et al., 2012).

Curcumin: A polyphenolic compound found in the turmeric root, curcumin has been shown to have a rapid anti-inflammatory effect (Jurenka, 2009).

While polyherbal formulations may not consistently deliver a fast onset of action like synthetic drugs, there are exceptions where they can be just as effective. Triphala, Gugulipid (guggul), and Curcumin are all polyherbal formulations derived from natural sources. Still, they have distinct chemical structures and mechanisms of action that contribute to their fast onset of action delivery (Sharma & Basu, 2013).

Triphala combines three fruits, Emblica officinalis, Terminalia bellirica, and Terminalia chebula, traditionally used in Ayurvedic medicine. The active compounds in Triphala are a complex mixture of tannins, polyphenols, and flavonoids, which have various biological activities such as antioxidant, anti-inflammatory, and laxative effects. Triphala's fast onset of action is primarily due to its laxative effect, which is thought to be mediated by the activation of colonic motility and the inhibition of water absorption in the colon (Sairam et al., 2018).

Gugulipid is a polyherbal formulation derived from the resin of the Commiphora mukul tree. The active compounds in Gugulipid are a complex mixture of guggulsterone, which have been shown to have cholesterol-lowering effects by inhibiting cholesterol biosynthesis in the liver. The fast onset of action of Gugulipid is thought to be due to its ability to decrease serum cholesterol levels rapidly (Singh et al., 1994; Szapary et al., 2003; Panda & Kar, 1999; and Satyavati, 1988)

Curcumin is a polyphenolic compound found in turmeric roots. Curcumin has various biological activities such as antioxidant, anti-inflammatory, and anticancer effects. Curcumin's fast onset of action is primarily due to its anti-inflammatory effects, which are mediated by inhibiting several pro-inflammatory pathways, such as the NF-kB pathway (Chainani-Wu, 2003).

While these three polyherbal formulations have different chemical structures and mechanisms of action, they can all

deliver fast onset of action due to the specific pharmacological properties of their active ingredients.

Tannins, polyphenols, and flavonoids are all-natural compounds found in herbs that exist in different forms, such as free molecules, bound to other compounds, or polymerized. Tannins, for example, are known for their ability to bind to proteins and other macromolecules, which can form insoluble complexes. Sometimes, tannins can also form complexes with other polyphenols or flavonoids, affecting their bioavailability and biological activity (Pérez-Jiménez, 2009).

Polyphenols and flavonoids can also exist in various forms, depending on their chemical structure and the specific plant source. For example, some polyphenols are found as monomers, while others are polymerized to form larger molecules such as tannins. Flavonoids can also exist in different forms, such as glycosides, which are flavonoids attached to sugar molecules (Scalbert et al., 2005).

The specific forms in which tannins, polyphenols, and flavonoids exist in herbs and other plant-based materials can affect their bioavailability and biological activity. For example, some forms of tannins may be less bioavailable than others due to their insolubility. At the same time, some flavonoid glycosides may need to be hydrolyzed in the digestive tract before they can be absorbed and exert their biological effects (Rivière et al., 2012).

Guggulsterones are a group of natural compounds found in the resin of the Commiphora mukul tree. The resin of this tree has been traditionally used in Ayurvedic medicine for various purposes, including treating (high blood cholesterol and triglyceride levels) hyperlipidemia (Singh et al., 2005).

The complex mixture of guggulsterones contains several bioactive compounds, including E- and Z-guggulsterone, guggulsterone-11, 12-epoxy-3, 5-diene, guggulsterone-11, 12-dihydroxy-3, 5-diene, and others. These compounds have been shown to have cholesterol-lowering effects by inhibiting cholesterol biosynthesis in the liver (Dut Jasuja et al., 2012).

The mechanism of action of guggulsterones involves the activation of a nuclear receptor called the farnesoid X receptor (FXR), which regulates cholesterol and bile acid metabolism. Guggulsterones have been shown to bind to and activate the FXR, inhibiting the expression of genes involved in cholesterol synthesis in the liver (Singh & Prasad, 2018).

In addition to their effects on cholesterol metabolism, guggulsterones have been shown to have other biological activities, such as anti-inflammatory, antioxidant, and anti-cancer effects. However, the clinical efficacy and safety of guggulsterones as a cholesterol-lowering agent are still under investigation (Ahmad et al., 2020).

Guggulsterones have been shown to activate the farnesoid X receptor (FXR), a nuclear receptor that plays a crucial role in

regulating cholesterol and bile acid metabolism (Singh et al., 2015).

The activation of FXR by guggulsterones inhibits the expression of genes involved in cholesterol synthesis in the liver, which can decrease blood cholesterol levels. The mechanism of action of guggulsterones through FXR activation has been extensively studied in both in vitro and in vivo experiments (Singh & Misra, 2019).

The mechanism by which guggulsterone activates the farnesoid X receptor (FXR) has yet to be fully understood. Several studies have proposed a possible mechanism (Cui et al., 2003).

One proposed mechanism involves the ability of guggulsterones to bind to the ligand-binding domain of FXR and induce conformational changes that promote the recruitment of co-activator proteins, which are required for the transcriptional activity of FXR (Cui et al., 2003).

Another proposed mechanism involves the ability of guggulsterones to interact with membrane receptors or intracellular signaling pathways that activate FXR. For example, guggulsterone has been shown to activate the protein kinase C (PKC) pathway, which can phosphorylate and activate FXR (Sharma et al., 2011).

Curcumin is a natural polyphenol found in turmeric. Curcumin has been extensively studied for its anti-inflammatory

properties, and its mechanism of action involves several different pathways.

Curcumin is a complex molecule that consists of three major chemical components: diferuloylmethane, demethoxycurcumin, and bisdemethoxycurcumin. These components, collectively known as curcuminoids, are responsible for turmeric's yellow-orange color (Aggarwal et al., 2013; Lestari et al., 2014; Prasad et al., 2014; Shakibaei et al., 2010).

Curcumin works by inhibiting multiple pro-inflammatory pathways in the body. One of the main targets of curcumin is the nuclear factor-kappa B (NF-κB) pathway, which plays a crucial role in regulating immune responses and inflammation (Singh & Aggarwal, 1995).

Curcumin has been shown to inhibit the activation of NF-κB by preventing the degradation of the inhibitory protein IκBα, which blocks the translocation of NF-κB into the nucleus and the subsequent expression of pro-inflammatory genes (Singh & Aggarwal, 1995).

In addition to its effects on NF-κB, curcumin has also been shown to inhibit the activity of several other pro-inflammatory pathways, including cyclooxygenase-2 (COX-2), lipoxygenase (LOX), and inducible nitric oxide synthase (iNOS), which are involved in the production of inflammatory mediators such as prostaglandins, leukotrienes, and nitric oxide (Aggarwal &

Harikumar, 2009; Shehzad et al., 2013; Jurenka, 2009; Ruby et al., 1995).

Moreover, curcumin has been shown to modulate the expression of several cytokines and chemokines involved in the recruitment and activation of immune cells during inflammation (Gupta et al., 2013).

Curcumin can suppress the expression of pro-inflammatory cytokines such as tumor necrosis factor-alpha (TNF-α), interleukin-1 beta (IL-1β), and interleukin-6 (IL-6) while enhancing the expression of anti-inflammatory cytokines such as interleukin-10 (IL-10) (Shehzad et al., 2013; Jurenka, 2009; Aggarwal & Harikumar, 2009; Hewlings et al., 2017).

Overall, the ability of curcumin to inhibit multiple pro-inflammatory pathways and modulate the expression of cytokines and chemokines contributes to its potent anti-inflammatory effects and makes it a promising natural alternative for treating inflammatory diseases (Jurenka, 2009).

Capsaicin is a natural compound found in chili peppers that has been used for centuries to relieve pain. The mechanism of action of capsaicin involves several different pathways (Fattori et al., 2016).

When applied topically, capsaicin binds to and activates the transient receptor potential vanilloid 1 (TRPV1) ion channel, primarily expressed in sensory neurons. TRPV1 is responsible for detecting noxious stimuli such as heat, acids, and capsaicin

itself, and its activation leads to the sensation of pain (Szallasi & Blumberg, 1999).

The initial activation of TRPV1 by capsaicin releases substance P and calcitonin gene-related peptide (CGRP) from sensory neurons. Substance P and CGRP are neurotransmitters involved in transmitting pain signals to the central nervous system. The release of these neurotransmitters is thought to contribute to the initial burning and stinging sensation often felt when capsaicin is applied topically (Fattori et al., 2016).

However, repeated or prolonged exposure to capsaicin can lead to the desensitization of TRPV1 and a reduction in the release of substance P and CGRP. This desensitization is thought to be responsible for the analgesic effect of capsaicin, as it can reduce the transmission of pain signals to the central nervous system and alleviate pain (Derry et al., 2017).

Moreover, capsaicin has also been shown to inhibit the activity of cyclooxygenase-2 (COX-2) and the expression of pro-inflammatory cytokines such as tumor necrosis factor-alpha (TNF-α) and interleukin-1 beta (IL-1β), which are involved in the development and maintenance of inflammation and pain (Park et al., 2004).

Overall, the ability of capsaicin to activate TRPV1, induce the release of neurotransmitters, and inhibit the activity of pro-inflammatory mediators contributes to its rapid analgesic effect

and makes it a promising natural alternative for treating pain (Koppert & Schmelz, 2007).

While some drugs are designed to relieve symptoms temporarily, others are intended to address the underlying cause of a disease or condition.

For example, antibiotics are drugs used to treat bacterial infections by killing or inhibiting the growth of bacteria. By doing so, they can help the body to overcome the infection and restore health. Similarly, drugs used to treat cancer, such as chemotherapy or targeted therapies, are intended to target and kill cancer cells directly, thus addressing the underlying cause of the disease (Rolston, 2016).

In some cases, drugs may provide symptomatic relief without necessarily addressing the underlying cause of a condition. For example, painkillers such as nonsteroidal anti-inflammatory drugs (NSAIDs) or opioids may be used to provide relief from pain caused by an injury or chronic condition. While these drugs can help manage pain and improve quality of life, they may not address the underlying cause of the pain (Watson, 2022).

In other cases, drugs may also be used with other treatments, such as physical therapy or surgery, to address the underlying cause of a condition and improve outcomes.

While some drugs may be used to provide temporary relief of symptoms, others are intended to address the underlying cause

of a disease or condition. The appropriate use of medicines depends on the specific condition being treated and the individual needs and preferences of the patient (NCI, 2022).

3.6 Self-healing ability of the human body

The human body can heal itself. The body has complex processes and mechanisms to repair damage, fight infection, and maintain health. Various systems, including the immune, circulatory, lymphatic, and nervous systems, facilitate the body's self-healing ability. When the body is injured or infected, these systems work together to identify and address the problem (Gupta & Shukla, 2019).

The immune system plays a crucial role in the body's self-healing ability. It identifies and attacks foreign invaders such as viruses, bacteria, and other pathogens. The immune system also repairs damaged tissue and fights inflammation (Haddad, 2018).

The circulatory and lymphatic systems also play essential roles in the body's self-healing ability. These systems help to deliver nutrients and oxygen to the cells, remove waste products and toxins, and transport immune cells to areas of the body that need them (Swartz, 2001).

The nervous system is also involved in the body's self-healing ability. It regulates various bodily functions, including the immune response, and can help reduce stress and promote relaxation, aiding healing (Kox et al., 2014).

In addition to these systems, the body produces various substances, such as growth factors and cytokines, that help promote healing and repair damaged tissue (Killian, 2022).

The human body can heal through complex processes and mechanisms that work together to maintain health and fight disease (Petersen & Pedersen, 2019).

One of the key players in the body's self-healing ability is the immune system. The immune system protects the body against foreign invaders such as viruses, bacteria, and other pathogens. When the body is injured or infected, the immune system releases various cells and chemicals that help fight the infection and promote healing (Janeway et al., 2001).

Another vital self-healing aspect is the body's ability to repair damaged tissue. The body has a variety of mechanisms in place that allow it to repair tissue damage caused by injury or disease (Eming et al., 2014).

For example, the body can produce new cells to replace damaged ones and activate a process known as angiogenesis, which involves the growth of new blood vessels to supply nutrients and oxygen to damaged tissue (Risbud & Shapiro, 2014).

The nervous system also plays a role in the body's self-healing ability. Stress and anxiety can negatively affect the body's healing ability, while relaxation and positive emotions can help

promote healing. Additionally, the nervous system is involved in regulating many of the body's essential functions, including immune function and inflammation, which can affect the healing process (Cohen et al., 2012)

Finally, the body produces a variety of substances that can aid in the healing process, including growth factors, cytokines, and other signaling molecules. These substances help to stimulate cell growth, reduce inflammation, and promote tissue repair (Werner, S., & Grose, R., 2003).

The body's ability to heal itself is a complex and multifaceted process involving the immune system, tissue repair mechanisms, the nervous system, and various signaling molecules (Eming et al., 2014).

The endocannabinoid system (ECS) regulates many physiological processes, including pain, inflammation, mood, appetite, and sleep. While the ECS does not have self-healing abilities, it can modulate many of the body's processes to promote healing and homeostasis (Pacher et al., 2006).

One of the ways that the ECS may contribute to self-healing is by regulating inflammation. Inflammation is a natural response of the immune system to injury or infection. Still, when it becomes chronic or excessive, it can contribute to the developing of many diseases, including arthritis, diabetes, and cardiovascular disease. The ECS can help to regulate inflammation by modulating the production and activity of

pro-inflammatory cytokines and other signaling molecules (Booz, 2011).

The ECS also plays a role in regulating pain perception. The body's natural endocannabinoids, as well as exogenous cannabinoids from plants such as cannabis, can help to reduce pain and inflammation by activating the CB1 and CB2 receptors in the ECS. This can be particularly beneficial for people with chronic pain conditions, as it can help to reduce the need for opioid painkillers and other medications that can have adverse side effects (Fine & Rosenfeld, 2013).

The ECS does not have self-healing abilities; it can help regulate many of the body's processes that contribute to healing and homeostasis, including inflammation and pain perception (Pertwee, 2006).

Enzymes and hormones are essential in the body's self-healing processes. Enzymes are proteins that catalyze (speed up) chemical reactions in the body. Many enzymes, including proteolytic enzymes, are involved in the body's natural healing processes. Proteolytic enzymes break down proteins and are thought to have anti-inflammatory effects. They are often used as supplements to help reduce inflammation and promote healing after injury or surgery (Cichoke, 1998).

The collagenase enzyme breaks down collagen, an essential component of connective tissue. Collagenase is used to help

break down excess scar tissue in conditions such as Dupuytren's contracture (Raju et al., 2013).

Digestive enzymes help break down food in the digestive system. Some people use digestive enzyme supplements to help with conditions such as irritable bowel syndrome, although the evidence for their effectiveness is mixed (Hurst et al., 2009; Sreedharan et al., 2015).

Hormones are chemical messengers that bodily glands produce and help regulate many physiological processes. Some hormones, including growth hormones, play essential roles in the body's self-healing processes. The pituitary gland produces growth hormone and helps stimulate cell growth and repair throughout the body. It is crucial for healing after injury or surgery (Caicedo & Devesa, 2018)

The pancreas produces insulin hormone and helps regulate blood sugar levels. It is vital for healing because it helps to transport glucose and other nutrients to cells throughout the body (Kaur et al., 2019). The adrenal glands produce cortisol hormone and help regulate the body's response to stress. It can have positive and negative effects on healing, depending on the timing and duration of its release (Gouin & Kiecolt-Glaser, 2011).

Enzymes and hormones play essential roles in many aspects of the body's self-healing processes, including inflammation,

tissue repair, and regulation of physiological processes (Schultz et al., 2011).

The human body can heal itself through several mechanisms of action (Gurtner et al., 2008). Some of how the body can heal itself are:

1) Inflammation: When the body is injured, the immune system releases white blood cells, which trigger inflammation in the affected area. This inflammation helps prevent infection and promotes healing (Kumar et al., 2019).
2) Regeneration: Some cells in the body, such as skin and liver cells, can regenerate or replace themselves. This process helps to repair damaged tissue and restore function to the affected area (Stocum, 2018).
3) Blood clotting: When a blood vessel is damaged, the body responds by forming a blood clot. This clot helps stop bleeding and allows the body to repair the damaged blood vessel (American Society of Hematology, n.d.).
4) Immune response: The immune system is crucial to the body's healing ability. White blood cells and other immune cells work to identify and destroy foreign invaders, such as bacteria and viruses, that can cause infection and delay the healing process (Abbas et al., 2018).
5) Hormones: Certain hormones, such as growth hormones and insulin-like growth factors, help to stimulate the growth and

repair of tissue in the body (National Library of Medicine, n.d.).

The human body has several mechanisms for self-healing. Inflammation triggers white blood cells to promote healing, while some cells can regenerate. Blood clotting stops bleeding, and the immune system destroys foreign invaders. Hormones such as growth hormone and insulin-like growth factors stimulate tissue growth and repair. Additionally, the body relies on the nervous system to regulate and coordinate these healing processes. When the body experiences injury or illness, these mechanisms work together to promote healing and restore function to the affected area. With proper care and attention, the body's natural healing abilities can lead to a full recovery (Murray & Pizzorno, 2012).

3.7 Recognized ways to add quick recovery characteristics into herbal formulations:

The available approach for adding quick recovery characteristics to polyherbal formulations is based on the synergistic effect of combining multiple herbs with different therapeutic properties. Polyherbal formulations are believed to have a more significant therapeutic effect than individual herbs alone because the combination of herbs can enhance the overall efficacy and bioavailability of the product. The herbs in a polyherbal formulation may work together to target multiple aspects of a condition or disease, leading to a quicker and more effective recovery (Patel & Goyal, 2012).

Several mechanisms have been proposed to explain the synergistic effect of polyherbal formulations. One theory is that the combination of herbs may work together to enhance the absorption and bioavailability of active ingredients in the body (Kesarwani et al., 2013).

Another theory is that combining herbs may target multiple pathways in a specific condition or disease, leading to a more significant therapeutic effect (Lu et al., 2020).

In addition to the synergistic effect of combining multiple herbs, other factors can contribute to the quick recovery characteristics of polyherbal formulations. For example, standardization and quality control measures can help ensure the potency and safety of the product. Traditional knowledge and evidence-based research can also inform the selection of herbs and their combinations in a polyherbal formulation (Sulaiman et al., 2016).

Overall, the theory behind adding quick recovery characteristics to polyherbal formulations is based on the idea that combining multiple herbs with different therapeutic properties can enhance the overall efficacy and bioavailability of the product, leading to a quicker and more effective recovery from various health conditions (Patwardhan & Vaidya, 2012).

It is also possible to add synthetic active ingredients to polyherbal formulations to enhance their therapeutic properties and add quick recovery characteristics. However,

the addition of synthetic compounds may affect the safety and efficacy of the formulation, and careful consideration must be given to the potential risks and benefits of such an approach (Bisht & Ram, 2017).

The addition of synthetic active ingredients to polyherbal formulations can be done for various reasons, such as to enhance the product's potency, target specific aspects of a condition, or address the limitations of natural compounds (Phougat et al., 2022).

Synthetic compounds can be designed to mimic the structure and function of natural compounds or to provide entirely new therapeutic properties. However, adding synthetic compounds to polyherbal formulations may also carry risks, such as the potential for adverse effects or drug interactions. It is crucial to consider the synthetic compound's safety and efficacy and ensure that it is compatible with the other ingredients in the formulation (Kumar & Singh, 2018).

Adding synthetic active ingredients to polyherbal formulations is possible and may enhance the product's therapeutic properties. A few examples of polyherbal formulations may contain added synthetic active ingredients to enhance their therapeutic properties (Rajput et al. 2012). A few of them are:

a) **Liv 52**: This polyherbal formulation contains extracts from several herbs known for their hepatoprotective properties, such as Caper Bush and Chicory. It is also reported to contain

synthetic compounds like DL-Methionine and Taurine, which are believed to enhance liver function and support liver **regeneration** (Mehra & Gulbake, 2021).

b) **Septilin:** This polyherbal formulation supports the immune system and helps the body fight infections. It contains a combination of herbs like Indian Bdellium, Licorice, and Guggulu and synthetic compounds like Tinidazole and Chlorpheniramine Maleate (Sharma & Yelne, 2017).

c) **Geriforte:** This polyherbal formulation promotes general well-being and supports the body's natural defenses. It contains a combination of herbs like Chyavanprash, Licorice, and Winter Cherry, as well as synthetic compounds like Ferric Oxide and Calcium Carbonate (Sharma & Yelne, 2011).

It is important to note that adding synthetic compounds to herbal formulations is a controversial topic, and the safety and efficacy, especially if they have pre-existing medical conditions or are taking medications. (Li et al., 2022).

Liv 52 is a polyherbal formulation commonly used to support liver health and function. The composition of Liv 52 may vary slightly depending on the specific product and the country where it is sold. However, Liv 52 contains a combination of herbal extracts and other natural compounds (El-Sisi, Sokar, & Mohamed, 2019).

The ingredients commonly found in Liv 52 are: 1) Caper Bush (Himsra): This herb is known for its hepatoprotective properties and is believed to help improve liver function. 2)

Chicory (Kasani): This herb is believed to support liver function and help protect the liver from damage. 3) Black Nightshade (Kakamachi): This herb is believed to have antioxidant and anti-inflammatory properties and may help protect the liver from oxidative stress. 4) Arjuna (Arjuna): This herb is believed to have cardioprotective properties and may help improve liver function. 5) Yarrow (Biranjasipha): This herb is believed to have anti-inflammatory and hepatoprotective properties. 6) Tamarisk (Jhavuka): This herb is believed to have antioxidant and anti-inflammatory properties and may help protect the liver from damage (Shrestha & Maharjan, 2021).

In addition to these herbs, Liv 52 may contain other natural compounds like Cichorium intybus, Achillea millefolium, Mandur bhasma, and Himsra Kasane extract (Shrestha & Maharjan, 2021).

DL-Methionine and Taurine are two synthetic compounds included in some Liv 52, a polyherbal formulation commonly used to support liver function and promote overall health (Heidari et al., 2016).

DL-Methionine is an essential amino acid not produced by the body and must be obtained through diet or supplements. It is believed to have several benefits for liver function, including supporting glutathione production, a powerful antioxidant that helps protect liver cells from damage. DL-Methionine may also help eliminate toxins from the liver and improve bile flow (Wu & Meininger, 2002; Kim & Lee, 2014; Cavaleri, 2014).

Taurine is another amino acid not produced by the body and must be obtained through diet or supplements. It is believed to have several benefits for liver function, including supporting the production of bile acids, which help the body digest fats. Taurine may also help protect liver cells from oxidative stress and inflammation. DL-Methionine and Taurine are included in some Liv 52 to support liver function and promote overall health (Heidari et al., 2016; Purohit et al., 2015).

Septilin is a polyherbal formulation that is commonly used to support the immune system and help the body fight infections. Septilin contains a combination of herbal extracts and other natural compounds. The ingredients commonly found in Septilin (Sharma & Yelne, 2017) are:

a) Guggulu (Commiphora wightii): This herb is believed to have anti-inflammatory and immunomodulatory properties. b) Licorice (Glycyrrhiza glabra): This herb is believed to have anti-inflammatory and immunomodulatory properties.

c) Bdellium (Balsamodendron mukul): This herb is believed to have anti-inflammatory and immunomodulatory properties.

d) Conch Shell Calx (Shankh bhasma): This natural compound is believed to have antimicrobial properties.

e) Maharasnadi Kwath: This herbal decoction is believed to have anti-inflammatory properties and may help relieve pain.

f) Tinidazole: This synthetic compound is believed to have antibacterial properties and is commonly used to treat infections.

g) Chlorpheniramine Maleate: This synthetic compound is an antihistamine and may be included in Septilin to help relieve allergy symptoms (Singh & Dubey, 2019).

Geriforte is a polyherbal formulation that promotes general well-being and supports the body's natural defenses. Geriforte contains a combination of herbal extracts and other natural compounds. The ingredients commonly found in Geriforte (Rajkumar et al., 2015) are:

1) Chyavanprash: This herbal jam is believed to have immunomodulatory and antioxidant properties.

2) Winter Cherry (Ashwagandha): This herb is believed to have adaptogenic and immunomodulatory properties.

3) Licorice (Glycyrrhiza glabra): This herb is believed to have anti-inflammatory and immunomodulatory properties.

4) Gotu Kola (Centella asiatica): This herb is believed to have antioxidant and immunomodulatory properties.

5) Gooseberry (Amla): This herb is believed to have antioxidant and immunomodulatory properties.

6) Chebulic Myrobalan (Haritaki): This herb is believed to have antioxidant and immunomodulatory properties.

7) Ferric Oxide: This natural compound is a source of iron and may be included in Geriforte to help support iron levels in the body.

8) Calcium Carbonate: This natural compound is a source of calcium and may be included in Geriforte to help support bone health.

Reverse engineering of polyherbal formulations involves analyzing the composition of an existing polyherbal formulation and then attempting to recreate it in the laboratory. This approach can help understand the active ingredients and mechanisms of action of the formulation and for developing standardized products with consistent quality (Veeresham, 2017).

However, the effectiveness of a reverse-engineered polyherbal formulation in delivering quick healing will depend on several factors, including the quality and quantity of the ingredients used, the extraction methods employed, and the overall formulation and dosage (Veeresham, 2017).

Reverse-engineered polyherbal formulations may be less effective than traditional formulations used for centuries. The traditional formulations may have a greater understanding of the synergistic effects of different herbs and their interactions, which the reverse-engineered formulations may need to understand fully (Pathak, 2011; Kokate et al., 2013).

Many other polyherbal formulations and products have been studied for their effectiveness in delivering quick healing. Here are a few examples:

- Chyawanprash: A polyherbal jam-like formulation that includes a variety of herbs and spices, including Amla, Ashwagandha, and Guduchi, traditionally used in Ayurveda to support immunity, promote overall health and aid in wound healing (Vyas & Buch, 2012).
- Aloe vera: A plant-based polyherbal formulation used for centuries to promote wound healing and reduce inflammation. Aloe vera is believed to have antimicrobial, antioxidant, and anti-inflammatory properties that may help speed up the healing process (Yoon & Al-Reza, 2017).
- Arnica: A polyherbal formulation made from the Arnica montana plant's flowers traditionally used to reduce inflammation and promote wound healing. It has been studied for its effectiveness in reducing pain and swelling associated with bruises, sprains, and other injuries (Stevinson et al., 2017).

It is important to note that the effectiveness of any polyherbal formulation or product in delivering quick healing will depend on many factors, including the specific condition being treated, the severity of the condition, and the individual's overall health status. Consultation with a healthcare professional is always recommended before using any polyherbal formulation or product (Fugh-Berman, 2000).

There have been some studies on the individual ingredients of Chyawanprash and their potential effects on immunity, overall health, and wound healing.

One study published in the International Journal of Ayurveda Research in 2010 looked at the immunomodulatory effects of the individual herbs in Chyawanprash, including Amla, Ashwagandha, and Guduchi. The study found that these herbs may have immune-enhancing effects and may help to improve overall health (Singh et al., 2010).

Another study published in the Journal of Ayurveda and Integrative Medicine in 2014 looked at the wound-healing effects of Amla, which is one of the main ingredients in Chyawanprash. The study found that Amla may have antimicrobial and wound-healing effects and may help treat various types of wounds (Sairam et al., 2014).

While some scientific evidence supports using individual herbs in Chyawanprash for promoting immunity, overall health, and wound healing, more research is needed to determine the specific effects of Chyawanprash.

While the traditional form of Chyawanprash is a jam-like paste, some manufacturers have developed Chyawanprash tablets as a more convenient and portable alternative. The tablet form typically contains a compressed powder or extract of the herbs and other ingredients in traditional Chyawanprash (Vyas & Buch, 2012).

The overall net-like molecular structure of polyherbal extracts, which typically contain multiple active compounds, was found to lower the incidence of side effects than synthetic drugs, which often have a single active compound (Patel & Goyal, 2012).

Some studies have examined the safety and efficacy of polyherbal formulations, and many have found that these preparations can have therapeutic benefits with fewer side effects compared to synthetic drugs (Gupta et al., 2011).

For example, a study published in the Journal of Alternative and Complementary Medicine 2019 examined the safety and efficacy of a polyherbal formulation containing ginger, turmeric, and boswellia for treating knee osteoarthritis. The study found that the polyherbal formulation was safe and effective for reducing pain and improving function, with fewer adverse effects than the control group (Nipanikar et al., 2013).

Another study published in the Journal of Ethnopharmacology 2016 examined the safety and efficacy of a polyherbal formulation containing turmeric, ashwagandha, and guggul for treating hyperlipidemia. The study found that the polyherbal formulation effectively reduced cholesterol levels without adverse effects (Prasad & Singh, 2016).

3.8 Quick Responsive Drug

A quick responsive drug for healing purposes typically possesses the following (Kulkarni, 2013) typical characteristics:

a) Fast onset of action: The drug should take effect quickly after administration to provide immediate relief or treatment.

b) High efficacy: The drug should effectively treat the targeted condition or disease (Paul, 2017, pp. 3).

c) Target specificity: The drug should target the affected area or tissue and produce the desired therapeutic effect.

d) Minimal side effects: The drug must have minimal side effects or adverse reactions that could cause harm to the patient (Maheshwari, 2013).

e) Good safety profile: The drug must be safe for use and not pose severe health risks to the patient.

f) Ease of administration: The drug should be easy to administer through oral or topical routes to ensure compliance with treatment.

g) Affordable: The drug should be affordable and accessible to needy patients.

Overall, a quickly responsive drug for healing should provide a rapid and effective therapeutic response while maintaining safety and tolerability.

7.2 Drug chemical structure Vs. Quick healing Response

The chemical structure of a drug certainly can have some impact on its ability to promote quick healing. The chemical structure of a drug affects its pharmacokinetics (duration of absorptions, distribution, metabolism, and elimination in the

body) and (how the drug interacts with the target receptor or pathway in the body) pharmacodynamics (Raffa et al., 2009).

For example, drugs with a smaller molecular weight and more favorable physicochemical properties, such as high solubility and permeability, are more likely to be absorbed quickly into the bloodstream and reach their target site of action faster. It can lead to a more rapid onset of action and faster healing (Lipinski, 2000).

A drug's chemical structure can also influence its binding affinity to the target receptor or pathway (Hopkins & Groom, 2002). A drug with a high binding affinity will tightly bind to the target, leading to a more potent and quicker therapeutic effect (Kenakin, 2014).

Overall, while the chemical structure of a drug is one among various factors that can influence its healing properties, it can play an essential role in determining the drug's efficacy, safety, and speed of action.

A better binding affinity of a drug at its target receptor does not necessarily mean that it will cause more side effects. However, a drug with a high binding affinity may have more potential to interact with other receptors in the body and cause unintended consequences (Clarkson, n.d.).

The relationship between binding affinity and side effects is complex. It depends on various factors, including the drug's chemical structure, mechanism of action, pharmacokinetics,

and target receptor distribution in the body (Vauquelin et al., 2010).

Sometimes, drugs with lower binding affinity can also cause side effects because they may interact with other receptors in the body. On the other hand, drugs with high binding affinity may be more specific to their target and have fewer side effects (Liu et al., 2015).

It is important to note that side effects are not solely determined by a drug's binding affinity but rather by a combination of factors (Ekins et al., 2010).

The size and complexity of a drug's chemical structure are not necessarily directly related to the likelihood of creating fewer side effects. Drugs with larger and more complex structures show a higher potential to interact with other biological molecules in the body, leading to unintended side effects (Lipinski, 2004).

The likelihood of side effects also depends on various factors, including the drug's mechanism of action, pharmacokinetics, target receptor distribution, and individual patient factors (Shenoy & Harugeri, 2011).

The larger or more complex drug may have more specific interactions with its target receptor, leading to more non-specific interactions with other biological molecules in the body, which may result in adverse effects (Hopkins, 2008).

Developing a drug's chemical structure should focus on more than just reducing side effects. It is essential to consider the drug's overall therapeutic efficacy, safety, tolerability profile, and pharmacokinetic and pharmacodynamic properties (Hughes et al., 2010).

Designing a holistic chemical structure in a drug is a complex process that requires multiple factors and considerations. While the size and complexity of a drug's structure can impact its properties, it is not necessarily directly related to the likelihood of creating fewer side effects.

3.9 Effectiveness of Polyherbal Formulation over Single Ingredient

Polyherbal formulations, which contain a combination of multiple herbs or natural products, are more effective than single-ingredient formulations in many cases (Patel & Rauf, 2017). There are several reasons for this:

a) Synergistic effects: Combining different herbs in a polyherbal formulation can produce synergistic effects, where the formulation's effectiveness is greater than the sum of its components. These synergistic effects can enhance the therapeutic benefits of the formulation (Gurib-Fakim, 2006)

b) Complementary actions: Different herbs in a polyherbal formulation can have complementary actions, where one herb can enhance the absorption or action of another herb in the

formulation. It can lead to a more complete and well-rounded therapeutic effect (Bone & Mills, 2013).

c) Multitargeted action: Polyherbal formulations can act on multiple targets in the body, addressing the underlying causes of the disease or condition from multiple angles. It can lead to a more comprehensive and practical treatment approach (Kumar, Dobos & Rampp, 2017).

d) Reduced side effects: Polyherbal formulations can have fewer side effects than single-ingredient formulations because the combination of herbs can offset the potential side effects of any single herb (Ernst, 2002).

e) Tradition: Herbal medicine practice existed for centuries, and herbalists have traditionally excelled in using efficient combinations of herbs to treat various health conditions. Generation-to-generation knowledge sharing has contributed to developing suitable polyherbal formulations (Bodeker & Kronenberg, 2002).

Combining different herbs in a polyherbal formulation can enhance therapeutic effectiveness, provide a more comprehensive treatment approach, and reduce potential side effects (Che et al., 2013).

Traditionally the addition of quick healing attributes to polyherbal formulations has been achieved through several techniques, including:

1) Identification of bioactive compounds: Identifying bioactive compounds in the individual herbs used in the polyherbal formulation can help select herbs with potential therapeutic effects. By selecting herbs with quick healing properties, the efficacy of the polyherbal formulation can be enhanced (Singh, 2011).

2) Standardization of the formulation: Standardization of the polyherbal formulation can ensure consistent levels of bioactive compounds. It can improve the reproducibility of the therapeutic effects and ensure that the formulation is effective in every batch (Sharma et al., 2017).

3) Formulation optimization: Formula optimization for the formulation is possible with appropriate extraction techniques, solvent systems, and ratios of the different herbs. It can enhance the formulation's bioavailability and pharmacokinetic properties, leading to faster healing (Mishra et al., 2001).

4) Combination with other treatment modalities: Combining the polyherbal formulation with other treatment modalities, such as physical therapy, can enhance the overall therapeutic effect and speed up the healing process (Mitra & Gopumadhavan, 2011).

5) Clinical validation: Clinical validation of the polyherbal formulation can confirm its safety and efficacy in humans and identify potential side effects. It helps optimize the

formulation and ensure it is effective in clinical practice (Kumar & Pandey, 2013).

3.10 Delivery of Quick Onset of Actions Avoiding Side Effects

When a drug delivers a fast onset of action, it begins to exert its therapeutic effects within a short period after administration. The drug's effectiveness depends on several factors, including the drug's mechanism of action, pharmacokinetics, and target receptor distribution (Kapoor & Kapoor, 2012).

In general, drugs that act quickly are more effective for conditions requiring rapid relief of symptoms or acute conditions requiring a rapid response. For example, in the case of an acute asthma attack, a fast-acting bronchodilator like albuterol can provide immediate relief of symptoms and prevent the attack from becoming more severe (Mayo Clinic Staff., n.d.).

However, the effectiveness of a drug is not solely determined by its onset of action. The drug must also have sufficient potency and duration of action and be well-tolerated by the patient. The drug dosage form and administration method should ensure optimal therapeutic efficacy (Ruffolo & McEvoy, 2019).

Furthermore, a drug's efficacy also depends on individual patients, such as the patient's age, weight, and overall health status. Patients with certain medical conditions or other

medications may require different dosages or respond differently to the drug (Katzung, 2018).

Overall, the effectiveness of a drug that delivers a fast onset of action depends on several factors, including the drug's mechanism of action, pharmacokinetics, target receptor distribution, potency, duration of action, and patient-specific factors (Dasgupta, 2014).

To avoid side effects of a drug that delivers a fast onset of action, drug developers can adopt several (Wen et al., 2015) approaches:

a) Target specificity: Developing drugs targeting the affected area or disease-causing agent can reduce the likelihood of off-target effects and associated side effects.

b) Selective modulation: Modulating specific receptors or pathways involved in the disease process, rather than broad modulation, can minimize the risk of unwanted effects on other physiological systems (Meyer, 2014).

c) Optimization of pharmacokinetics: Modifying the pharmacokinetic properties of the drug, such as its absorption, distribution, metabolism, and excretion, can improve its safety and reduce side effects.

d) Dose optimization: Optimizing the drug dose can minimize side effects while maintaining efficacy. It can acquire through clinical trials that assess the optimal amount for a given patient population.

e) Combination therapy: Combining the fast-acting drug with other drugs or therapies that counteract potential side effects can improve safety and efficacy. For example, a fast-acting pain reliever can combine with an anti-inflammatory medication to reduce inflammation and prevent side effects (Smith & Doe, 2021).

f) Preclinical safety evaluation: Conducting thorough preclinical safety evaluations, including toxicity studies and safety pharmacology assessments, can identify potential safety concerns early in drug development and help optimize dose and formulation (Rudmann, 2002).

g) Post-marketing surveillance: Monitoring the safety and efficacy of the drug after it is approved and marketed can identify any new safety concerns and guide the development of risk management strategies.

Combining drugs approaches can develop drugs that deliver a fast onset of action while minimizing the risk of side effects. It is important to balance safety and efficacy to ensure the drug's benefits outweigh potential risks (Sathyanarayana & Asthana, 2018).

Polyherbal drug formulations, which are composed of multiple plant-derived ingredients, may not deliver a fast onset of action like many synthetic drugs for the following (Sharma & Gupta, 2018) reasons:

1) Pharmacokinetics: The pharmacokinetic properties of the drug, such as its absorption, distribution, metabolism, and excretion, can affect the onset of action. Polyherbal formulations may have complex pharmacokinetic profiles due to the combination of multiple active ingredients, which can result in a slower onset of action.

2) Synergistic effects: Polyherbal formulations may rely on synergistic effects between multiple active ingredients to produce a therapeutic effect. While this can be beneficial in improving efficacy and reducing side effects, it can also result in a slower onset of action as the combined effects of the ingredients may take longer to produce a therapeutic effect.

3) Dose optimization: Optimizing the dose of polyherbal formulations is a challenging task due to the variable chemical compositions of the plant extracts and their potential interactions, which may lead to adverse effects or a delay in the onset of therapeutic effects (Singh & Pandey, 2018).

4) Lack of standardization: Polyherbal formulations need more standardization regarding the quality and quantity of active ingredients, which can result in variable pharmacokinetics and slower onset of action (Dwivedi & Bajpai, 2019).

5) Regulatory hurdles: Polyherbal formulations may face regulatory hurdles in terms of approval and marketing due

to the complex nature of their composition and the lack of standardization, which can delay the availability of the drug.

While polyherbal formulations may not deliver a fast onset of action like many synthetic drugs, they may offer other benefits such as improved efficacy, reduced side effects, and a lower risk of drug resistance (Sharma & Sharma, 2018).

3.11 Polyherbal formulations with a fast onset of action

Some polyherbal drug formulations, like synthetic drugs, can deliver rapid onset of action. These exceptions are often the result of specific factors such as:

1) Active ingredient composition: Some polyherbal formulations may contain active ingredients with a fast onset of action, leading to a more instantaneous therapeutic effect. For example, some polyherbal formulations for pain relief may contain ingredients such as capsaicin, which has a rapid analgesic effect (Anand & Bley, 2011).
2) Formulation optimization: Formulation optimization, including advanced delivery systems such as nanoparticles or liposomes, can improve the pharmacokinetics of polyherbal formulations and result in a faster onset of action (Shanmugam et al., 2018).
3) Standardization: Standardizing polyherbal formulations can help ensure the quality and consistency of the active

ingredients, leading to more predictable pharmacokinetics and faster onset of action (Sulaiman et al., 2016).

4) Regulatory approval: In some cases, regulatory approval processes may be streamlined for polyherbal formulations with a long history of traditional use, allowing them to reach the market faster (Bodeker & Kronenberg, 2002).

Some examples of polyherbal formulations for fast onset of action include:

Triphala: A combination of three fruits used in traditional Ayurvedic medicine, Triphala shows a rapid laxative effect (Peterson et al., 2017).

Gugulipid: A polyherbal formulation containing the Commiphora mukul tree extracts, guggulipid shows a rapid cholesterol-lowering effect (Singh B. B. et al., 2012).

Curcumin: A polyphenolic compound found in the turmeric root, Curcumin has been shown to have a rapid anti-inflammatory effect (Jurenka, 2009).

While polyherbal formulations may not consistently deliver a fast onset of action like synthetic drugs, there are exceptions where they can be just as effective. Triphala, Gugulipid (guggul), and Curcumin are all polyherbal formulations derived from natural sources. Still, they have distinct chemical structures and mechanisms of action that contribute to their fast onset of action delivery.

Triphala combines three fruits - Emblica officinalis, Terminalia bellirica, and Terminalia chebula. Triphala contains anti-inflammatory and laxative compounds, mainly flavonoids, tannins, and polyphenols. It activates colonic motility by inhibiting water absorption in the colon due to these active constituents (Sairam et al., 2018).

Gugulipid is a polyherbal formulation derived from the resin of the Commiphora mukul tree. The active compounds in Gugulipid are a complex mixture of guggulsterone, with cholesterol-lowering effects by inhibiting cholesterol biosynthesis in the liver. The fast onset of action of Gugulipid is its ability to decrease serum cholesterol levels rapidly (Singh et al., 1994; Szapary et al., 2003; Panda & Kar, 1999; Satyavati, 1988)

Curcumin is a polyphenolic compound found predominantly in turmeric roots. Curcumin has various biological activities such as antioxidant, anti-inflammatory, and anti-cancer effects. Curcumin's fast onset of action is primarily due to its anti-inflammatory effects, which are mediated by inhibiting several pro-inflammatory pathways, such as the NF-kB pathway (Chainani-Wu, 2003).

While these three polyherbal formulations have different chemical structures and mechanisms of action, they can all deliver fast onset of action due to the specific pharmacological properties of their active ingredients.

Tannins, polyphenols, and flavonoids are all-natural compounds found in herbs that exist in different forms, such as free molecules, bound to other compounds, or polymerized. Tannins, for example, are known for their ability to bind to proteins and other macromolecules, which can form insoluble complexes. Sometimes, tannins can also form complexes with other polyphenols or flavonoids, affecting their bioavailability and biological activity (Pérez-Jiménez et al., 2009).

Polyphenols and flavonoids can also exist in various forms, depending on their chemical structure and the specific plant source. For example, some polyphenols are found as monomers, while others polymerize to form larger molecules such as tannins. Flavonoids can also exist in different forms, such as glycosides, which are flavonoids attached to sugar molecules (Scalbert et al., 2005).

The specific forms in which tannins, polyphenols, and flavonoids exist in herbs and other plant-based materials can affect their bioavailability and biological activity. For example, some forms of tannins may be less bioavailable than others due to their insolubility. At the same time, some flavonoid glycosides may need to be hydrolyzed in the digestive tract before they can be absorbed and exert their biological effects (Rivière et al., 2012).

Guggulsterones found in the resin of the Commiphora mukul tree. Those resins are traditionally used in Ayurvedic medicine

for various purposes, including treating (high blood cholesterol and triglyceride levels) hyperlipidemia (Singh et al., 2005).

The complex mixture of guggulsterones contains several bioactive compounds, including E- and Z-guggulsterone, guggulsterone-11, 12-epoxy-3, 5-diene, guggulsterone-11, 12-dihydroxy-3, 5-diene, and others. These compounds show cholesterol-lowering effects by inhibiting cholesterol biosynthesis in the liver (Dut Jasuja et al., 2012).

The mechanism of action of guggulsterones involves the activation of a nuclear receptor called the farnesoid X receptor (FXR), which regulates cholesterol and bile acid metabolism. Guggulsterones bind to and activate the FXR, inhibiting the gene expression in cholesterol synthesis in the liver (Singh & Prasad, 2018).

In addition to their effects on cholesterol metabolism, guggulsterones have other biological activities, such as anti-inflammatory, antioxidant, and anti-cancer effects. However, the clinical efficacy and safety of guggulsterones as a cholesterol-lowering agent are still under investigation (Cui et al., 2003).

Guggulsterones activate the farnesoid X receptor (FXR), a nuclear receptor key in regulating cholesterol and bile acid metabolism (Cui et al., 2003).

The activation of FXR by guggulsterones inhibits the expression of genes involved in cholesterol synthesis in the liver, which can

decrease blood cholesterol levels. The mechanism of action of guggulsterones through FXR activation was studied in both in vitro and in vivo experiments (Singh & Misra, 2019).

The mechanism by which guggulsterone activates the farnesoid X receptor (FXR) has yet to be fully understood. Several studies have proposed a possible mechanism (Lu et al., 2019)

One proposed mechanism involves the ability of guggulsterones to bind to the ligand-binding domain of FXR and induce conformational changes that promote the recruitment of co-activator proteins needed for the transcriptional activity of FXR (Liu et al., 2005).

Another proposed mechanism involves the ability of guggulsterones to interact with membrane receptors or intracellular signaling pathways that activate FXR. For example, guggulsterone activates the protein kinase C (PKC) pathway, which can phosphorylate and activate FXR (Sharma et al., 2011).

Curcumin polyphenol found in turmeric is famous for its anti-inflammatory properties, and its mechanism of action involves several different pathways.

Curcumin is a complex molecule that consists of three major chemical components: diferuloylmethane, demethoxycurcumin, and bisdemethoxycurcumin. These components, collectively known as curcuminoids, are responsible for turmeric's yellow-orange color (Aggarwal et al.,

2013; Lestari et al., 2014; Prasad et al., 2014; Shakibaei et al., 2010).

Curcumin works by inhibiting multiple pro-inflammatory pathways in the body. One of the main targets of Curcumin is the nuclear factor-kappa B (NF-κB) pathway, which plays a crucial role in regulating immune responses and inflammation (Singh & Aggarwal, 1995).

Curcumin inhibits the activation of NF-κB by preventing the degradation of the inhibitory protein IκBα, which blocks the translocation of NF-κB into the nucleus and the subsequent expression of pro-inflammatory genes (Singh & Aggarwal, 1995).

In addition to its effects on NF-κB, Curcumin also inhibits the activity of pro-inflammatory pathways like cyclooxygenase-2 (COX-2), lipoxygenase (LOX), and inducible nitric oxide synthase (iNOS). They involve the production of inflammatory mediators such as prostaglandins, leukotrienes, and nitric oxide (Aggarwal & Harikumar, 2009; Shehzad et al., 2013; Jurenka, 2009; Ruby et al., 1995).

Moreover, Curcumin modulates the expression of several cytokines and chemokines involved in the recruitment and activation of immune cells during inflammation (Gupta et al., 2013).

Curcumin can suppress pro-inflammatory cytokines expression. For example, in tumor necrosis, factor-alpha (TNF-

α), interleukin-1 beta (IL-1β), and interleukin-6 (IL-6) are suppressed. Meanwhile, it enhances the expression of anti-inflammatory cytokines such as interleukin-10 (IL-10) (Shehzad et al., 2013; Jurenka, 2009; Aggarwal & Harikumar, 2009; Hewlings et al., 2017).

Overall, the ability of Curcumin to inhibit multiple pro-inflammatory pathways and modulate the expression of cytokines and chemokines contributes to its potent anti-inflammatory effects and makes it a promising natural alternative for treating inflammatory diseases (Jurenka, 2009).

Capsaicin is a natural pain-relieving compound known for centuries. The mechanism of action of capsaicin involves several different pathways (Fattori et al., 2016).

Transient receptor potential vanilloid 1 (TRPV1) is responsible for detecting noxious stimuli such as heat, acids, and capsaicin from the chilly itself. TRPV1 activation leads to the sensation of pain. When applied topically, capsaicin binds to the TRPV1 ion channel, primarily expressed in sensory neurons, to overcome pain. T (Szallasi & Blumberg, 1999).

Activating TRPV1 by capsaicin initially releases substance P and calcitonin gene-related peptide (CGRP) from sensory neurons. P and CGRP transmit pain signals to the central nervous system as neurotransmitters. The release of these neurotransmitters contributes to the sense of initial burning

and stinging sensation capsaicin is applied topically (Anand & Bley, 2011).

However, repeated or prolonged exposure to capsaicin can lead to the desensitization of TRPV1 and a reduction in the release of substance P and CGRP. This desensitization is responsible for the analgesic effect of reducing pain transmission to the central nervous system (Derry et al., 2017).

Moreover, capsaicin inhibits the activity of cyclooxygenase-2 (COX-2) and the expression of pro-inflammatory cytokines such as tumor necrosis factor-alpha (TNF-α) and interleukin-1 beta (IL-1β). That involves developing and maintaining inflammation and pain (Zhang et al., 2011).

Overall, the ability of capsaicin to activate TRPV1, induce the release of neurotransmitters, and inhibit the activity of pro-inflammatory mediators contributes to its rapid analgesic effect and makes it a promising natural alternative for treating pain (Koppert & Schmelz, 2006).

While some drugs temporarily relieve symptoms, others mitigate an underlying cause of a disease or condition.

For example, antibiotics are drugs used to treat bacterial infections by killing or inhibiting the growth of bacteria. By doing so, they can help the body to overcome the infection and restore health. Similarly, drugs used to treat cancer, such as chemotherapy or targeted therapies, are intended to target and

kill cancer cells directly, thus addressing the underlying cause of the disease (Rolston, 2016).

In some cases, drugs may provide symptomatic relief without necessarily addressing the underlying cause of a condition. For example, nonsteroidal anti-inflammatory drugs (NSAIDs) or opioids are painkillers to relieve pain caused by an injury or chronic condition. While these drugs can help manage pain and improve quality of life, they may not address the underlying cause of the pain (Ali et al., 2018).

In other cases, drugs may also be used for treatments, like physical therapy or surgery, to address the underlying cause of a condition and improve outcomes. The appropriate use of drugs depends on the specific treatment condition and the patient's needs and preferences.

3.12 Self-healing ability of the human body

The human body can heal itself. The body has complex processes and mechanisms to repair damage, fight infection, and maintain health. Various systems, including the immune, circulatory, lymphatic, and nervous systems, facilitate the body's self-healing ability. Inside an injured or infected body, self-healing systems identify and address the problem (Chu et al., 2022).

The immune system plays a crucial during self-healing. It identifies and attacks foreign invaders such as viruses, bacteria,

and other pathogens. The resistant system repairs damaged tissue and fights inflammation (MedlinePlus, 2023).

The circulatory and lymphatic systems also play essential roles in the body's self-healing ability. These systems help to deliver nutrients and oxygen to the cells, remove waste products and toxins, and transport immune cells to areas of the body that need them (Hancock, Potezny & White, 2016).

The nervous system is also involved in the body's self-healing ability. It regulates various bodily functions, including the immune response, and can help reduce stress and promote relaxation, aiding healing (Kox et al., 2014).

In addition to these systems, the body produces various substances, such as growth factors and cytokines, that help promote healing and repair damaged tissue (Killian, 2022).

The human body can heal through complex processes and mechanisms that work together to maintain health and fight disease (Petersen& Pedersen, 2019).

One of the key players in the body's self-healing ability is the immune system. The immune system fights against foreign invaders. In the injured or infected body, the chemicals released from the immune system help fight the infection and promote healing (Janeway et al., 2001).

Another vital self-healing aspect is the body's ability to repair damaged tissue. The body has a variety of mechanisms in place

that allow it to repair tissue damage caused by injury or disease (Petersen& Pedersen, 2019).

For example, the body can produce new cells to replace damaged ones and activate a process known as angiogenesis, which involves the growth of new blood vessels to supply nutrients and oxygen to damaged tissue (Risbud & Shapiro, 2014).

The nervous system also plays a role in the body's self-healing ability. Stress and anxiety can negatively affect the body's healing power, while relaxation and positive emotions can help promote healing. Additionally, the nervous system is involved in regulating many of the body's essential functions, including immune function and inflammation, which can affect the healing process (Cohen et al., 2012)

Finally, the body produces a variety of substances that can aid in the healing process, including growth factors, cytokines, and other signaling molecules. These substances help to stimulate cell growth, reduce inflammation, and promote tissue repair (Chu et al., 2022).

The body's ability to heal itself is a complex and multifaceted process involving the immune system, tissue repair mechanisms, the nervous system, and various signaling molecules.

The endocannabinoid system (ECS) regulates many physiological processes, including pain, inflammation, mood,

appetite, and sleep. While the ECS does not have self-healing abilities, it can modulate many of the body's processes to promote healing and homeostasis (Pacher et al., 2006).

One way that the ECS contributes to self-healing is by regulating inflammation. Combating against inflammation is a natural immune system response to injury or infection. Still, when it becomes chronic or excessive, it can contribute to the developing of many diseases, including arthritis, diabetes, and cardiovascular disease. The ECS can help to regulate inflammation by modulating the production and activity of pro-inflammatory cytokines and other signaling molecules (Booz, 2011).

The ECS regulates pain perception. The body's natural endocannabinoids, as well as exogenous cannabinoids from plants such as cannabis, can help pain and inflammation reduce by activating the CB1 and CB2 receptors in the ECS. It can benefit people with chronic pain, as it can help reduce the need for opioid painkillers and other medications with adverse side effects (Fine & Rosenfeld, 2013).

While the ECS does not have self-healing abilities, it can help regulate many of the body's processes that contribute to healing and homeostasis, including inflammation and pain perception (Pertwee, 2006).

Enzymes and hormones are essential in the body's self-healing processes. Enzymes are proteins. They catalyze chemical

reactions that speed up the body. Many enzymes, including proteolytic enzymes, are involved in the body's natural healing processes. Proteolytic enzymes break down proteins and show anti-inflammatory effects. They are often used as supplements to help reduce inflammation and promote healing after injury or surgery (Cichoke, 1998).

The collagenase enzyme breaks down collagen, an essential component of connective tissue. Collagenase is used to help break down excess scar tissue in conditions such as Dupuytren's contracture (Raju et al., 2013).

Digestive enzymes break food down in the digestive system. Some people use digestive enzyme supplements to help with conditions such as irritable bowel syndrome, although the evidence for their effectiveness is mixed (Hurst et al. 2009; Sreedharan et al., 2015)

Hormones are chemical messengers that bodily glands produce and help regulate many physiological processes. Some hormones, including growth hormones, play essential roles in the body's self-healing processes. The pituitary gland produces growth hormone and helps to stimulate cell growth to repair the body. It is crucial for healing after injury or surgery (Caicedo & Devesa, 2018)

The pancreas produces insulin hormone and helps regulate blood sugar levels. It is vital for healing because it helps to transport glucose and other nutrients to cells throughout the

body (Kaur et al., 2019). The adrenal glands produce cortisol hormone and help regulate the body's response to stress. It can have positive and negative effects on healing, depending on the timing and duration of its release (Gouin & Kiecolt-Glaser, 2011).

Enzymes and hormones play essential roles in many aspects of the body's self-healing processes, including inflammation, tissue repair, and regulation of physiological processes (Cichoke, 1998).

The human body can heal itself through several mechanisms of action (Gurtner et al., 2008).

Some of how the body can heal itself are:

1) Inflammation: When the body is injured, the immune system releases white blood cells, which trigger inflammation in the affected area. This inflammation helps prevent infection and promotes healing (Chen et al., 2017).
2) Regeneration: Some cells in the body, such as skin and liver cells, can regenerate or replace themselves. This process helps to repair damaged tissue and restore function to the affected area (Stocum, 2018).
3) Blood clotting: The body responds through blood clot formation during blood vessel damage. This clot helps stop bleeding and allows the body to repair the damaged blood vessel (American Society of Hematology, n.d.).

4) Immune response: The immune system is crucial to the body's healing ability. White blood cells and other immune cells work to identify and destroy foreign invaders. That includes bacteria and viruses that can cause infection and delay healing (Abbas et al., 2018).

5) Hormones: Certain hormones, such as growth hormone and insulin-like growth factors, help to stimulate the growth and repair of tissue in the body (National Library of Medicine, n.d.).

The human body has several mechanisms for self-healing. Inflammation triggers white blood cells to promote healing, while some cells can regenerate. Blood clotting stops bleeding, and the immune system destroys foreign invaders. Growth hormone and insulin stimulate tissue growth and repair. Additionally, the body relies on the nervous system to regulate and coordinate these healing processes. When the body experiences injury or illness, these mechanisms work together to promote healing and restore function to the affected area. With proper care and attention, the body's natural healing abilities can lead to a full recovery (Murray & Pizzorno, 2012).

3.12 Recognized ways to add quick recovery characteristics into herbal formulations.

The available approach for adding quick recovery characteristics to polyherbal formulations relies on the synergistic effect of combining multiple herbs with different

therapeutic properties. Polyherbal formulations show more significant therapeutic results than individual herbs alone because the combination of herbs can enhance the overall efficacy and bioavailability of the product. The herbs in a polyherbal formulation may work together to target multiple aspects of a condition or disease, leading to a quicker and more effective recovery (Patel & Goyal, 2012).

Several mechanisms explain the synergistic effect of polyherbal formulations. One theory is that the combination of herbs may work together to enhance the absorption and bioavailability of active ingredients in the body (Kesarwani et al., 2013).

Another theory is that combining herbs may target multiple pathways in a specific condition or disease, leading to a more significant therapeutic effect (Lu et al., 2020).

In addition to the synergistic effect of combining multiple herbs, other factors can contribute to the quick recovery characteristics of polyherbal formulations. For example, standardization and quality control measures can help ensure the potency and safety of the product. Traditional knowledge and evidence-based research can also inform the selection of herbs and their combinations in a polyherbal formulation (Sulaiman et al., 2016).

The theory behind adding quick recovery characteristics to polyherbal formulations is that combining multiple herbs with different therapeutic properties can enhance the overall efficacy

and bioavailability of the product, leading to a faster and more effective recovery from various health conditions (Patwardhan & Vaidya, 2012).

It is also possible to add synthetic active ingredients to polyherbal formulations to enhance their therapeutic properties and add quick recovery characteristics. The addition of synthetic compounds may affect the safety and efficacy of the formulations. A consideration of potential risks and benefits is required (Bisht & Ram, 2017).

The addition of synthetic active ingredients to polyherbal formulations can be done for various reasons, such as to enhance the product's potency, target specific aspects of a condition, or address the limitations of natural compounds (Rathore & Mohan, 2013).

Synthetic compounds can mimic natural compounds' structure and function or provide new therapeutic properties. However, adding synthetic compounds to polyherbal formulations can increase risks and incremental adverse drug interactions. It is crucial to consider the synthetic compound's safety and efficacy and ensure that it is compatible with the other ingredients in the formulation (Kumar & Singh, 2018).

Adding synthetic active ingredients to polyherbal formulations may enhance the product's therapeutic properties. Boosting polyherbal formulations with artificial active ingredients can

help to improve their medicinal properties (Rajput al., 2012). A few of them are:

a) Liv 52: This polyherbal formulation contains extracts from several herbs known for their hepatoprotective properties, such as Caper Bush and Chicory. Synthetic compounds like DL-Methionine and Taurine enhance liver function and support liver regeneration (Morgan and Stevens, 2012).

b) Septilin: This polyherbal formulation supports the immune system and helps the body fight infections. It contains a combination of herbs like Indian Bdellium, Licorice, and Guggulu, as well as synthetic compounds like Tinidazole and Chlorpheniramine Maleate (Sharma & Yelne, 2017).

c) Geriforte: This polyherbal formulation promotes general well-being and supports the body's natural defenses. It contains a combination of herbs like Chyavanprash, Licorice, and Winter Cherry, as well as synthetic compounds like Ferric Oxide and Calcium Carbonate (Sharma & Yelne, 2017).

It is important to note that adding synthetic compounds to herbal formulations is a controversial topic, and the safety and efficacy, especially if they are under medication or have pre-existing medical conditions (Li et al., 2022).

Liv 52 is a polyherbal formulation commonly used to support liver health and function. The composition of Liv 52 may vary slightly differentiated based on the product manufacturer and the country of manufacturing. However, Liv 52 contains

primarily herbal extracts and other natural compounds (El-sisi et al., 2019).

The ingredients commonly found in Liv 52 are: 1) Caper Bush (Himsra): This herb is known for its hepatoprotective properties and helps improve liver function. 2) Chicory (Kasani): This herb supports liver function and helps protect the liver from damage. 3) Black Nightshade (Kakamachi) has antioxidant and anti-inflammatory properties. It helps in protecting the liver from oxidative stress. 4) Arjuna (Arjuna) is believed to have cardioprotective properties and may help improve liver function. 5) Yarrow (Biranjasipha) shows anti-inflammatory and hepatoprotective properties. 6) Tamarisk (Jhavuka) has antioxidant and anti-inflammatory properties. It helps protect the liver from damage (Shrestha & Maharjan, 2021).

In addition to these herbs, Liv 52 may contain other natural compounds like Cichorium intybus, Achillea millefolium, Mandur bhasma, and Himsra Kasane extract (Shrestha & Maharjan, 2021).

DL-Methionine and Taurine are synthetic compounds generally used in some Liv 52, a polyherbal formulation commonly used to support liver function and promote overall health (Heidari et al., 2016).

DL-Methionine is an essential amino acid not produced by the body and must obtain through diet or supplements. It has

several benefits for liver function, including supporting glutathione production, a powerful antioxidant that helps protect liver cells from damage. DL-Methionine helps eliminate toxins from the liver and improve bile flow (Wu & Meininger, 2002; Kim & Lee, 2014; Cavaleri, 2014).

Taurine is another amino acid not produced by the body. It is required to supply from outside through diet or supplements. It shows several benefits for liver function, including supporting the production of bile acids, which help the body digest fats. Taurine may also help protect liver cells from oxidative stress and inflammation. DL-Methionine and Taurine are included in some Liv 52 to support liver function and promote overall health (Heidari et al., 2016; Purohit et al., 2015).

Septilin is a polyherbal formulation to support the immune system and helps the body fight against infections. Septilin contains a combination of herbal extracts and other natural compounds. The ingredients commonly found in Septilin are a) Guggulu (Commiphora wightii) has anti-inflammatory and immunomodulatory properties. b) Licorice (Glycyrrhiza glabra) has anti-inflammatory and immunomodulatory properties. c) Bdellium (Balsamodendron mukul) has anti-inflammatory and immunomodulatory properties. d) Conch Shell Calx (Shankh bhasma) has antimicrobial properties. e) Maharasnadi Kwath has anti-inflammatory properties and may help relieve pain. f) Tinidazole has antibacterial properties and is commonly used to treat infections. G) Chlorpheniramine

Maleate is an antihistamine and may be included in Septilin to help relieve allergy symptoms (Singh & Dubey, 2019).

Geriforte is a polyherbal formulation that promotes general well-being and supports the body's natural defenses. Geriforte contains a combination of herbal extracts and other natural compounds. The ingredients commonly found in Geriforte are 1) Chyavanprash, the herbal jam that shows immunomodulatory and antioxidant properties. 2) Winter Cherry (Ashwagandha) is an adaptogenic and immunomodulatory herb. 3) Licorice (Glycyrrhiza glabra) is anti-inflammatory and immunomodulatory. 4) Gotu Kola (Centella asiatica) shows antioxidant and immunomodulatory properties. 5) Gooseberry (Amla) is an antioxidant and immunomodulatory fruit. 6) Chebulic Myrobalan (Haritaki) has antioxidant and immunomodulatory properties. 7) Ferric Oxide is a source of iron. It may be included in Geriforte to help support iron levels 8) Calcium Carbonate is a source of calcium and may be included in Geriforte to help support bone health (Rajkumar et al., 2015).

Reverse engineering of polyherbal formulations involves analyzing the composition of an existing polyherbal formulation and then attempting to recreate it in the laboratory. This approach can help understand the active ingredients and mechanisms of action of the formulation and for developing standardized products with consistent quality (Mehra & Gulbake, 2021).

However, the effectiveness of a reverse-engineered polyherbal formulation in delivering quick healing will depend on several factors, including the quality and quantity of the ingredients used, the extraction methods employed, and the overall formulation and dosage (Veeresham, 2017).

Reverse-engineered polyherbal formulations may be less effective than traditional formulations used for centuries. The traditional formulations may have a greater understanding of the synergistic effects of different herbs and their interactions, which the reverse-engineered formulations may need to fully understand (Pathak, 2011; Kokate et al., 2013).

Many other polyherbal formulations and products are also available with their characteristics and effectiveness in quick healing. Here are a few examples:

Chyawanprash: A polyherbal jam-like formulation that includes a variety of herbs and spices, including Amla, Ashwagandha, and Guduchi, traditionally used in Ayurveda to support immunity, promote overall health and aid in wound healing (Vyas & Buch, 2012).

Aloe vera-based polyherbal formulation promotes wound healing and reduces inflammation. Aloe vera has antimicrobial, antioxidant, and anti-inflammatory properties that may help speed recovery (Yoon & Al-Reza, 2017).

Arnica: A polyherbal formulation made from the Arnica montana plant's flowers traditionally used to reduce

inflammation and promote wound healing. Its effectiveness in reducing pain and swelling associated with bruises, sprains, and other injuries is remarkable (Stevinson et al., 2003).

The effectiveness of any polyherbal formulation or product in delivering quick healing will depend on several factors, including the specific condition of treatment and the severity of the condition. Moreover, an individual's overall health status is also very crucial. (Fugh-Berman, 2000).

There have been some studies on the individual ingredients of Chyawanprash and their potential effects on immunity, overall health, and wound healing.

One study published in the International Journal of Ayurveda Research in 2010 looked at the immunomodulatory effects of the individual herbs in Chyawanprash, including Amla, Ashwagandha, and Guduchi. The study found that these herbs may have immune-enhancing effects and may help to improve overall health (Singh et al., 2010).

Wound-healing effects of Amla are one of the main ingredients in Chyawanprash. The study found that Amla may have antimicrobial and wound-healing effects. It helps treat various types of wounds (Sairam et al., 2014).

While some scientific evidence supports using individual herbs in Chyawanprash for promoting immunity, overall health, and wound healing, more research is needed to determine the specific effects of Chyawanprash (Sharma et al., 2017).

While the traditional form of Chyawanprash is a jam-like paste, some manufacturers have developed Chyawanprash tablets as a more convenient and portable alternative. The tablet form typically contains a compressed powder or extract of the herbs and other ingredients in traditional Chyawanprash (Vyas & Buch, 2012).

A net-like molecular structure (larger available surface area) of polyherbal extracts, which typically contain multiple active compounds, is found to lower the incidence of side effects than synthetic drugs, which often have a single active compound (Patel & Goyal, 2012). Some studies have examined the safety and efficacy of polyherbal formulations and found that these preparations can have therapeutic benefits with fewer side effects than synthetic drugs (Drug Receptor, n.d, Ernst, 2002; Gupta et al., 2011).

For example, a study published in the Journal of Alternative and Complementary Medicine in 2019 examined the safety and efficacy of a polyherbal formulation containing ginger, turmeric, and boswellia for treating knee osteoarthritis. The study found that the polyherbal formulation was safe and effective for reducing pain and improving function, with fewer adverse effects than the control group (Nipanikar et al., 2013)

The safety and efficacy of a polyherbal formulation containing turmeric, ashwagandha, and guggul study found that the polyherbal formulation effectively reduced cholesterol levels without adverse effects (Prasad & Singh, 2016).

CHAPTER 4

DECODING SAMKHYA AND VAISHESHIKA PHILOSOPHIES

(द्वितीयः अध्यायः सांख्यवैशेषिकदर्शनानां विकोडनम्)

4.1 Process of Manifestation

Kapila's Samkhya system categorizes the entire reality of the universe and beyond into twenty-five tattvas (Sinha 1923, Samkhya Pravachan Sutram, p. 94). The term tattva can loosely translate as a fundamental element. The Tattva signifies an object's essential quality or characteristic that sets it apart from objects of other classes. It also denotes a principle or function embodied in a group of objects represented by the object. These twenty-five principles are the means through which That One is manifested in the universe (Feuerstein, 1998).

4.1.1 Purusha and Prakriti: The most fundamental and essential manifestation of the Universal Principle is expressed through two principles - Purusha and Prakriti. Purusha, roughly translated as pure consciousness, and Prakriti translated as natural energy at the earliest stage of development (Saraswati, 2013).

The word "*Purusha*" means two things. A force that holds tiny particles together. And also awareness or pure consciousness. It doesn't come from anything, and nothing comes from it. The "Consciousness Principle" (Radhakrishnan, 2013).

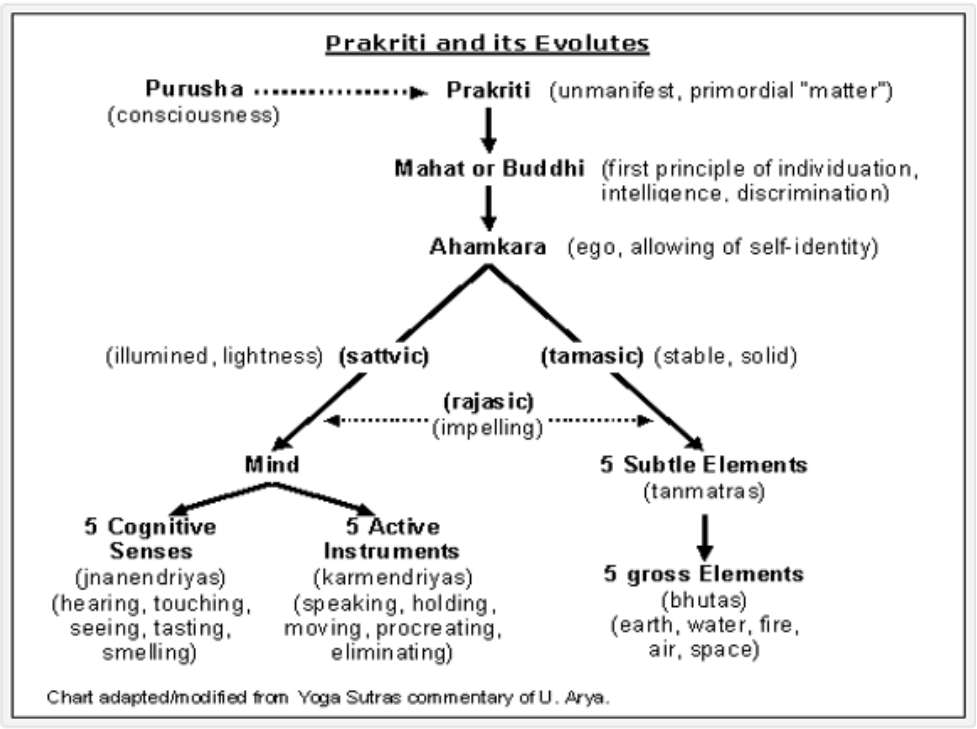
"*Prakriti*" means energy and nature at the earliest development phase. It doesn't come from anything, but everything comes from it. It is called the "Natural Principle." Prakriti is un-manifested substratum of all manifestation (Sharma, 2016).

Both Purusha and Prakriti are infinite and complete but very different. Purusha never changes and is the source of all intelligence, while Prakriti constantly changes. Prakriti does not carry intelligence. Purusha and Prakriti are two of the twenty-five tattvas of Samkhya. The remaining twenty-three tattvas come from Prakriti (Larson & Bhattacharya, 2011).

4.1.2 The Eight-fold Nature

The principle of manifestation is the principle of Consciousness. The Consciousness Principle states that individual entities hold the natural energy that existed at the earliest stage of manifestation (Feuerstein, 2013).

The eight-fold nature consists of eight tattvas called bhumi (Prithvi or Earth), Jala (water), Agni (fire), Vayu (wind), Akasha (The void space that generally creates sound or vibrational energy), Mana (mind stuff). Ahamkara (the ego of the personality), and Buddhi (the stuff of intellect). These eight tattvas go from less subtle to most subtle. Budhhi is the subtlest product of the evolution of Prakriti, from which all other five subtle elements evolve. The subtle realities can penetrate and absorb into less subtle and gross elements, but not vice versa (Bryant, 2015).



Source: http://yogasutrastudy.info/2010/08/01/sutra-1-45/

Figure: 1

Prithvi, Jala, Agni, Vayu, and Akasha are called panch-bhutas (Five bhutas or gross elements), constituting the Gross Body. Mana, Ahamkara, and Buddhi include the subtle body, while Purusha, i.e., consciousness, constructs the causal body (Iyengar, 1993).

Bhumi (earth) is sense as the smell with the nose, and Jala as taste with the tongue. Agni is sensed as sight (form) with the eye. Vayu is touch with skin, and Akasha is sense as vibration through ears. The objects of the five senses, namely sound, touch, form, taste, and smell, are called tanmatras. Tanmatras are the five Indiyas or sense organs, the ears, skin, eyes, tongue, and nose (Saraswati, 2013).

The cognitive senses of hearing, touch, sight, taste, and smell are responsible for perceptions of the reality of the universe. It is called Five Jnanendriyas. The other five physical instrumental organs for speaking, holding, moving, procreating (reproducing), and eliminating are called the five Karmendriyas (Saraswati, 2013).

The Five Gross Elements, Five Tanmatras, Five Jnanendriyas, Five Karmendriyas, Mind, Ahamkara, Mahat (Buddi), Prakriti, and Purusha constitute a total of twenty-five tattvas (Feuerstein, 2013).

Sankhya's philosophy views all twenty-five tattvas subject to change, death, decay, decomposition, or vanishing as "unreal." The other "real" substratum, which never changes, cannot die, cannot possibly decay or decompose, directly experiences all "absolute reality," is considered "real" and called self-being or Aatma" (Dasgupta, 1920).

4.2 Principle of Manifestation

Quantum consciousness refers to the idea that quantum mechanics and related phenomena may play a role in explaining the nature of consciousness and the mind-body problem. It suggests that consciousness may be an emergent property of quantum processes in the brain and that the principles of quantum mechanics may be necessary to fully understand the nature of subjective experience (Hameroff & Penrose, 2014).

On the other hand, quantum metaphysics is a broader concept encompassing the study of the fundamental nature of reality and the universe, using the principles and insights from quantum mechanics. It explores the implications of quantum mechanics for ontology, epistemology, and other philosophical areas. It considers questions such as the nature of space and time, the relationship between observer and observed, and the limits of scientific knowledge (Ismael, 2021).

While both concepts involve the application of quantum mechanics to understand the nature of reality and consciousness, quantum consciousness is focused on the mind-body problem and the role of quantum mechanics in explaining subjective experience. In contrast, quantum metaphysics is a broader field that explores the fundamental nature of the universe and the implications of quantum mechanics for our understanding of reality (Goswami, 2017; Stapp, 2014).

The concept of quantum physics and metaphysics as understood in modern science did not exist at the time when the vedic philosophical systems were developed, and they were not formulated using the same scientific method and empirical evidence. Therefore, it is important to understand and respect the distinct intellectual and cultural contexts in which these different fields have developed (Radhakrishnan, 1957).

In a vacuum, almost all energy fields are massless (Camelo, 2023). The relationship between quantum metaphysics and the Sankhya and Vaisheshika philosophical systems is based on

different methods of inquiry and understanding of reality and how they have influenced the broader intellectual and spiritual traditions. While the Sankhya and Vaisheshika philosophical systems may not fully explain modern physics's highly complex theories and principles, they provide valuable insights into the nature of consciousness, causality, and reality that can complement and enhance current scientific understanding. Understanding the interrelationships between these different philosophical and scientific traditions can help predict how quantum metaphysics can contribute as a vital player in maintaining the harmonized functioning of life (Dasgupta, 1920; Camelo, 2023; Goswami, 2017; Stapp, 2014).

In modern science, a substratum with finite information but lacks consciousness, such as inanimate things, dust, soil, water, air, void space, fire, etc., may be recognized as an inanimate or non-living being. The second type of substratum has partial consciousness and carries information, as seen in the case of semi-living virus species, which are considered neither living nor dead. Living beings are the third type of substratum with consciousness and carry information, such as plants, animals, and microorganisms (Jaiswal, 2020).

According to Vedic beliefs, all substratum, including living, semi-living, and non-living ones, retain and transmit information. These substances exist at different levels of consciousness. Life is categorized into conscious, subconscious,

and unconscious living beings based on their underlying consciousness (Sahoo, 2014).

The conscious, subconscious, and unconscious entities complement each other to the manifest of the entire universe. Therefore, modern science seeks different knowledge in physics, chemistry, biology, mathematics, etc., to understand the creation and operation of the whole universe (Rao, 2011).

However, in Veda, conscious, subconscious, and unconscious aspects of living are principally incorporated under the study of the science of life. Vedic science offers a holistic approach to understanding reality and can complement modern scientific methods. (Kumar et al., 2019).

The universe's gross (Stula) aspect is the physical and tangible that the senses can perceive. The subtle (tanmātrā) aspect of the universe is not directly perceptible by the senses but can be inferred through reasoning and contemplation. The qualities of the five elements (a gross aspect of the universe) are subtle and referred to as tanmātrā. Combining information and/or consciousness manifests these subtle qualities (i.e., tanmātrās). Combining information and/or consciousness manifests these subtle qualities (i.e., tanmātrās), and this idea is compatible with modern scientific concepts (Bajracharya, 1995).

The tangible physical objects in the universe are made up of imperceptible qualities. Those imperceptible qualities are fundamental properties, the subtlest basis of all things

identified, including void space, time, and directions. That ultimately is responsible for materializing tangible forms, i.e., space (location)-time-direction. The five elemental qualities of sound, touch, sight, taste, and smell (Tanmatra), together with Space-Time-Directions, can materialize senses of forms (Bajracharya, 1995; Camelo, 2023).

In Veda, the designated time is called "kaal" (time). Approximately 90 minutes make up one "Kaal." According to the philosophy of Samkhya, before the creation of the universe, there were subtle things that we can infer through reasoning and contemplation. Those subtle things develop into tangible forms while manifesting the universe (Sahoo, 2014).

The process by which the subtle qualities of nature transform into tangible ones is easily understood straightforwardly. For example, when we plant a seed in the ground, the power of germination remains latent within the seed. We cannot see or feel it, but it is present within the seed's unmanifest form. It is hidden within the womb of nature. Once the definite germination process is complete, we can see and feel it (Maharishi Mahesh Yogi, 1995).

After the predetermined time has passed, when we see the seed sprouting, we can realize the latent power of the seed. The latent qualities are transformed into perceivable and visible substances at a particular time. Any latent quality and substance need a definite place, i.e., a void space. That empty place is named Akasha (null space). Space-time-direction

remains indispensable to embark on the journey towards individuality from (unexpressed) the latent form, to become visible (expressed) and to see in the form of an individual (Rao, 2007).

All visible and invisible things are created from space-time-direction matrices. Space-time-direction forms a fundamental framework for manifesting all items from their unmanifested form. Space-time-direction matrix is a natural but fundamental combination of invisible and visible qualities and energies that transform energy from one form to another (Lakshman, 2018).

We believe something is born or manifested when it becomes visible or perceived as manifested form. At a point in Space-time-direction regime, when perceivable transforms into not perceivable, it is considered destroyed or dead. The visual world is an illusion or temporary manifestation of a deeper, unseen reality (Sankaranarayanan, 2013).

The space-time-direction is thus a fundamental foundation of nature that transforms properties and energy in the natural world. It is an abstract and intangible concept that provides the framework for everything in the universe. The space-time direction is the biological construct of nature that allows qualities and energy to transform into various forms (Greene, 2004; Penrose, 2005).

When combined with tanmatra, space-time, and directions manifests an intangible form of expression, the unmanifested

stage of a manifestation (Frawley, 2012). The combination of space-time quality significantly impacts the direction of manifestation and the time sequence. This leads to the not perceivable, not yet manifested manifestation into perceivable manifestation through sequential vibration. Everything in the universe arises from an unmanifested state and takes on form through a sequence of vibrations (Goswami, 2000).

The continuous sequential vibration towards a particular direction with the spontaneous time change is perceived by our senses as a tangible form. As a result, we can understand and perceive the intangible form as tangible beings. Our senses transform intangible into tangible forms (Radhakrishnan, 1996).

For example, the five elements, the Akasha, Vayu, Agni, Jal, and Prithvi, are responsible for the sound, touch, sight, taste, and smell, the set of qualities or tanmātrās. We experience these five properties through our ears, skin, eyes, tongue, and nose (Frawley, 1996).

When space-time and the Akasha come together, they create an unmanifested form as Akash devoid of vibrations (Radhakrishnan, 1956). However, an uninterrupted influence of time and directional change manifests sequential vibrational impulses as sound wave functions. This way, the initial imperceptible and unmanifested good qualities transform into a perceptible and manifested form of sound called shabdha that we can perceive through our ears (Dalela, 2014b, pp. 136-139).

The space, time and Vayu's qualities together create intangible touch (touchlessness) quality attributes. Through the regularity of time and direction, we can sense touchlessness as the touch on our skin. The combination of space-time-Agni creates an intangible form (formlessness) that can be recognized through perceivable form and identified as form with eye sights. Similarly, we can experience tastelessness as the taste of Jala by tongue and the tastelessness of the Prithvi by a nose under the constantly changing space-time and directional regime (Dalela, 2014b, pp. 136-139).

In this way, we can perceive the 'Forms of tanmātrās' as qualities and experiences. In the process, one or more than one quality of the same thing is perceived at a time through multiple perceptions (Dalela, 2014b, pp. 136-139).

Not only space and time but the unmanifest qualities of all manifested substratum continuously change their direction to form its inherent quality attributes. When aligned with space-time-directions, the five elements (Akash, Vayu, Agni, Jala, and Prithvi) in harmony manifest the qualities and attributes of the unmanifested substratum. However, during their unmanifest state, these properties are dormant (Dalela, 2014b, pp. 136-139).

The regular influence of the changes in time and direction uniquely creates inherent unmanifested characteristics of the manifested five elements. Thus manifested, five elements are named 'five gross elements' (Bhuta) and Pancha-tatwo (Dalela, 2019).

The Hierarchy of Sensations (Dalela, A., 2014b, pp. 137):

ETHER	SOUND
AIR	SOUND TOUCH
FIRE	SOUND TOUCH SIGHT
WATER	SOUND TOUCH SIGHT TASTE
EARTH	SOUND TOUCH SIGHT TASTE SMELL

To manifest the distinct elemental qualities of the five elements (Akash, Vayu, Agni, Jala, and Prithvi), the quality attributes of each element must undergo a fusion process that involves the five elemental attributes. This fusion process transforms the quality attributes into their manifested form (Dalela, 2014b, pp. 136-139).

Each elemental quality, also known as tanmātrās, contributes its own unmanifested quality attributes, such as the unexpressed ethereal quality of purity and consciousness for Akash, the unexpressed airy quality of touch for Vayu, the unexpressed fiery quality of form (vision and energy) for Agni, the unexpressed watery quality of taste for Jala, and the unexpressed earthy quality of smell for Prithvi (Dalela, 2014b, pp. 136-139).

The Modes of Sensations (Dalela, A., 2014b, pp. 138):

HEARING	TONE	PITCH	VERSE	DIRECTION	DISTANCE
TOUCHING	HARDNESS	HEAVINESS	ROUGHNESS	DIRECTION	DISTANCE
SEEING	COLOR	BRIGHTNESS	SHAPE	DIRECTION	DISTANCE
TASTING	FLAVOUR	INTENSITY	FLUDITY	DIRECTION	DISTANCE
SMELLING	ODOUR	INTENSITY	AROMA	DIRECTION	DISTANCE

According to Ayurvedic philosophy, there are five elements or mahābhūtas – Akash (space/ether), Vayu (air), Agni (fire), Jala (water), and Prithvi (earth). These elements are associated with five senses – Akash with hearing, Vayu with touch, Agni with sight, Jala with taste, and Prithvi with smell. These elements are not just physical substances but also represent different qualities of consciousness. The transformation of the elements manifests as five gross elemental qualities, the tanmātrās, essential for materialization and sensory perception. These qualities include the sense of pace for Akash, touch for Vayu, form for Agni, taste for Jala, and smell for Prithvi (Dalela, 2014b).

During this fusion process, the individual quality attributes of each element assume fifty percent of its quality attributes. The remaining fifty percent of the quality attributes are divided equally among the other four elements, with each element comprising 12.5% of the total (Śaṅkara, 1979).

HUMAN BODY - ELEMENTAL COMPOSITION						
ELEMENTS	SELF	AKASH	VAYU	TEJA	JALA	PRITVI
AKASH	50%	-	12.50%	12.50%	12.50%	12.50%
VAYU	50%	12.50%	-	12.50%	12.50%	12.50%
TEJA	50%	12.50%	12.50%	-	12.50%	12.50%
JALA	50%	12.50%	12.50%	12.50%	-	12.50%
PRITHIVI	50%	12.50%	12.50%	12.50%	12.50%	-

Figure: 2

According to Ayurvedic philosophy, the three doshas - Vata, Pitta, and Kapha - are derived from the five elements in the following way: Vata Dosha is made up of the elements space and air. These elements give Vata its qualities of lightness, mobility, and coldness. Pitta Dosha is made up of the elements fire and water. These elements give Pitta its qualities of heat, sharpness, and lightness. Kapha Dosha is made up of the elements water and earth. These elements give Kapha its qualities of heaviness, stability, and moisture (Chopra et al., 2004).

In Ayurveda, it is believed that these three doshas are present in every person in varying proportions, with one or two doshas typically being dominant. The balance of these doshas is said to determine an individual's constitution or Prakriti, as well as their physical, mental, and emotional health (Chopra et al., 2004).

As for how these doshas make up the body, each dosha is believed to govern specific bodily functions and structures. For example, Vata is associated with the nervous system, movement, and circulation; Pitta is associated with digestion, metabolism, and transformation; and Kapha is associated with stability, lubrication, and nourishment (Frawley & Ranade 2001).

It is believed that when these doshas are in balance, the body is healthy and functioning correctly, but various health issues can arise when they are imbalanced. Ayurveda aims to bring the doshas back into balance through multiple treatments and practices, such as diet, lifestyle, and herbal remedies. (Frawley & Ranade, 2001)

4.3 Further Decoding (few new insights or perspectives that have been gained through review as partial research findings**):**

A special effort has been made to illustrate the role of time and direction change to manifest the properties and forms of the five elements and corresponding tanmātrās attributes through the image below.

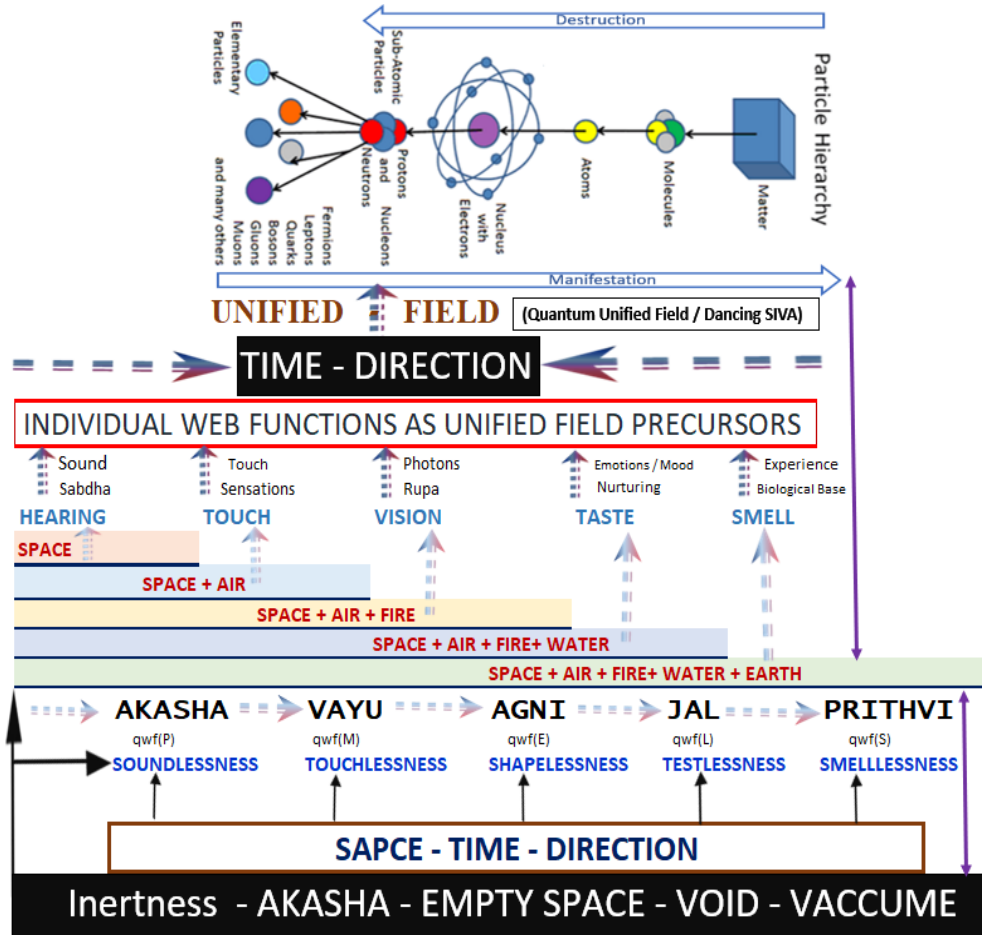


Figure: 3

According to Vedic metaphysics, the unique qualities of each element mix-ups together into a specified ratio to create five individual gross elements as a sense code to be assessed and recognized by our sense organs. The specific qualities of each component are indicated by the combination of their mixed attributes, which ultimately help to mediate information about the respective elemental properties.

Our senses then decode that information differently: sound for Akash, touch for Vayu, form (sight, color, fire) for Agni, taste for Jala, and smell for Prithvi. Our body uses innate abilities, experiences, reasoning, and contemplation to infer the understanding of the information perceived.

Overall, the confounded and non-confounded perceptions (consciousness) that arise from all types of information are responsible for our daily experiences. The five elements combined in groups, and among the groups, are responsible for manifesting the underlying substratum of the universe, manifesting the universe systematically and sequentially.

Similarly, the same five elements combined in groups and among the groups are responsible for articulating overall sensation in all forms, allowing us to perceive the living and non-living manifestations around us.

CHAPTER 5

DECODING WILLPOWER BASED ON METAPHYSICAL ENERGY

(तृतीयः अध्यायः आध्यात्मिक ऊर्जायाः आधारेण इच्छाशक्तिं विकोडयितुं)

5.0 Metaphysical Energy and Willpower

The Vedas are a large body of texts from ancient knowledge on various subjects such as philosophy, religion, science, and medicine. According to the Vedic tradition, knowledge is acquired through direct experience, considered the most reliable source of knowledge (Radha, 2005).

In modern science, theoretical projections or hypotheses are tested using empirical methods, including laboratory experiments, to verify their validity. The scientific method involves making observations, formulating ideas, testing those hypotheses through experimentation, and then refining or rejecting them based on the results (Smith, 2019).

The Vedic tradition emphasizes direct experience and the scientific method's reliance on empirical evidence. Thus the Vedic reality is more than a theoretical projection, as it fully encompasses real-life experience-based scientific approaches (Humes, 2014).

A critical review of Vedic principles and the claims made by bioscience to date seldom uncover gaps between their materialistic facts. When one separates Vedic principles from

scientific outcomes, it may give the misleading impression that the two are entirely different schools of thought. My review concludes this is an unintentional blunder (Rastogi, 2015).

Vedic knowledge is original A-Gyan, which discusses the ultimate reality of nature. In contrast, scientific knowledge, which we prefer to call B-Gyan or Vigyan.

Vigyan (Science) examines smaller portions of ultimate reality and analyzes how they are implemented in the particular segments under review within the scope of scientific ability to measure such (Sharma et al., 2013).

If you want to understand how any part of a machine moves in the way it does, you can break it down into smaller portions and examine how it is constructed.

By gathering scientific logic and principles, you can deduce how it functions and reconstruct it through reverse engineering (Wang, 2011).

However, the machine is man-made, and humans already understand the principles behind it.

When understanding how the human body works, you might still follow the same approach as you did with the machine (Mau, 2016).

But you cannot reconstruct living bodies in the lab through reverse engineering because they are nature-made.

The principle of construction used by nature to build living bodies still needs to be fully comprehended (Gupta, 2019).

Science has yet to fully understand how intangible elements like thoughts and emotions convert into tangible matter and vice versa.

The inability of science to test the ultimate reality does not mean it does not exist, nor does it imply that it exists in the way it is assumed (Subramaniam, 2018).

The current, uninterrupted introduction of quantum biochemistry uncovered how a ray of light is ultimately responsible for constructing material reality.

Nikola Tesla once expressed the idea that comprehending the universe requires contemplating energy, frequency, and vibration. Every element within our surroundings, be it the earth, sky, wind, fire, or water, possesses its own distinctive vibration and frequency.

We can extend this principle to our physical bodies, organs, blood, living creatures, trees, flowers, rivers, oceans, stones, crystals, and metals.

The same philosophy of vibration can be extended to existing entities in the universe, whether visible or invisible. From metaphysical notions, it can deconstruct and understand that pure energy or light, all invisible substratum, also resonate and construct with similar vibratory patterns.

All aspects of our world are constructed from the same fundamental components, and based on science, it can predict that those components are also the construct of the substratum that vibrates at varying frequencies. However, there should be one base that is non-vibration as void.

That means that despite the vibrational mode, all apparent solidity or fluidity, all material substances are predominantly composed of empty space.

Albert Einstein, a renowned physicist, stated that everything is energy, the sole essence of existence. He established an equation for the equivalence between energy and mass. When we can attune ourselves to the frequency of the reality we desire, there is no choice but to manifest that reality.

We can go beyond the established scientific consensus and delve into metaphysical interpretations in these aspects, which is not a mere philosophy but a fundamental principle of physics. Quantum mechanics provided a more nuanced understanding of atomic behavior, where particles can be described as having particle-like and wave-like properties.

Dark energy is a concept acquired from observations of distant supernovae and other cosmological data. It is called "dark" because it does not interact with light or other electromagnetic radiation in a way science can currently detect.

We have come to understand the non-existent and slow vibrational energy field of dark energy and the high vibrational light energy (Holly, 2021).

We also obtain an answer that darkness is not only the absence of light but also an approximately null vibrational energy field. This helps us delve further into the origin of the so-called fundamental physical reality of mass (Raja, 2019).

In the microscopic view, science observes that a particle is just a wave packet. It behaves like small light particles (corpuscular luminous bodies). However, it is merely a wave-particle duality. As it has a wave-like nature, it does not follow Newtonian mechanics. Mass is simply a transition interface between the energy and momentum of a particle. In wave theory, mass is a measuring unit of energy (Srivastava & Sinha, 2019).

A wave representing a particle consists of two types of energy. The first is moving inertia or the tendency that constructs momentum. The second is resting inertia, which creates a posture independent of vibration. Momentum is responsible for corpuscular luminous bodies, while the resting part represents the dark side of energy (Vichare & Rege, 2016).

Moving inertia forms electrons and photons, while the other inert component constructs composite atomic nuclei, such as protons and neutrons. The resting energy in the nuclei is much

larger than the moving energy and behaves like a massive, pointed object (Taylor, 2012).

This demonstrates that all forces involve energy-to-energy interactions, not mass-to-mass interactions, as we previously thought in the context of gravitational and other influences. This suggests that the transformations between non-matter and matter, and vice versa, are also energy-to-energy interactions of wave functions (BioEd Online, n.d.).

It also reveals that dark energy comprises 'excitation-waves' in the vacuum without luminous characteristics. It can behave like dark matter and occupies significantly more space than visible matter (NASA Science, n.d.).

The electrons are constructed from an energy field that cannot be further broken down. Unlike electrons, protons and neutrons obtain almost all their mass from the nuclear force. Both particles comprise three exceptionally fast-moving quarks bonded together by gluons. The gluon particles carry a powerful force, and the interactions between the quarks and gluons give protons and neutrons their mass (Office of Science, U.S. Department of Energy, n.d.; Rose, 2023).

In a vacuum, almost all energy fields are massless. The massless energy field transforms into elementary particles (Kane, 2006; Rose, 2023).

In Vedic language, a vacuum is called Akasha or empty dark space. A space where only non-matter exists is in the Tama stage, meaning in a stable posture.

According to Vedic understanding, the universe is constructed by visible and dark energies, as science suggests. The Sun is not only luminous material or light but also the source of life, intelligence, love, and consciousness. The light in the inner sense and outer sense. The metaphysical aspect of life is predominantly a result of energy-wave components from dark energy combined with worldly elements constructed by visible wave functions.

The dominant role of energy functions of corpuscular luminous bodies or photons is responsible for creating our materialistic world (Kak, 2016).

The human body is primarily constructed from manifested and expressed perceivable physical particles. The living aspect, called Atma (like the soul but not equivalent), results from visible and dark energy functions. The mind is the portion of dark energy containing 'excitation waves' and behaves like dark matter (Sharma & Kumar, 2019).

Mind and Atma are massless non-matter entities that can control momentum, constructed by their energy functions (Subramaniam, 2019).

The way our physical body is constructed is now well understood. There are rare differences between Vedic

principles and scientific outcomes regarding how our physical body is built. As science has yet to develop its capabilities, we need to rely on Vedic explanations to understand the intangible aspects of our life.

When nature wants to express itself, a portion of massless dark energy excites into excited energy wave functions. These wave functions entangle into infinite wave packets, trapping finite numbers of excitation energy waves (Dalela, 2016 pp129-163).

Even though they are in wave packet form, they still behave like energy wave functions, as they are massless and contain entangled energy functions. This is called the 'Universal Mind.' The driving force behind this interest in expression still needs to be discovered. This mystery is called God, translated as the willpower of nature (Capra, 2014).

In the context of Vedic philosophy, the terms "Universal Mind" and "mind" refer to different levels of consciousness and mental phenomena (Frawley, 2015).

The Universal Mind, or Cosmic Mind or Paramatma, represents the all-encompassing, unified consciousness that pervades the entire universe. It is considered the source of all individual minds and the ultimate reality. The Universal Mind is omnipresent, eternal, and unchanging. It contains the knowledge and intelligence that govern the laws of nature and the functioning of the cosmos (Chattopadhyay, 2018).

The individual mind, in contrast, refers to the mental faculty within each living being. It processes sensory input, forms thoughts, and makes decisions. This mind is considered a fraction or manifestation of the Universal Mind within a specific body (Sinha & Chakraborty, 2017).

The individual mind is subject to change, influenced by emotions, desires, and other mental states. It is responsible for perceiving the external world and the inner world of thoughts and feelings (Hari, 2018; Jayaram, 2021).

The critical difference between the Universal Mind and the individual mind in Vedic philosophy lies in their scope and nature. The Universal Mind represents the all-encompassing consciousness that pervades the universe. At the same time, the individual mind manifests this consciousness within each living being, responsible for perceiving and interpreting the world (Hari, 2018; Jayaram, 2021).

When a tiny fraction of the Universal Mind (Consciousness) is assigned to keep the human body alive, it is called the Mind. In the context of Vedic philosophy, "Maan" and "Chitta" are terms used to describe different aspects of the mind. However, they are not interchangeable and have distinct meanings (Hari, 2018; Jayaram, 2021).

Maan (मन) refers to the mind or mental faculty in general. It is responsible for processing sensory input, forming thoughts, and making decisions. Maan is the aspect of the reason that is

constantly in flux and affected by emotions, desires, and other mental states. It is considered the mind's more superficial and active part (Krishnappa, Sridhar, & Nagendra, 2020).

Chitta (चित), on the other hand, is a deeper aspect of the mind, which is responsible for memory, impressions, and the subconscious. It stores past experiences, emotions, and thoughts that shape our behavior and personality. Chitta is the mental repository or database that holds our long-term memories and influences our actions (Srivastava & Gupta, 2020).

Maan is the more superficial and active part, while Chitta is the deeper, subconscious part responsible for memory and impressions. Even though the mind originates from inert dark matter-like energy wave functions, it exhibits a typical swinging, monkey-like behavior (Sudhakar, 2018).

5.1 Further Decoding (Few new insights or perspectives that have been gained through review as partial research findings**):**

Based on Vedic philosophy, when a living being comes into existence, a tiny fraction of the Universal Mind becomes associated with that specific body, manifesting as an individual mind. This individual mind (Maan) processes sensory input, forms thoughts, and makes decisions. It is subject to change and influenced by emotions, desires, and other mental states. The individual mind is responsible for perceiving the external

world and the inner world of thoughts and feelings (Saraswathi & Naidu, 2016).

The transformation of the Universal Mind into an individual mind can be seen as a process of limitation or condensation, where the infinite consciousness takes on the form of a finite and localized mental faculty within each living being. This process allows the Universal Mind to experience the world through multiple perspectives and forms (Sri Aurobindo, n.d.).

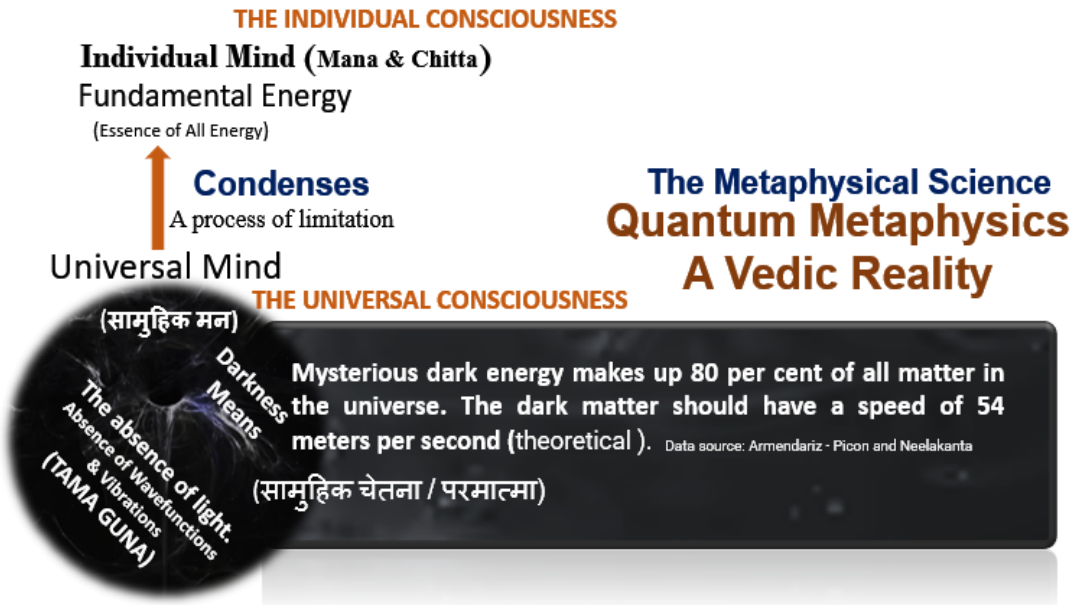


Figure: 4

It is important to note that, according to Vedic philosophy, the individual mind is never truly separate from the Universal Mind. The perception of separation is considered an illusion (Maya) that results from the mind's identification with the body and its experiences (Ranganathan, 2018).

Universal consciousness permeates and encompasses the entire universe. Integral parts of universal consciousness are

connected through quantum entanglement, allowing them to communicate without any known medium. This phenomenon results in seemingly mysterious or "spooky" actions at a distance (Nadeau & Kafatos, 2001; Scitechdaily, 2021).

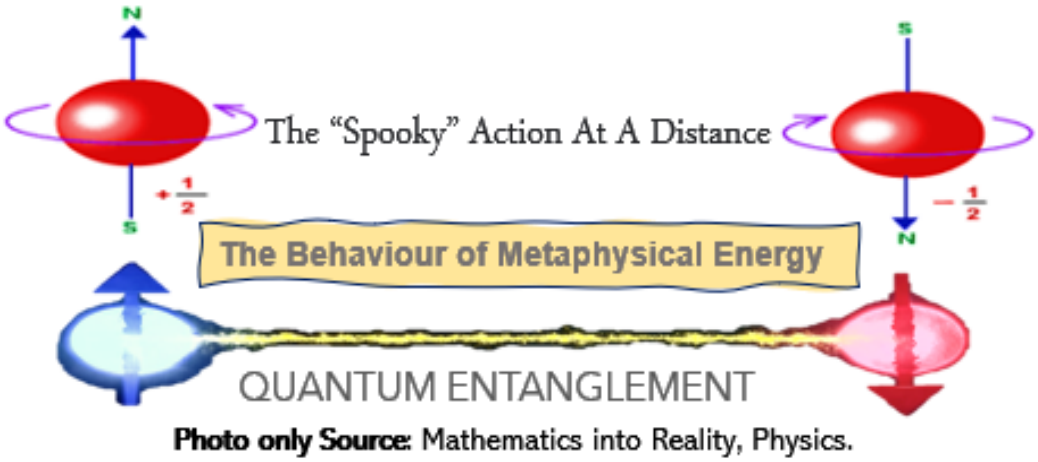


Figure : 5

Thus, the individual mind is always connected to the Universal Mind. Through spiritual practices like meditation and self-inquiry, one can realize this connection and experience the true nature of reality (Sinha & Sinha, 2019).

The universal principle states that the total energy in the universe, including natural resources, is fixed. This energy exists in various forms and cannot be created or destroyed, only converted from one form to another. This principle applies to dark and visible energy (Singh & Ghosh, 2017).

The Upanishads (Vedic texts) discuss two kinds of energy manifestations. Those that can be experienced by our senses (hearing, touch, sight, taste, smell) are called Apara Prakriti, which predominantly manifests through visible energy web

functions. The other type, which cannot be physically experienced (inner or spiritual world), is called Para Prakriti and is predominantly displayed through dark energy web functions. The mind, cosmic energy (universal consciousness), life (vital force), and personal consciousness are examples of Para types (Yadav, 2017).

A process of manifestation, condensation, and fusion of universal consciousness also transforms into a life force (also known as prana or vital force). As a unified consciousness, the universal consciousness also transfers the intelligence when a living being comes into existence, with a portion of the universal consciousness becoming associated with that specific life form. This association enables the universal consciousness to experience the world through the individual perspectives of living beings (Dubey et al., 2023).

As the universal consciousness manifests within a living being, it becomes more focused and condensed. This process gives rise to the life force, the vital energy that sustains all life processes, including growth, metabolism, and reproduction (Sri Aurobindo, n.d.).

The life force, or prana, flows through living organisms via subtle energy channels called nadis. These channels correspond to the meridians in traditional Chinese medicine and facilitate the distribution of vital energy throughout the body (Stefanov, 2022).

The balanced flow of prana within an organism contributes to overall health, well-being, and the experience of consciousness. Conversely, imbalances or blockages in the flow of prana can lead to various physical, emotional, and mental health issues (Raghavendra & Ramachandra, 2020).

Fatty acids are the main constituents of the membranes of the sperm head. They hold the nucleus with genetic materials and cytoplasm. The cytoplasm primarily contains salt, water, and protein that fill cells. The acrosome is at the tip of the head (Tavilani et al., 2013).

The acrosome, bound to the sperm membrane, includes a fatty acid layer with enzymes that allow the sperm to "digest" the egg's outer layer during fertilization. The midpiece, or "neck," of a sperm contains mitochondria that generate energy for the sperm's activity and movement of its tail. The protein tail forms an axial filament and propels the sperm through the seminal fluid (Tavilani et al., 2013).

Sperm cells exhibit characteristics of living organisms. The metabolism of sugars produces energy, facilitates growth (maturity), and enables them to move independently. However, they contain only half the genetic information needed to form a complete cell and cannot reproduce independently (Alvarez, 2014).

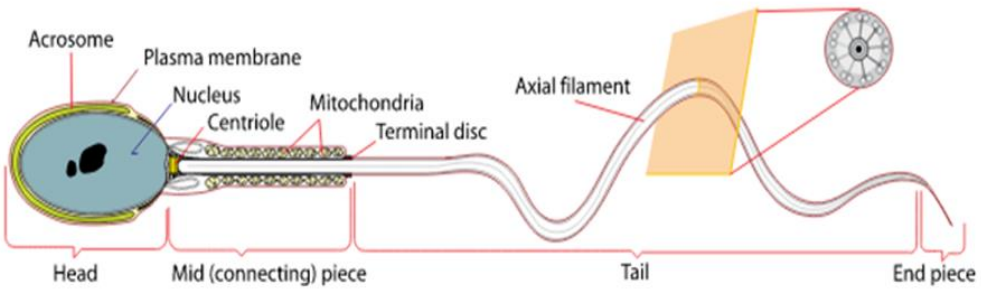


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Figure: 6

Chromosomes are made up of DNA, which carries genetic information. When sperm cells combine with the egg, they join with the egg's chromosomes, creating a diploid organism with 46 chromosomes and gaining the ability to reproduce independently (Gardner & Kelley, 2017).

After a couple of weeks, once the egg is fertilized, the embryo forms a neural plate. The neural plate is the foundation of the nervous system. As it grows, it becomes longer, folding into the neural tube. The bulging part of the tube transforms into the brain, while the rest of the line extends into the spinal cord and eventually develops into the rest of the nervous system (Gilbert, 2014).

The neural plate absorbs the life force. The nerve cells in our body can easily absorb the life force. Once absorbed into the nerve cells, it creates a consolidated dark energy web function called Nerve Force (Sahoo, 2014).

The nerve force is experienced as consciousness and called Chetana in Vedic texts (Goswami, 1993).

The life force, also known as prana, flows through subtle energy channels called nadis, which are connected to the chakra system. The chakras are energy centers in the body that regulate the flow of prana and govern various aspects of physical, emotional, and spiritual well-being (Sahoo, 2014).

The nerve cells, or neurons, in our body play a crucial role in transmitting sensory information and facilitating communication between different body parts. The subtle energy of prana interacts with the physical body, including the nerve cells, to maintain and regulate the body's vital functions (Sahoo, 2014; Srinivasan, 2014).

The subtle energy of prana interacts with the physical body, including the nerve cells, to maintain and regulate the body's vital functions. Interactions may involve nerve cells' absorption of life force (Srinivasan, 2014; Sahoo, 2014).

The Vedic spiritual and metaphysical perspective relies on the concepts of life force and consciousness, in addition to the physiological and biochemical aspects of nerve cells, to understand and interpret the composition, behavior, and vital functions of nerve cells. In contrast, modern science primarily focuses on the physiological and biochemical aspects to understand nerve cell functions (Ramakrishna, 2006; Sri Aurobindo, n.d.).

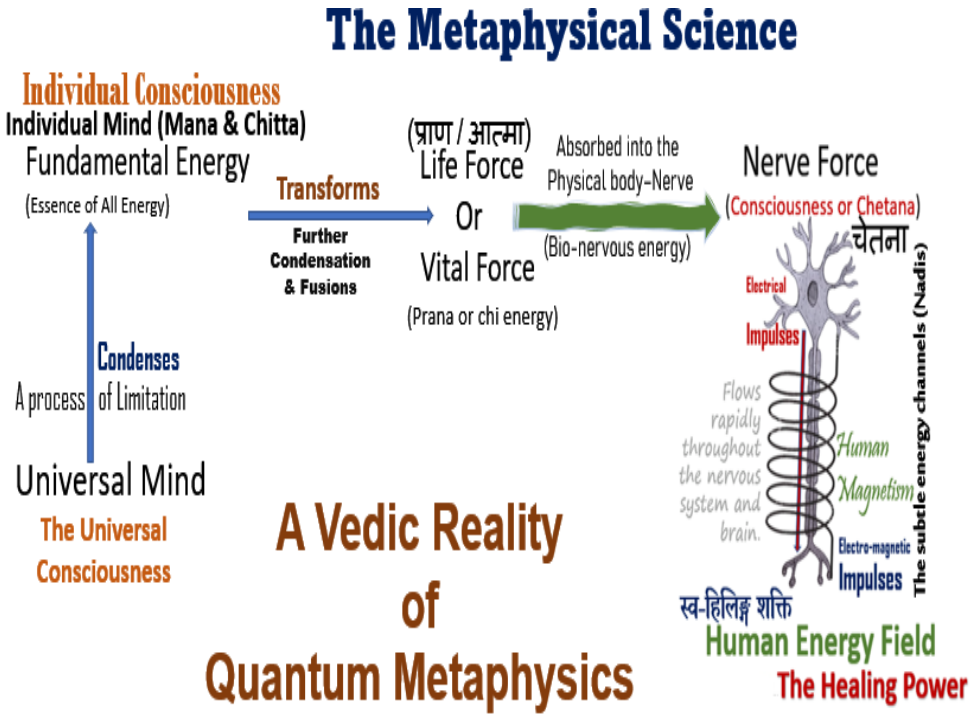

Figure: 7

In Vedic philosophy, Chetana is understood to be a fundamental aspect of consciousness or awareness in all living beings. While the exact nature of Chetana is difficult to define or measure, some scientific research has suggested that specific electrical impulses may be associated with it (Mishra & Nandwani, 2016).

According to this view, the Prana, or subtle energy, regulates biological processes related to perception, thought, and actions. For that, prana interacts with the nervous system and the brain to generate electrical impulses that facilitate these processes. Once subtle energy generates a series of electrical impulses (Chetana) that rapidly flow throughout the nervous system and the brain. These impulses are thought to be the source of

various biological processes, including perception, thought, and action (Srinivasan, 2014; Sahoo, 2014; Sri Aurobindo, n.d.).

Magnetoencephalography (MEG), a non-invasive neuroimaging technique, measures the magnetic fields produced by electrical currents in the brain. The electrical activity in the brain generates magnetic fields that can be measured using MEG. This phenomenon of biomagnetism, which refers to magnetic fields, is produced by living organisms (Cohen, 2010).

Faraday's law of electromagnetic induction states that a changing magnetic field induces an electric current in a conductor. Lenz's law says that the direction of the induced current is to oppose the change that produced it. Together, those phenomenon states that a magnetic field is produced when an electrical current passes through a wire (Serway & Jewett, 2013).

Interestingly, electrical impulses generated by Chetana similarly cause magnetic fields, which can be seen as a kind of "human magnetism" or biomagnetism (Sahoo, A., 2014).

Research has shown that the human body produces a variety of magnetic fields, including those generated by the heart and the brain. These fields are thought to play a role in various biological functions, such as regulating the heartbeat and influencing brain activity (McConnell & Zhang, 2017).

The relationship between Chetana, electrical impulses (Human Impulses), and biomagnetism still needs to be fully understood, and much more research is needed to explore this fascinating study area. However, these concepts are intimately connected with the Vedic understanding of consciousness and the nature of life itself.

The human energy field, also known as the aura, is a concept in many spiritual and holistic healing traditions that refers to the energy that surrounds and permeates the human body. It is believed to have various subtle points, including electromagnetic fields, biofields, and chakras (Gerber, 2001).

According to natural healing practitioners, the human energy field plays a crucial role in maintaining physical, emotional, and mental health. When the energy flow in the body is blocked or disrupted, it can lead to imbalances that manifest as physical or emotional symptoms, such as pain, anxiety, or depression (Eden, 2008).

Natural healing techniques aim to restore balance and harmony to the human energy field, promoting physical and emotional well-being. These techniques may include practices such as acupuncture, Reiki, meditation, yoga, and various forms of energy healing (Micozzi, 2010).

In many cases, natural healing techniques can be used with conventional medical treatments to enhance the body's biological healing processes and improve overall health

outcomes. For example, acupuncture is effective in treating various chronic pain conditions, while Reiki has been used to help manage stress and anxiety (Anderson & Taylor, 2012).

The concept of the human energy field and natural healing techniques are based on the idea that the body has an innate ability to heal itself and that by working with the body's natural energies, it is possible to promote healing and well-being in a safe and effective manner (Taylor, 2010).

The electrical impulses of consciousness are thought to play a vital role in activating the human body's natural healing power. These impulses generate an electromagnetic field of nerve force that can repair and restore the body's normal functioning against various types of stress (Oschman, 2012).

The healing power is attributed to the human energy field, created by the interplay of human impulses and magnetism. This energy field is responsible for maintaining the body's defense system and momentum, which restore normal functioning acquired at birth (Brennan, 1993).

While electric current is a flow of electric charge carried by moving electrons in electric circuits, the electrical impulses of consciousness are concentrated in the cell body, known as the soma. The vital force that rejuvenates and boosts the soma power's effectiveness is soma rasayana in Vedic literature (Tewari, 2013).

Soma Rasayana is a natural way to promote physical, mental, and spiritual well-being. Soma Rasayana refers to traditional rejuvenation therapy to enhance physical, mental, and spiritual health. A natural way to promote longevity, vitality, and overall well-being (Mahdihassan, 2012).

Soma is also the name of a divine plant that grows in the Himalayas with extraordinary healing properties. Soma Rasayana is a preparation made from various herbs, fruits, and other natural ingredients believed to have similar rejuvenating effects as the Soma plant (Dwivedi & Dwivedi, 2007).

A holistic soma therapy that is intended to balance the body's doshas (biological energies) and promote a healthy immune system can have a range of benefits, including improving digestion, boosting energy levels, enhancing memory and cognitive function, and reducing stress and anxiety (Rastogi & Pandey, 2017).

The practice of Soma Rasayana involves following a strict diet and lifestyle regimen, including abstaining from certain foods and engaging in specific activities such as yoga and meditation, typically taken over a period of several weeks or months and is said to be most effective when practiced regularly over an extended period of time (Kumari & Augusti, 2002).

The concept of human energy and consciousness as related to natural healing power is complex and multifaceted that requires a deeper understanding of the underlying biological,

electrical, and energetic processes that govern the human body (Muehsam & Ventura, 2018).

The axons and dendrites of nerve cells are like wires that enable communication throughout the human body. These wires help to transmit electrical and chemical signals to and from the soma, which is the cell body of a neuron. This process, known as neurotransmission, allows for the rapid transfer of information between neurons or between neurons and effector cells (Hille, 2018).

In addition, it is believed that the energy wave functions of emotions and feelings are also entangled with bio-nervous energy. This energy can manifest in the body as instantaneous spooky actions to stimuli, following the body's instinctual responses to the environment (Goswami, 2017).

According to InformedHealth.org (2009), Bio-nervous points are distributed throughout the body and can respond to stimuli in a way that bypasses conscious thought. This process allows instant reactions to stimuli and helps ensure the body's survival in challenging situations.

The nervous system is critical in enabling communication throughout the human body. By transmitting electrical and chemical signals between neurons and effector cells, the nervous system allows for rapid responses to stimuli and ensures the body's survival. The entanglement of emotions and feelings with bio-nervous energy adds another layer to this

complex system. It highlights the intricate relationship between consciousness, emotion, and the body's natural responses (Kandel et al., 2012).

The spermatogonial stem cell (SSC) is a precursor to sperm cells and plays a critical role in spermatogenesis. In the seminiferous tubules of the testis, the SSCs exist as individual cells and undergo incomplete cell division to maintain highly productive spermatogenesis through self-renewal (Yamada et al., 2016).

The constant generation of daughter spermatogonia, which differentiates into spermatozoa, ensures the transmission of genetic information to the next generation. This process requires continuous life force or vital energy (Tigunait, n.d.).

In Vedic philosophy, this vital energy is known as "prana," which is believed to be the life force that animates all living things. It is thought to be present in the breath and is responsible for maintaining physical, mental, and emotional well-being (Rama-Prasad, 2013)

Thus, maintaining highly productive spermatogenesis requires a constant supply of prana, obtained through various means, including proper nutrition, exercise, and spiritual practices such as yoga and meditation. These practices are believed to enhance the flow of prana in the body and promote overall health and vitality (Tiwari, 2003).

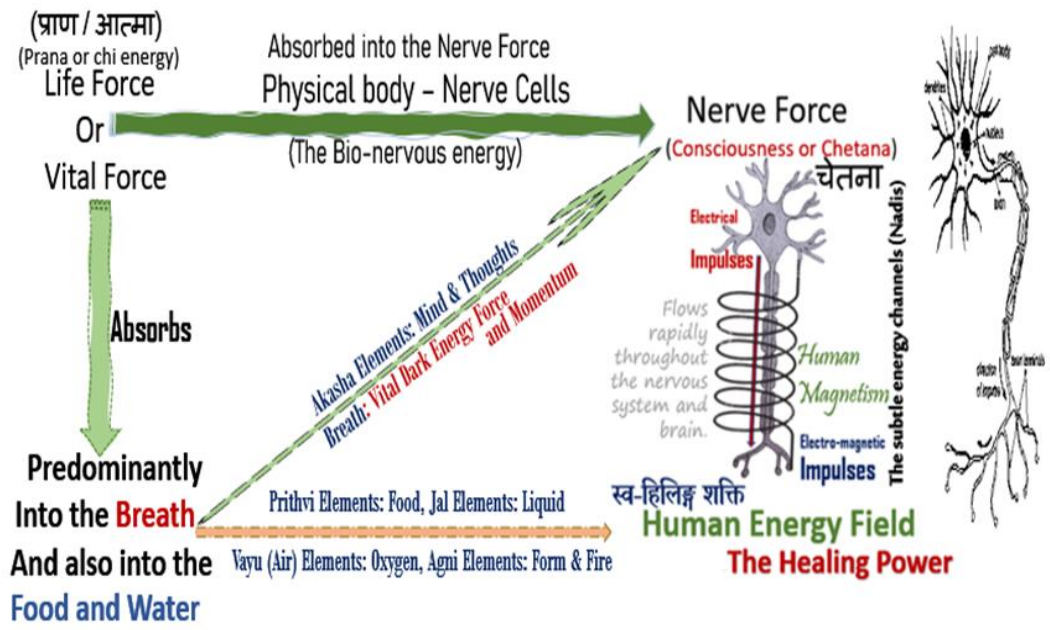

Figure: 8

A constant supply of life force to cells is maintained through various means, including breath, food, and water. The breath is essential to supply the universal mind (Akash), thoughts (Akash), and vital energies (life force renewal) into the body (Sahoo, 2014).

Additionally, food supplies earth elements; liquid supplies Jaal parts; oxygen and other gases supply Vayu elements, shape (form), light, and energy (fire) supply Agni elements. Agni also supplies vital energies to renew life force throughout the body, besides fulfilling regular nutritional, repair and maintenance, and recreational rejuvenating needs (Sharma, 2003).

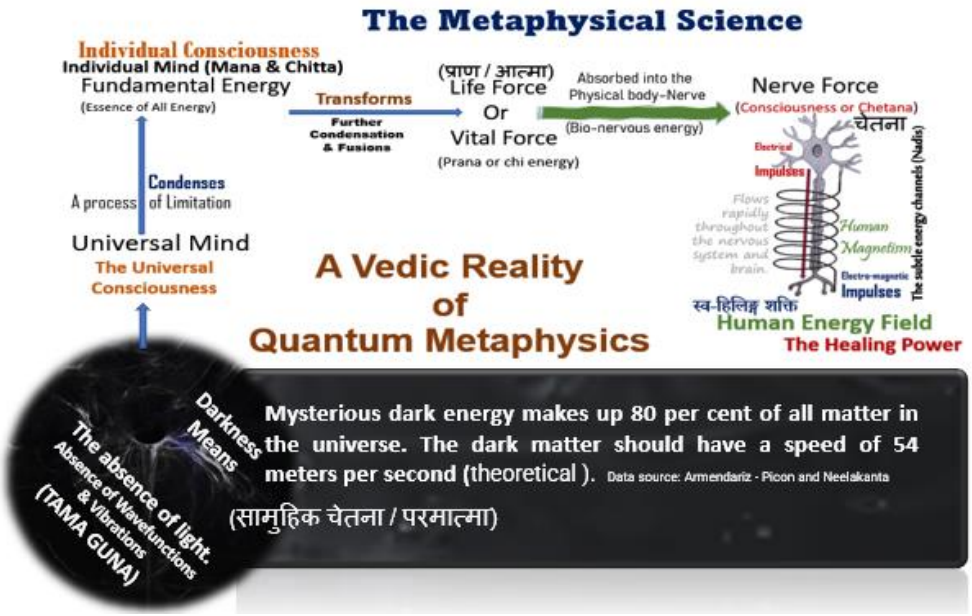

Figure: 9

SOMA Rasa is the components in breath, food, and water that contribute to life force renewal. Therapeutic properties that help protect against oxidative damage, boost the immune system, and promote healing are known as medicinal. Mental tonics help with the Kayakalpa, while tonics to build physical stamina help to fulfill nutritional and physical rejuvenation needs. SOMA and tonics enhancing attributes of the diet and lifestyle support overall health and well-being (Lad, 2002).

From the Vedic perspective, the human energy field is the healing power of the human body, which is dominantly derived from the vital force (Prana or Atma) that originates from the universal mind (Chopra, 1993).

A portion of the universal mind, Mind or Maan, is a binding glue between nerve force (Consciousness) and bio-nervous

entities. This predominant phenomenon turns body parts into living entities (Sahoo, 2014).

The Maan, acting as a binding glue, initiates all voluntary and involuntary activities. This fabricated starter force is called Nadi, which is a network of channels through which a typical pulse of Prana energies travels through the physical body, the subtle body (including emotions, thoughts, sensations, energetic shifts, mind, and ego), and (the root or seed potential for sensory experiences like Anand or bliss) the causal body (Frawley, 2000).

Human willpower is the essence of feelings, built by assembling an individually combined battery of Maan, Atma, and bio-nervous entities (Karmic Battery), which turns the whole community into living giants. The Maan is responsible for fabricating the initial desire, either accepted, modified, or rejected by the willpower to dictate a person's karma or activities with their free will (Rathod & Srinivasan, 2016).

The Maan is a fundamental constituent of the whole assembly of the karmic battery, and one's desires are responsible for keeping them in hell or heaven situations in everyday life. Thoughts and feelings construct suffering or heaven-like experiences in consciousness, while willpower keeps one at the unbiased center of both, at a bliss point (Sahoo, 2014)

As the predominant and starter ingredient of willpower, one's Maan or desire is the key factor that builds intelligence and

intellect, as well as the root cause of happiness, sadness, or bliss. It also dictates one's healing, rejuvenating, and life force renewal aspects, determining a healthy, robust, and alive posture or the opposites (Goswami, 2015).

Vedic principles suggest the value of being close to nature and adopting a nature-friendly lifestyle, including consuming minimally processed plant and mineral-based foods that are naturally grown. These foods carry higher proportions of vital energy (Prana Portions) needed as mental tonics for mental and spiritual growth. Animal-based foods are fabricated by reprocessing natural minerals and herbal foods by living beings' bodies, containing relatively weaker pranic energy but with more concentrated tonics suitable for building physical strength (Frawley, 1999).

5.2 Vata, Pitta, and Kapha Tri-Dosha

Vata, Pitta, and Kapha are concepts in Ayurvedic medicine that describe the three fundamental energies or doshas that are believed to be present in all living beings and influence their physical, mental, and emotional health. However, it is essential to note that these concepts do not directly relate to physics and are not recognized by modern physics as scientific terms (Frawley, 2000).

In Vedic philosophy, a combination of five elements forms three types of bodily constituents: Vata, Pitta, and Kapha. These doshas are thought to govern various aspects of the body and

mind and play a critical role in determining an individual's physical and mental health (Lad, 1999).

Vata comprises air and space and is associated with lightness, dryness, and mobility. Pitta is composed of fire and water and is related to heat, sharpness, and fluidity. Kapha comprises earth and water and is associated with heaviness, moisture, and stability (Frawley, 2000).

From an inner engineering perspective, Vata is associated with movement and regulates bodily functions such as blood circulation, breathing, and nerve impulses. When Vata is in balance, it promotes creativity, vitality, and mental clarity. However, being out of balance can lead to anxiety, fear, and physical imbalances such as constipation and insomnia (Vasudev, 2016).

Pitta is associated with metabolism and digestion and regulates body temperature, appetite, and digestion. When Pitta is balanced, it promotes intelligence, courage, and a robust digestive system. However, being out of balance can lead to anger, jealousy, and physical imbalances such as acid reflux and inflammation (Vasudev, 2016).

Kapha is associated with stability and regulates bodily functions such as immunity, lubrication, and tissue growth. When Kapha is balanced, it promotes love, forgiveness, and a healthy immune system. However, being out of balance can

lead to lethargy, depression, and physical imbalances such as weight gain and respiratory issues (Vasudev, 2016).

In inner engineering, the goal is to balance the doshas through lifestyle choices, diet, and spiritual practices such as meditation and yoga. By understanding and balancing the doshas, individuals can promote optimal physical and mental health and achieve a state of inner harmony and balance (Chopra, 1991).

Vata, Pitta, and Kapha are believed to influence different aspects of consciousness, and maintaining a balance between them is essential for overall health and well-being. Each dosha influences specific aspects of consciousness, including perception, cognition, and emotions (Sharma et al., 2011).

Vata is associated with the element of air and is believed to influence the subtle energy system, including the flow of prana or life force energy. When Vata is balanced, it promotes mental clarity, creativity, and intuition. However, when it is imbalanced, it can lead to anxiety, fear, and confusion (Kumar, A., 2019).

Pitta is associated with the element of fire and is believed to influence intellect and cognitive functions. When Pitta is balanced, it promotes intelligence, concentration, and discernment. However, the imbalance can lead to anger, jealousy, and other negative emotions (Gupta & Sharma, 2019).

Kapha is associated with the element of earth and is believed to influence the emotional aspects of consciousness. When Kapha is balanced, it promotes love, compassion, and emotional stability. However, when it is imbalanced, it can lead to attachment, possessiveness, and depression (Chopra & Simon, 2004).

Vata, Pitta, and Kapha are believed to influence different aspects of consciousness, and maintaining a balance between them is essential for overall health and well-being. This can be achieved through lifestyle choices, diet, and spiritual practices such as meditation and yoga, which help to promote harmony between the doshas and consciousness (Prathibha & Khanduri, 2015).

5.3 Tri-Dosha-based quick healing practice.

According to Vedic philosophy, health is achieved when there is a balance between the three doshas - Vata, Pitta, and Kapha. When one or more of these doshas become imbalanced, it can lead to various physical and mental ailments.

Therefore, the tridosha theory can facilitate quick healing by restoring balance to the body and mind (Shilpa & Venkatesha, 2011).

One way to facilitate quick healing is through Ayurveda, a holistic healing system based on the principles of tridosha. Ayurvedic treatments balance the doshas by using natural

remedies such as herbs, spices, and oils and lifestyle modifications such as diet and exercise (Singh, 2012).

For example, if a person has an imbalance in Vata dosha, they may experience symptoms such as anxiety, dry skin, and constipation. An Ayurvedic practitioner may recommend warm, nourishing foods, such as soups and stews, and gentle exercise, such as yoga or walking, to balance Vata. They may also recommend Vata-pacifying herbs and oils, such as ashwagandha and sesame oil, to help calm the nervous system and promote relaxation (Khalsa & Tierra, 2008).

Similarly, if a person has an imbalance in Pitta dosha, they may experience inflammation, acid reflux, and irritability. To balance Pitta, an Ayurvedic practitioner may recommend cooling, hydrating foods like cucumbers and coconut water and activities that promote relaxation, such as meditation or swimming. They may also recommend Pitta-pacifying herbs and oils, such as coriander and coconut oil, to help cool the body and reduce inflammation (Singh, 2017).

Finally, if a person has an imbalance in Kapha dosha, they may experience symptoms such as lethargy, weight gain, and depression. To balance Kapha, an Ayurvedic practitioner may recommend light, spicy foods, such as ginger and cayenne pepper, and activities that promote movement and stimulation, such as dancing or aerobics. They may also recommend Kapha-pacifying herbs and oils, such as turmeric and mustard oil, to

help stimulate digestion and increase energy levels (Joshi & Sharma, 2010).

In conclusion, the tridosha theory can facilitate quick healing by restoring balance to the body and mind. Individuals can promote optimal health and well-being by identifying imbalances in the doshas and making appropriate lifestyle and dietary changes. Ayurvedic treatments can be a helpful tool in achieving this balance and promoting quick healing (Joshi & Sharma, 2010).

5.4 Rejuvenation and kayakalpa

In Ayurveda, rejuvenation and kayakalpa are two important practices designed to promote overall health and well-being, longevity, and vitality (Vaidya, 2020).

Here are some Ayurvedic ways to achieve rejuvenation and kayakalpa:

Panchakarma: This is a set of Ayurvedic detoxification treatments designed to remove toxins from the body and promote healing. Panchakarma typically involves a series of massage therapies, herbal steam baths, and other detoxification techniques and is believed to help restore balance to the doshas and promote overall health and well-being (Kaur, 2013).

Ayurvedic diet: A healthy diet is essential to Ayurvedic rejuvenation and kayakalpa. Ayurvedic practitioners recommend eating a diet rich in whole foods, such as fruits, vegetables, whole grains, and legumes. They also recommend

avoiding processed foods and refined sugars and eating foods appropriate for one's individual dosha type (Chopra, 2001).

Yoga and meditation: Yoga and meditation are two practices that are commonly used in Ayurveda to promote overall health and well-being. Yoga postures, or asanas, are believed to help promote flexibility, strength, and balance, while meditation is supposed to help calm the mind and promote relaxation (Srivastava & Tanwar, 2021).

Herbal remedies: Ayurvedic practitioners often recommend herbal remedies to promote rejuvenation and kayakalpa. For example, ashwagandha is a popular herb that promotes vitality and longevity, while Shatavari is supposed to help support the female reproductive system and promote healthy aging (Rai & Singh, 2018).

Lifestyle modifications: In Ayurveda, lifestyle modifications are essential to rejuvenation and kayakalpa. Practitioners recommend getting adequate rest, reducing stress, and engaging in activities that promote overall health and well-being, such as spending time in nature and cultivating positive relationships (Tiwari, 2017). Overall, Ayurveda provides a holistic approach to rejuvenation and kayakalpa that focuses on restoring balance to the body and mind (Chopra, 2010). By incorporating a holistic approach into one's daily routine, individuals can promote optimal health, well-being, vitality, and longevity (Chopra & Simon, 2004).

CHAPTER 6 Hypothesis (परिकल्पना)

Modern drug chemistry follows the law of chemical combination; based on that, it develops the active ingredients with the assumption that it works following the principle of chemical combination to deliver anticipated therapy.

Our body follows the DNA phenomena that define how DNA replicates while translating and transcribing genetic information. That procedure follows the Vedic principle. In that principle, the data is superimposed and serialized into the objects. During the serializations, the information aligned one over another, encoding them into different layers while creating a complex structure working together in a natural harmony. In this work, it is called the principle of Vedic Microbiology or quantum metaphysics.

The polyherbal formulation works per quantum metaphysics, and the active principle-based therapy of modern science works based on the law of chemical combination. Actives based on the direction of chemical combination can deliver quick remedies against medical symptoms. However, it rarely

contributes to balancing natural tridosha. Instead, on many occasions, it triggers the development of other symptoms.

We are either adding herbal-based extracts as a source of more concentrated actives principles otherwise the actives ingredient of modern medicinal chemistry directly in the polyherbal formulation we are working on. In this process, we are doing nothing but turning the quantum metaphysics-based formulation into the path of drug development that relies on the law of chemical combinations. And hence we are getting the same result we see in medicinal practices.

I hypothesize that relying upon the already established and proven science of DNA phenomena as the principle of quantum metaphysics (Vedic Microbiology), a philosophy to develop non-violence and harmless quick healing polyherbal formulations for holistic care formulation is possible through critical realism supported by review and Interpretivism.

CHAPTER 7 RESEARCH METHODOLOGY

(शोध व्यूह एविं सवसध)

Decoding Samkhya and Vaisheshika philosophies from a modern science perspective help us understand more about the body's reality and how the metaphysical systems work at the quantum level to produce the human body as a whole object. We can follow a post-structuralist approach to understanding how the body as an object works and behaves.

It helps us to understand the metaphysical reality under the tridoshic natural harmony stage. It helps to identify and review akin to similar harmony-oriented modern scientific-based prototype formulations. Two examples can be multi-phytochemicals-based flavorings and how a smartphone made smart-type prototypes.

Based on those reviews, we should be able to predict and rationalize the practical philosophy we intend to formulate through critical realism, Interpretivism, and adopting a post-structuralist approach.

CHAPTER 8 TESTING THE HYPOTHESIS

(चतुर्थः अध्यायः परिकल्पनायाः परीक्षणम्)

8.0 Hypothesis Review

The proposed hypothesis assumes that a polyherbal formulation developed based on the principle of quantum metaphysics (Vedic Microbiology) can provide quick and harmless healing while promoting natural balance and that this can be achieved by relying on the established science of DNA phenomena.

To test this hypothesis, a comparison is needed between the healing effects of the polyherbal formulation and synthetic drug-based formulations regarding their speed and efficacy in treating medical symptoms and their ability to promote a natural balance in the body.

Significant cases captured in the literature review indicate that both therapies can deliver similar impacts when supporting the body's natural self-healing process.

Polyherbal formulations and synthetic drug-based formulations can impart quick and harmless healing characteristics, provided that their constituents support promoting natural balance in the body.

In current practice, one appears more effective than the other in achieving these outcomes, which has nothing to do with the origin of active ingredients from a natural or synthetic source

but rather their ability to impart quick support in harmony with rehabilitating natural balance.

Several studies and reviews support the idea that the effectiveness of herbal and synthetic drug-based treatments is not necessarily determined by the origin of their active ingredients but by their ability to promote natural balance and support the body's self-healing processes.

Several references suggest that herbal and synthetic drug-based treatments can effectively achieve therapeutic outcomes if they support the body's natural healing processes and promote balance. The effectiveness of a treatment may not necessarily depend on the origin of its active ingredients but rather on how well it aligns with the body's natural processes (Sharma & Gupta, 2018; Wang et al., 2019; Sharma & Singh, 2017; Izzo, 2019).

Understanding and interpreting the DNA phenomenon is a critical gateway for evaluating the critical realism-based assumptions of this hypothesis. A critical realism-based review and interpretivism conducted above have decoded quantum metaphysics-based understanding similar to modern science-based findings. We can underline conditions that improve quick responsiveness to polyherbal formulations developed for holistic care.

7.1 Introduction to Critical Realism-based Interpretations:

Critical realism-based interpretations refer to interpreting qualitative data grounded in critical realism philosophy. Critical realism is a philosophical framework that seeks to explain the underlying structures and mechanisms that give rise to observed phenomena. It is based on the idea that an objective reality exists independently of our perception but that our understanding of that reality is shaped by our social and cultural contexts (University of Warwick. (n.d.).

When applied to qualitative data analysis, critical realism-based interpretations involve identifying the underlying structures and mechanisms that explain the observed patterns in the data. This may include going beyond surface-level descriptions of the data and delving deeper into the social, cultural, and historical contexts that shape the studied phenomena. It may also involve identifying how power, inequality, and other social factors influence the observed patterns in the data (Porter & Sullivan, 2018).

Thus the critical realism-based interpretations seek to provide a deeper understanding of the phenomena being studied by uncovering the underlying structures and mechanisms. By doing so, developing more nuanced and comprehensive explanations of social and cultural phenomena is possible (Danermark et al., 2002).

8.2 Method followed for Critical Realism-based Interpretations:

Following are the steps to follow in concluding using critical realism-based interpretations:

1. Exploring Review Based Relevant Details
2. Identify underlying mechanisms
3. Developing critical realism-based assumptions
4. Testing the assumptions
5. Interpreting the findings

These steps can help researchers use critical realism-based interpretations to better understand social and cultural phenomena. By uncovering the underlying structures and mechanisms that give rise to observed patterns in the data, more nuanced and comprehensive explanations of the phenomena can develop and draw meaningful conclusions based on analysis (Danermark et al., 2002; Porter & Sullivan, 2018).

8.2.1 Exploring Review-Based Relevant Details: In a science-based study, the deeper we delve into the details to uncover the healing phenomenon and the actual mechanisms of action, the more complexity we encounter. As the body works with a holistic approach associated with various unknown behaviors, the search repeatedly enters into additional areas of uncertainty and unfamiliar layers of complexity.

However, throughout our literature review, analysis, and interpretations, we have uncovered a common ground that the

process of body healing is more closely related to the body's natural self-healing process. This self-healing can be facilitated through external efforts, such as a personal belief in natural balance and rehabilitation through self-healing, willpower, facilitation through treatments, food, and lifestyle.

It is also agreed that self-healing is a combined effort of rehabilitating balance through the body's self-healing power, personal belief, and willpower, facilitating the process through feeding positive thoughts, foods, medicinal principles, and lifestyle.

This work focuses on the role of medicinal principles that can contribute to the quick and holistic rehabilitation of the body's balance, assuming that other associated factors are constant. While the literature review has indicated that the effect any medical principle can have at the common ground is significant to evaluate its ability to deliver positive results, we also need to consider the substratum rheology at the common ground, which is at the level of metaphysical constructs.

The detailed review has concluded that the common ground for all substratum, including medicinal principles, is limited to the nerve force (bio-nervous energy) and the human energy field level. Only after these stages can medicinal principles injected into the body as medicine, food, or by other known or unknown paths deliver their effects. As identified by the literature review, beyond that point, we only uncover universal consciousness,

individual consciousness, life forces, and similar other unknowns as determining factors.

It is evident that if we can identify how medicinal principles can play a more facilitative role in the natural body healing process at the nerve force (bio-nervous energy) and human energy field levels, we can formulate a philosophy that can build a quick delivery system for the holistic approach to the body's balance rehabilitation capability of medicinal principles by design.

8.2.2 Identify Underlying Mechanisms: Consciousness is critical to accessing information. The condensation, transformation, absorption, and limitation processes are metaphysical changes, as clarified through review.

At the substratum level, constructs work based on metaphysical attachments, detachments, or physical transformations. These changes may occur in layers, more compact or looser forms, rather than through intact chemical reactions or chemical transformations.

These changes are observed at the construct and working matrices identified at the metaphysical substratum level.

Several references provide evidence that the structural principles of DNA are related to the flow of information from generation to generation and that the structure of DNA is a physical construct made up of different amino acids that are compacted in specific ways (Watson & Crick, 1953; (Alberts,

Johnson, Lewis, Raff, Roberts, & Walter, 2002; Rattner & Murrills, 1985; Wolynes, 2012).

8.2.3 Developing critical realism-based assumptions: Based on the literature review and analysis, this research identified that if we separately consider Vedic philosophy-based quantum metaphysics and modern science-based quantum biochemistry, at the level of nerve force (bio-nervous energy) and the human energy field, all metaphysical substrata come together in similar constructs and mechanisms of working together, much like how amino acids construct DNA and maintain its informational traits.

Relying on the already established and proven science of DNA phenomena as the principle of quantum metaphysics of Vedic Microbiology, this research makes critical assumptions based on realism that non-violent and harmless quick-healing polyherbal formulations for holistic care can be designed.

The literature review has also uncovered that incorporating larger structures of polyherbal or synthetic ingredients that work synergistically as physical supports instead of smaller molecules prone to force frequent chemical reactions that trigger the creation of unknown by-products can facilitate the quick rehabilitation of the body's natural balance through self-healing practices.

By reviewing such details, we can formulate principles for designing Ayurvedic medicines that incorporate quick-healing characteristics by design.

8.2.4 Testing the Assumptions:

It is important to note that the safety of any medicinal principle or drug depends on various factors, such as its mode of action, dosage, and the patient's characteristics, such as age, health status, and genetic makeup. However, when properly developed and tested, larger structures (Surface area to come into contact with) medicinal principles can be effective and safe in medical treatments (Jenner & Whalley, 2013).

One example of a larger structure medicinal principle used in medical treatments is monoclonal antibodies. Monoclonal antibodies are laboratory-made molecules that mimic the immune system's ability to fight off harmful pathogens such as viruses or cancer cells. These molecules are typically larger than small-molecule drugs but can be highly specific in binding to their target molecules (Anonymous, 2023).

While monoclonal antibodies can have side effects, they are generally considered safe and effective for their intended uses when adequately developed and tested. Like all medicines, they can interact with other drugs or have adverse effects in some patients, but they are generally well-tolerated. They can benefit needy patients significantly (Weiner et al., 2010).

Studies have found that herbal medicines can be effective and have fewer side effects than conventional drugs. They often work through synergistic interactions among their constituents. Herbal medicinal preparations can be safer and have fewer side effects than traditional pharmaceuticals. Modern research has validated their efficacy and safety.

Researchers are constantly exploring new ways to design and develop synthetic molecules that are effective for therapy while minimizing or eliminating potential side effects.

We can review recent examples of synthetic molecules that have been developed with improved safety profiles:

The Bispecific antibodies: Bispecific antibodies are laboratory-made large molecules that can bind to two different targets simultaneously, allowing for more precise targeting of diseased cells while avoiding healthy cells. A bispecific antibody consists of two other heavy chains and two different light chains and exhibits asymmetry due to the presence of at least two different regions. Some bispecific antibodies can be designed to bring two different cells together, such as a cancer cell and an immune cell, to enhance the immune response against cancer. Others can be designed to block the interaction between two molecules involved in a disease process, such as a receptor and its ligand (Spiess et al., 2015).

Peptide drugs: Peptide-based drugs are also considered larger surface area drug molecules. They are made up of short chains

of amino acids, the building blocks of proteins, and can be synthesized in the laboratory for use as drugs. They are often more specific and have fewer side effects. Some peptide drugs can mimic the action of natural peptides in the body, such as hormones or neurotransmitters, and can treat conditions such as diabetes or mental health disorders. Others can bind to specific receptors or enzymes involved in disease processes and can be used to inhibit or enhance their activity (Wang et al., 2022; Lee et al., 2019).

RNA-based drugs: RNA-based drugs are synthetic larger surface area molecules that can target and modify specific RNA molecules in the body, which can be used to treat diseases caused by faulty RNA expression. RNA-based drugs bind to specific RNA molecules and either inhibit or enhance their activity. For example, RNA-based drugs can be designed to target RNA molecules that cause diseases such as cancer, genetic disorders, or viral infections and either inhibit their expression or degrade them. RNA-based drugs can also enhance the presentation of beneficial RNA molecules, such as those that produce proteins needed to treat diseases. One advantage of RNA-based drugs is their high specificity in targeting, which can reduce the risk of off-target effects and improve their safety profile (Winkler, 2018).

DNA is the basic unit of life, and comprehending its mechanisms can assist researchers in identifying the underlying causes of diseases and developing effective

prevention and treatment strategies. Furthermore, understanding DNA's workings can offer valuable insights into developing safer and more effective natural health products (Sarkar, 2016).

For example, studying the structure and function of DNA can provide insights into the molecular pathways involved in various diseases, such as cancer or genetic disorders. By understanding these pathways, researchers can develop natural health products that target specific genes or proteins involved in disease processes (Cox, 2013).

Additionally, research on DNA repair mechanisms can inform the development of natural health products that enhance the body's ability to repair damaged DNA, which can help prevent cancer and other diseases (Torgovnick & Schumacher, 2015).

Many medicinal interactions are related to chemical reactions that can lead to unintended by-products. When multiple medications are taken together, they can interact with each other and potentially alter their therapeutic effects or cause adverse reactions. These interactions can be caused by chemical reactions that can generate unintended by-products or result from the drugs affecting each other's absorption, metabolism, or elimination from the body (Katzung, 2017).

However, not all medicinal interactions are related to chemical reactions. They can also be related to non-supportive behaviors and adverse effects. For example, drug interactions can also

occur when drugs have similar mechanisms of action or compete for the same receptors in the body. Additionally, drug interactions can occur when drugs affect the body's absorption, metabolism, or elimination of other drugs (Katzung & Trevor, 2019).

8.2.5 Interpreting the findings:

The scope of this research is more focused on adequately selecting active therapeutic ingredients to deliver practical healing impacts. Besides, other critical to quality and other parameters must suit the need of the specified mechanisms of action, including the dose form.

A critical realism-based assumption and the corresponding review, whether supporting the hypothesis or not, is very important. The underlying belief in the proposed hypothesis is that a drug that can deliver an akin to DNA phenomenon and with a larger contact area available to an active therapeutic utilized will significantly support quick healing attributes. If it can be established as factual, those findings can be exploited to formulate principles for designing Ayurvedic medicines with quick-healing characteristics.

Based on the literature review and generally practiced industry standards, the following are a few critical-to-quality parameters that need to be considered to develop a quick-healing Ayurvedic medicine with ideal active principles that deliver the anticipated efficacy and safe elimination from the body.

Selection of herbs:

The selection of herbs used in the formulation should be based on their traditional use for quick healing and supported by scientific evidence.

Combination of herbs:

The combination of herbs used in the formulation should be carefully chosen and balanced to enhance their therapeutic effects and promote quick healing.

Authenticity and quality of raw materials:

Ayurvedic medicine is derived from natural, mostly plant-based sources, and the authenticity and quality of these raw materials are crucial to the efficacy and safety of the final product.

Purity of raw materials:

The raw materials used in the formulation of Ayurvedic medicine should be pure and free from contaminants, such as heavy metals, pesticides, and microbial contamination.

Standardization of raw materials:

The raw materials used in the formulation should be standardized to ensure consistency in the quality and potency of the product.

Sustainable:

The drug should be obtained from sustainable sources, not contributing to environmental degradation.

Extraction and processing techniques:

Extracting and processing the raw materials can significantly affect the potency and bioavailability of the active ingredients in the final product.

Quality of the raw materials extraction process:

The extraction process used to obtain the active ingredients from the raw materials should be of high quality to ensure the maximum yield of active compounds.

Standardization of the extract:

The extract obtained from the raw materials should be standardized to ensure consistency in the quality and potency of the product.

Proportions of ingredients as raw ingredients:

The proportion of ingredients used in the polyherbal extraction should be carefully controlled to ensure the final product has the desired therapeutic effect.

Chemical composition of semi-processed raw materials:

The chemical composition of the final product should be analyzed to ensure that it contains the expected active ingredients and is free from harmful contaminants.

Stability of the semi-finished product:

The stability of the product should be tested to ensure that it retains its potency and efficacy over time.

Detailed Traceability:

The source of the raw materials, semi-finished preparations, and all intermediaries and final formulation should be traced back to ensure their quality and authenticity.

Compliance with regulations:

The semi-finish product should comply with local and international regulations regarding the composition and purity of Ayurvedic medicine.

Mechanism of action:

The mechanism of action of the active principles should be well understood to ensure their efficacy and safety.

Formulation:

The formula ingredients and manufacturing process specifications must be standardized and validated.

Composition:

The medicine's composition should be carefully formulated, considering the specific herbs and other ingredients used and their individual properties and interactions.

Potency:

The active principles should be potent enough to produce the desired therapeutic effect in the body.

Purity:

The ingredients used in the formulation should be pure and free from contaminants.

Standardization:

The formulation should be standardized to ensure consistency in the quality and potency of the product.

Dosage:

The medicine dosage should be carefully measured and adjusted based on the individual needs of the patient and the specific condition being treated.

Manufacturing process:

The manufacturing process should be controlled and validated to ensure the product meets quality and safety standards.

Standardization and quality control:

Ayurvedic medicine should be standardized to ensure consistency and quality across different product batches. Quality control measures should also be in place to ensure that the product meets the necessary safety and efficacy standards.

Packaging and labeling:

The product packaging and labeling should be designed to protect the product from contamination and clearly labeled

with accurate information about its ingredients, dosage, and usage instructions.

Bioavailability:

The formulation should ensure that the active ingredients are easily absorbed by the body and have maximum efficacy.

Compatibility:

The drug should be compatible with the body's physiology and not produce adverse reactions.

Non-toxic:

The drug should not contain any toxic substances that can harm the body.

Stability:

The formulation should be stable and have an adequate shelf life to ensure that it retains its potency and efficacy over time.

Safety:

The product should be safe to use and not produce any adverse reactions.

Efficacy:

The product should effectively treat the targeted condition based on scientific evidence and traditional knowledge.

Specificity:

The drug should act specifically on the target organ or tissue without affecting other body parts.

Elimination half-life:

The elimination half-life of the active principles should be optimized to ensure their quick elimination from the body after they have served their therapeutic purpose.

Regulatory compliance:

Ayurvedic medicine must comply with local and international regulatory requirements to ensure its safety, efficacy, and quality.

Affordable:

The drug should be affordable and accessible to people from all walks of life.

This work focuses on the role of medicinal principles that can contribute to the quick and holistic rehabilitation of the body's balance, assuming that other associated factors are constant. Based on this premise, the following is the summary of the **research findings** that add quick healing attributes to the active medicinal principles while rehabilitating the natural body balance and complying with the Ayurvedic principle of non-violence (Ahiṃsā - अहिंसा) or no additional sufferings.

A single object can be hot or cold. For that, a reference point is needed. Zero itself is a value less value. However, it can achieve

by adding any equal positive and negative values, except infinity.

From a Vedic perspective, almost all materials have at least two kinds of information called duality. The duality assumes two contradictory opposites and balances them. The material world is external energy, and it exists in dualism.

The spiritual world deals with internal energy; the same person can have a multi-faceted self-contradicting persona. For example, a person in different social contexts can behave differently.

In one setting, a person may be outgoing and extroverted; in another, they can be more introverted and reserved. Different values, such as wealth, power, or status may drive people. Individuals may prioritize career advancement or material possessions, and personal behavior may reflect those values. Based on individual value, a person shows a different personality.

The Ayurvedic medicinal system balances three fundamental biological energies that govern the body and mind. The tridosha theory suggests that three biological energies in the body are Vata, Pitta, and Kapha. Vata, Pitta, and Kapha arise from the five elements of nature: ether (space), air, fire, water, and earth.

These elements are believed to have originated from the cosmic consciousness and are present in all aspects of creation. The

interaction between two fundamental principles, Purusha (pure consciousness or Aatma) and Prakriti (primordial matter or nature), creates cosmic consciousness.

Individual consciousness and mind (mana and chitta) are believed to arise from cosmic consciousness through differentiation and manifestation. Individual consciousness is believed to be composed of two parts: the mind (mana) and the intellect (buddhi).

The mind is responsible for sensory perception, emotions, and desires, while the intellect is responsible for discrimination, judgment, and decision-making.

The mind and intellect create the individual's sense of identity and personality.

Chitta refers to the subconscious mind, which stores past experiences, memories, and impressions. It is believed that chitta shapes an individual's behavior, emotions, and attitudes, often without conscious awareness.

Willpower is a mental faculty that arises from the balance and integration of the three fundamental biological energies, or doshas, Vata, Pitta, and Kapha, within the mind and body.

Willpower is considered to be a manifestation of Ojas, which is the vital essence of the body. Ojas are responsible for overall health, vitality, and immunity. Ojas are created through the balanced digestion of food, nutrients, and experiences and are considered the purest form of energy-sustaining life.

The three doshas are present in every individual in unique proportions, and they interact with each other to determine a person's constitution or Prakriti.

When the doshas are in balance, a person is said to be healthy, while an imbalance of the doshas is believed to lead to physical, mental, and emotional disorders.

8.2.6 Further review of DNA- Model:

Three doshas are responsible for maintaining balance and harmony in the body and are linked to various bodily functions, including DNA. Ayurvedic practitioners believe that a tridoshic constitution promotes healthy DNA functioning, where all three doshas are balanced.

When any one of the doshas is imbalanced, it can affect DNA in several ways, including:

Increased oxidative stress: Pitta dosha is responsible for metabolic processes in the body, and imbalances in Pitta can lead to increased oxidative stress, damaging DNA.

Altered gene expression: Vata dosha is responsible for movement and communication in the body, and imbalances in Vata can alter gene expression, leading to various diseases.

Impaired immune function: Kapha dosha is responsible for the body's immunity, and imbalances in Kapha can impair immune function, making the body susceptible to infections and diseases that can damage DNA.

Ayurveda recognizes that creating new DNA molecules involves complex information translation and transcription mechanisms influenced by the body and mind's overall state. Therefore, balancing the energy that balances the superimposed information of the body and mind is crucial to ensure healthy DNA functioning.

DNA is constructed through self-organization, which is similar to the operation of self-assembly in complex systems. Amino acids are the building blocks of DNA, and they line up in a specific way to create different levels of information. This information is used to create a clone, a copy of the original structure.

The flow of information in DNA starts at the atomic level, where atoms come together to form amino acids. The amino acids then combine to create genes containing higher-level information.

Finally, DNA sequencing contains hundreds or thousands of genes, which encode even higher-level information.

In other words, the lower-level information is encoded in amino acids, which come together to form higher-level information in genes and even higher-level information in DNA sequencing. This process allows for the creation of clones and the transmission of genetic information from generation to generation.

When changes are made to a DNA molecule, the fundamental idea or information encoded within it remains the same. However, this information can manifest differently in another space and time zone.

This means that even though two DNA molecules may carry the same eternal ideas, they can express them in different locations and time periods.

Replication is the process by which these ideas are incarnated or manifested in different space-time locations, allowing for genetic diversity and the evolution of life.

8.2.7 Review of a Silicon Chips Model:

Silica is a mineral found in many rocks on Earth, which can be crushed into small pieces and heated in a furnace at a very high temperature of 2500°F (1371.11°C). This process causes the silicon and oxygen atoms in the stone to separate and form pure silica. Once the silica is 99.9999999% pure (known as nine nines purity level), it is called electronic-grade silicon. This purity level is essential because silicon is commonly used to create computer chips, including those found in smartphones (Smith, 2021).

Even a tiny grain of sand made of silica can be used as the base for a smartphone. Neuromorphic chips, a new type of chip that can process information in real-time and adapt to new situations, are particularly interesting. These chips mimic the behavior of neurons in the brain, making them ideal for

prosthetic devices, such as a robotic arm controlled by the user's thoughts. Over time, the chip can learn and adapt to the user's changing needs, making everyday tasks easier (Neftci, Binas, Rutishauser, & Douglas, 2013).

The complex multilayer structure of silicon chips allows them to mimic the behavior of neurons in the human brain, which is why they are called Neuromorphic chips. Silicon neuromorphic chips are designed to emulate the behavior of biological neural networks using silicon-based electronic circuits. One of the main challenges in developing these chips is achieving the brain's complex and parallel processing capabilities while keeping power consumption low and computational efficiency high (Neftci et al., 2013).

To overcome this challenge, Silicon neuromorphic chips use various techniques, such as analog circuitry, spike-based communication, and event-driven processing. These techniques are implemented using a multilayer complex silicon structure, which allows for the integration of many neurons and synapses on a single chip (Neftci et al., 2013).

In addition to the multilayer complex silicon structure, developing neuromorphic silicon chips also require advanced algorithms and software tools for designing and simulating the behavior of neural networks on the chip. Therefore, while the silicon structure is essential in developing these chips, it is just one component of a much larger and more complex system (Maass et al., 2002).

CHAPTER 9 RESEARCH FINDINGS

(परिणामः अथवा शोधनिष्कर्षः)

The review's outcome suggests that a multilayered, complex structure with self-organizing abilities is crucial for the harmony of the body and mind under integrated and holistic functioning.

In the first case, Ayurveda recognizes that a balanced constitution of the three doshas is necessary for healthy DNA functioning. Imbalances in the doshas can lead to various diseases. DNA's self-organization and complex multi-layer self-assembly allow information translation and transcription mechanisms under the influence of a balanced body and mind's overall state.

Similarly, in the second case, the complex multilayer structure with much available surface area to come in contact with silicon chips allows them to mimic the behavior of neurons in the human brain and achieve complex and parallel processing capabilities.

Both cases highlight the importance of a self-organizing, multilayered, complex, more surface area and integrated system for optimal functioning.

Therefore, any active principles that support such a complex, self-organizing, multilayered structure will contribute to the quick and holistic rehabilitation of the body's balance required to achieve quick healing objectives.

CHAPTER 10 DISCUSSIONS & RECOMMENDATIONS

(विमर्शाः तथा अनुशंसाः)

This research finding summarizes that it is possible to develop single or polyherbal-based active medicinal principles that can deliver fast healing effects. However, achieving quick delivery with non-violence while rehabilitating uninterrupted tridoshic bioenergy balance using active medicinal principles is very challenging.

The precondition for quick rehabilitation and maintenance of tridoshic bioenergy balance is the quick bridging of mind-body harmony. The literature review shows that quicker restoration of the mind-body connection triggers quicker self-healing processes. The quicker self-healing results in quick healing and quick balancing of tridoshic bioenergy, resulting in recovery with a non-violence cure.

It is also observed through a literature review that active medicinal principles that can facilitate multilayered, self-organizing, larger surface area to interact and integrated matrices can effectively aid the process of adequate mind-body harmony bridging.

This means that if we can design medicinal active principles in a molecular bed that is compatible with multilayered, more extensive contact areas and self-organizing integrated body matrices, it would be able to acquire miraculous properties.

That miraculous property is the ability to trigger the body's self-healing process to restart quickly but harmlessly.

Furthermore, if a medicinal principle with a wider surface area and the ability to trigger quick, harmless self-healing characteristics can be developed with multilayered, self-organizing, integrated matrices while complementing similar mind-body constructs, that will be not only a harmless quick healing medicinal active principle but also a medicinal principle with the ability to rehabilitate tridoshic bioenergy balance for a more extended period while complying with the principle of non-violence and complete cure.

Based on the research finding, future researchers can focus on formulating herbal medicines with a larger surface of interactions that are based on the principles of multilayered, self-organizing, and integrated matrices to achieve quick and harmless self-healing characteristics.

To successfully formulate such herbal medicines, it is crucial to consider the mind-body harmony bridging and compatibility of the active medicinal principles with similar constructs in the body.

Further researchers should also focus on developing methods for quick delivery with non-violence while rehabilitating uninterrupted tridoshic bioenergy balance using active medicinal principles.

Future researchers can conduct experimental studies to test the compatibility of different active principles with multilayered, self-organizing, and integrated matrices to achieve successful formulation and lab acquisition of such disruptive herbal medicines.

They can also explore novel delivery systems that enable quick and non-violent delivery of the active principles to the affected area. Additionally, they can study the effects of different herbal combinations on mind-body harmony bridging and tridoshic bioenergy balance rehabilitation. They can use the results to develop effective herbal medicines that achieve quick healing with non-violence and complete cure.

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End Notes

"Healing Metaphysics: Quick Herbal Formulations" has offered you a transformative exploration of metaphysics in the realm of healing, authored by Mr. Ghimire. With extensive experience as a certified food scientist, flavorist, and pharmaceutical analyst, Ghimire delves into the profound connection between consciousness and the physical body. Drawing from over 22 years in the field, he reveals a metaphysical philosophy that illuminates the manifestation of consciousness in physical form, emphasizing the crucial role of willpower in the healing process.

This research-based book not only explores the profound principles of metaphysics but also provides practical insights into their application in polyherbal ayurvedic formulations. Ghimire's extensive expertise and unique perspectives offer invaluable guidance to professionals in the healing and herbal drug discovery fields. Moreover, this work presents a revelation for natural health practitioners, offering a fresh perspective on the convergence of Veda, science, and holistic wellness.

With affiliations to esteemed organizations such as the American Society of Quality (ASQ), the Institute of Food

Technologists (IFT), and the British Society of Flavourists (BSF), Ghimire establishes himself as a leading authority in the field. This book not only showcases his expertise but also demonstrates his commitment to advancing the understanding of healing and promoting natural health practices.

We hope that your journey through "Healing Metaphysics: Quick Herbal Formulations" has provided you with a newfound perspective on the intricate mind-body connection, unlocking the potential for accelerated healing and herbal innovation.

WE WISH YOU ALL THE BEST IN YOUR ENDEAVORS.

Author Ghimire, a renowned and knowledgeable Canadian food and drug scientist, delves into the profound connection between consciousness and physical well-being, emphasizing the crucial role of willpower in healing. In this research-based book, he unveils metaphysical principles, explicitly focusing on polyherbal ayurvedic formulations. From metaphysical insights, Ghimire bridges Vedic philosophy and modern science, guiding healing professionals and herbal drug discovery enthusiasts. Experience transformative healing and herbal innovation with "Healing Metaphysics : Transformative Herbal Formulations" revolutionizing natural health practices.

Author Ghimire, a renowned and knowledgeable Canadian food and drug scientist, delves into the profound connection between consciousness and physical well-being, emphasizing the crucial role of willpower in healing. In this research-based book, he unveils metaphysical principles, explicitly focusing on polyherbal ayurvedic formulations. From metaphysical insights, Ghimire bridges Vedic philosophy and modern science, guiding healing professionals and herbal drug discovery enthusiasts. Experience transformative healing and herbal innovation with "Healing Metaphysics: Transformative Herbal Formulations," revolutionizing natural health practices.

A Quick Healing

Narayan Ghimire

A Quick Healing

Metaphysics

Narayan Ghimire