



BOMRIM

Bulletin on Microvita Research and Integrated Medicine

Official Bulletin of Society for Microvita Research and Integrated Medicine (SMRIM)

(Registered under Societies Registration Act 28, 1958 (Raj.) No. 73/UDR/08-09)



Vol. 4

No. 2 & 3

www.microvitamedresearch.com

December 2012

International Seminar on Microvita Research 24th March, 2012, Udaipur, INDIA Glimpses



Lymph- the essence of life

-Dr. S. K. Verma
-Dr. Vartika Jain

Abstract

Lymph is the cream of all we eat and drink. In fact, it is the cream of all creams. Biologically, lymph contains most ingredients of the blood except red pigment. It has same composition as of the interstitial fluid and works for the defense of the body. However, as per Yoga psychology, lymph is a hormone and other glands, use this to manufacture their respective hormones. It is also the food for the brain cells and the cause of psychic change. Most importantly, its formation is affected by physical and psychic environment to which the role of microvita may be further added. The present article deals with the prevailing scientific knowledge, the concept of yoga psychology, the new science of bio-psychology and the microvita, regarding importance of lymph and the possible future scientific research.

Introduction

The streams of spirituality and medical sciences have been flowing for thousands of years without any interrelationship between two. It is only last two or three decades that the synthesis between these two sciences has emerged. It was in fact, the pioneer concepts of microvita and biopsychology coined by Shrii P.R.Sarkar, that the people among all strata have started thinking in terms of synthesizing spiritual science and physical science. In fact, concept of microvita is the link between these two. Whatever he said in his discourses, are entirely logical and rational but still need empirical verifications and acceptance by scientific community. In fact, many of his claims are a way ahead of science in its present state. Hopefully, the intellectual mass will analyze, verify and accept the concepts and utilize them for human welfare. The concept of lymph is one of the examples where the streams of sciences (spiritual and medical) diverge. The present article is an attempt to search interrelation among the physical, psychological, para-psychological and spiritual thoughts about lymph and the possible connection of lymph with microvita.

Lymphatic system

The lymphatic system represents an accessory route through which fluid can flow from the interstitial spaces into the blood. It is important to note that the lymphatics can carry proteins and large particulate matter away from the tissue spaces, neither of which can be removed by absorption directly into the blood capillaries. The return of proteins to the blood from the interstitial spaces is an essential function without which life cannot sustain.

Scientific concept

Lymph contains most ingredients of the blood except red pigment. It is extracted from the blood, processed and modified by the regional lymph glands before returning to the blood. It is through lymphatics that the lymph is collected from all regions of the body and is poured into the blood. The lymph glands are present all over the body and grouped in certain areas. Superficially they are around the joints e.g. axilla, groin, elbow, knee. The other important groups are in the neck, chest and abdomen. Besides these, lymphatic tissue are present in various other organs e.g. the liver, spleen, gut, tonsils etc. All tissues have lymphatic channels except the brain, spinal cord, bones, deeper parts of the nerve and some parts of the skin and muscles. These tissues do have minute channels called perilymphatics or paralympatics through which interstitial fluid can flow. This

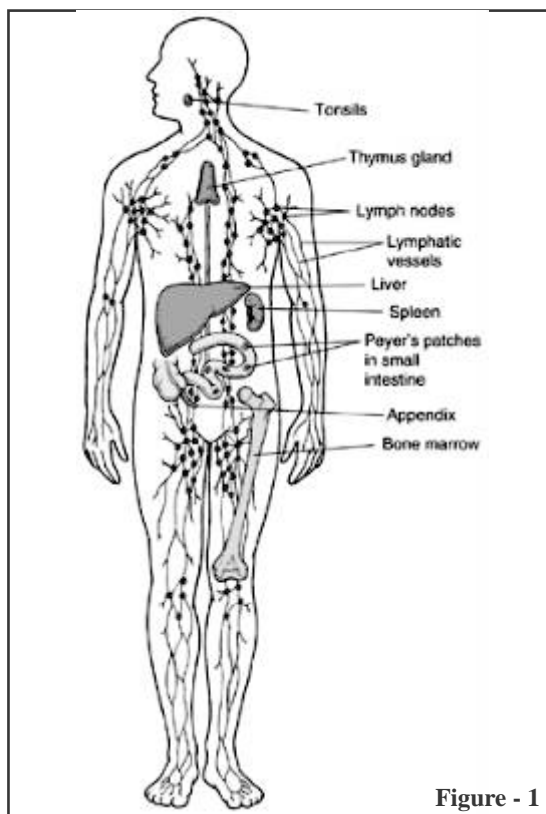


Figure - 1

fluid eventually empties either into the lymphatic vessels or in the case of the brain, in the cerebro-spinal fluid and then directly into the blood. This whole system of lymph with lymph glands, lymphatics and scattered lymphoid tissues are called the lymphoid system.

Essentially all the lymph vessels from the lower part of the body eventually empty into the thoracic duct, which empties at the junction of the left internal jugular vein and left subclavical vein. Lymph from the left side of the head, the left arm and the parts of the chest region also enter the thoracic duct. Lymph from the right side

of the neck and head, the right arm and parts of the right thorax enters the right lymph duct (much smaller than the thoracic duct) which empties at the junction of the right subclavian vein and right internal jugular vein.

The fluid that returns to the circulation by way of the lymphatics is extremely important because substances of high molecular weight, such as proteins, cannot be absorbed from the tissue in any other way, although they can enter the lymphatic capillaries, almost unimpeded. The reason for this is a special structure of the lymphatic capillaries.

Formation of lymph

Lymph is derived from interstitial fluid that flows into the lymphatics. Therefore, lymph as it first enters the terminal lymphatics has almost the same composition as of the interstitial fluid.

Twenty liters of fluid is filtered per day in the intercellular spaces from the small blood capillaries. Seventeen liters with all its electrolytes is soon reabsorbed back into the venous blood. The remaining 3 liters along with filtered proteins remain in intercellular spaces. The protein molecules, because of their large size are not reabsorbed through the small pores of venous capillaries. The remaining three liters of fluid in the tissue with its protein content must be continuously removed. If the proteins filtered in the tissues are not removed readily by lymphatics, the tissues will develop edema. This will disturb the dynamics of fluid exchange, which is crucial for the life.

The protein concentration in the interstitial fluid of most tissues averages about 2g/dl, and the protein concentration of lymph flowing from these tissues is near this value. In the liver, lymph formed has a protein concentration as high as 6g/dl and lymph formed in the intestine has a protein concentration as high as 3-4g/dl. Because about $\frac{2}{3}$ rd of all lymph is derived from the liver and intestines, the thoracic duct lymph, which is a mixture of lymph from all area of the body, usually has a protein concentration of 3-5g/dl.

The lymphatic system is also one of the major route for absorption of nutrients from the gastrointestinal tract especially for absorption of virtually all fats in food. Indeed, after a fatty meal, thoracic duct lymph sometimes contains as much as 1-2% fat.

Finally, even large particles; such as bacteria can push their way between the endothelial cells of the lymphatic capillaries and in this way enter the lymph. As the lymph passes through the lymph nodes, these particles are almost entirely removed and destroyed.

It is important to note that proteins are the most essential ingredients of human chemistry and the body conserves them at all costs. In this direction, lymph plays an important role by conserving the protein and thereby maintaining tissue structure. Proteins are present in every cell of the body and provide the skeleton of the cells, thereby maintain the shape and structure of the cells.

Proteins also help in carrying the minerals like iron, calcium, magnesium etc. in the body. Furthermore, proteins are made of amino acid molecules which are utilized by some endocrine glands to manufacture their hormones e.g. thyroid, parathyroid and pituitary glands.

Lymph also transports fat, particularly from the regions of the gastrointestinal tract where it is absorbed from the diet. Like proteins, fat is also an important ingredient of the human body and execute

important physiologic functions. The cell wall is made up of fat, through which exchanges of various nutrients and minerals occur. Some cells have special fat components for specialized functions. Brain cells for example, are rich in fat, which has special conducting properties for the propagation of nerve impulses. Some endocrine glands such as adrenal and sex glands utilize fat for synthesis of their hormones which are called steroid hormones.

In a nutshell, lymphatic system plays a very important role in the transportation of the two most important biological nutrients, the protein and fat, in the human body. These two ingredients are crucial for the maintenance of structural integrity, hormonal synthesis and sustaining human health.

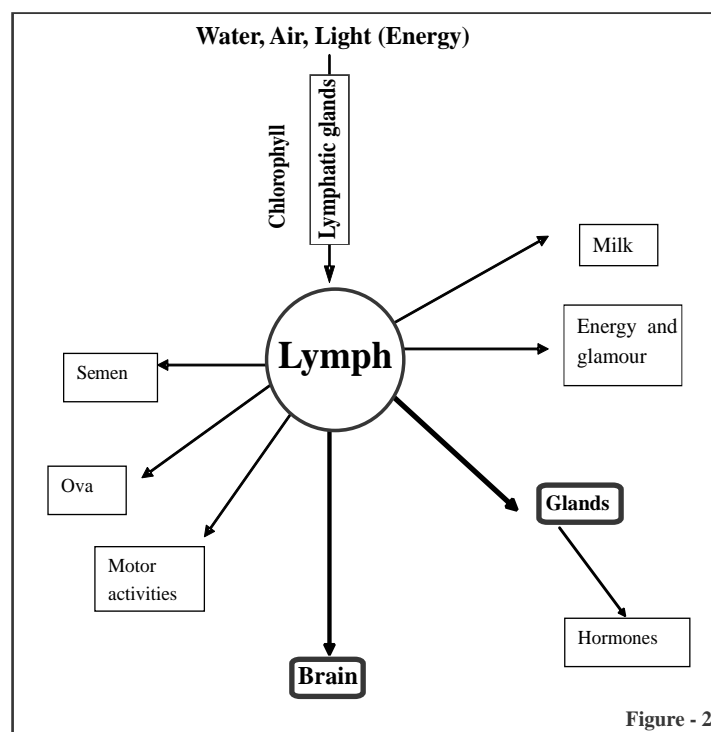


Figure - 2

Circulation of lymph

Lymph flows at the rate of 120 ml/hr, much slower than the blood. This can be increased about 5 to 15 fold by exercise and decreased by the rest. Valves exist in all the lymphatic channels. The lymphatic pump is enhanced by muscle contraction, movements of the parts of the body, compression and by arterial pulsation. Respiratory movements of the chest and lungs also enhance this pumping effect.

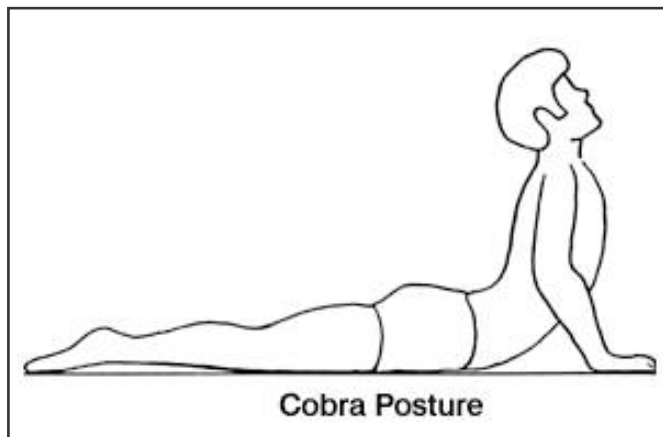
Some organs are located in the remote nooks and corners of the body from which lymph drainage is not easy in the ordinary conditions and therefore the flow of lymph is minimal from these organs. Kidneys, adrenal glands and pancreas are adhered to the back wall of the abdomen where normal day to day activities do not produce a significant movement or compression of these organs. Furthermore, lymph flow from these organs is further reduced in people leading sedentary life styles. To reach every nook and corner of the body, one needs special postures which may not be vigorous, nevertheless; very effective in enhancing the lymph flow from these remotely placed organs. These special postures (a`sana`s or yogic postures) when coupled with coordinated breathing (Pr`ana`ya`m) squeeze the main lymphatic channels in the chest, enhance the lymph flow many fold.

When lymph flow is decreased in the face of normal lymph formation, the tissue loses its lusture and becomes swollen or oedomatous. This is associated with the loss of energy. On the other hand, when lymph formation is decreased as occurs in dehydration and debilitating conditions, the energy is sapped and glamour is lost.

Lymphoid – the defense system

A more important function of the lymphoid system is removal of various foreign materials such as dust particles inhaled in lungs, viruses and bacteria which have invaded the tissues. These are removed before they reach the blood. Lymphatics traverse through a number of lymph glands where the lymph is exposed to many kinds of defensive cells, called macrophages that engulf the foreign intruders and digest them out of existence. These scavenger cells are well programmed to recognize what is foreign to the body and which is its own.

In the lymph glands, many cells and proteins are added to the lymph, which plays a very important role in the immune reactions of the body and hence called immuno-lymphocytes and immuno-proteins respectively. These two immune materials are produced by the different regions of the lymph nodes. The region of the lymph node, which produces lymphocytes (T-lymphocytes) is dependent upon the thymus gland.



The region of the lymph glands, which have cells that produces immuno-proteins or immuno-globulins are dependent on the signals from the bone marrow (B-lymphocytes) and produce various classes of immunoglobulins (IgG IgM, IgA, IgE). These proteins immobilize and inactivate the intruders while the T-lymphocytes engulf them. Thus after passing through the lymph nodes, the lymph gains (immune cells and proteins) and loses (harmful intruders) something.

Thymus- heart of lymphoid system

It is regarded as the heart of the lymphoid system because whatever happens in the lymph glands and in the lymphoid tissues is pre-planned, pre-programmed and predetermined in the thymus gland. In the fetus, the thymus gland is very active in sorting out its affairs. It is so choosy in the early stage that 90% of its own cells that multiply are rejected and killed. Only the very 'fit' and 'competent' one are allowed leaving the gland to migrate to the lymph glands. These migrating cells are 'stamped' and primed to recognize between self and non-self. This message stays with them as long as they live and when they multiply in the lymph glands, their off- springs carry this message from generation to generation.

Changes in the thymus gland

At birth, the thymus has almost finished all its functions. It weighs about 10-15 g and at puberty, its weight doubles its birth weight to about 30-40 g. The growth of the gland after 5 to 6 years of age is due to the increase in it's supporting tissues rather than in the cell mass. In fact, the lymphocytes in the gland, progressively decrease after this age.

The androgen hormones secreted by the adrenals and sex glands have an antagonistic relationship between these glands and the thymus. Experimentally, it has been shown that removal of sex glands and adrenal glands delays the normal involution of the thymus glands whereas injection of cortisone or androgen sex hormones, cause shrinking or atrophy of the thymus.

By mid-adult life, the thymus shrinks to about 10 g. The remaining cells in the thymus continue to secrete a hormone called thymopoetin or thymosin whose main function is to keep reminding the migrated lymphocytes in the lymph glands what they have been programmed for. It is because of this hormone that the thymus is classed as an endocrine gland despite being the centre of the lymphoid system. This dual role of the thymus is perhaps suggestive of the close relationship between the lymph and the hormones.

Functions of lymphoid system

1. Transportation of lymph from all parts of the body to the blood.
2. Defense of the body.
3. Recognition of self and non-self

Yoga psychological concept of lymph

In Yoga psychology, lymph is considered as an important constituent of the body because many glands and sub-glands in the human body are dependent on lymph. The initial stuff in the manufacture of lymph is the energy and vitality derived from the different quinelemental factors of the Universe such as, light, water etc. It is the cream of all we eat and drink. It is cream of all creams.

Lymph is a hormone manufactured by lymphatic glands. It is the initial hormone and other glands use lymph to manufacture their respective hormones. The lymphatic glands supply the raw material to glands for hormone production. Lymph also maintains the luster of the skin.

In the male and female bodies, the lymphatic glands become very active at the time of puberty. A special type of nerve sensation occurs in the genitals which creates vigour in a person and gives the feeling in the mind "I shall have to do something". At that age, one decides or tries to decide one's future.

The testes glands convert lymph into semen. If the testes function properly and if there is no hindrance from the lymphatic glands, intelligence will develop. Without the testes, solar plexus (Ana`hat cakra) will be u

ndeveloped and intelligence will decrease. Lymph is also the food for the brain cells, so a shortage in lymph supply to the brain cells affects the intellectual growth of a person. Human qualities grow along with the growth of lymph. The lymph is converted into semen by the testes. Man should have proper control over the conversion of lymph into semen. This is the principle part of Brahmacharya Sa`dhana`.

When the lymphatic glands and the testes start functioning at the same time, the testes work in a proper

manner. The raw material for the testes is the hormone generated by the lymphatic glands. In the female body, ova are created in the ovaries. Some of the lymph helps in maintaining proper energy and glamour in the body, and a certain portion, in the case of females, is converted into milk.

In the case of spiritual aspirants, there is excessive hormone secretion in the solar plexus. Love for children is converted into love for the Supreme. The solar plexus cannot function properly if the supply of the lymph is not perennial or regular. Lymph is thus the cause of psychic change, the transformation of love for the unit into love for the Supreme.

For the manufacture of lymph, chlorophyll is a must. Chlorophyll accelerates the speed of the production of lymph, but it doesn't act as the initial stuff. Those who are vegetarians produce more lymph because they get chlorophyll from green vegetables. Those who take animal proteins suffer from want of lymph.

Food, lymph and intellect (Brain)

As per yoga psychology, there is intimate relation with the food consumed, the lymph formed and the development of intellectual faculties. In the case of human being, those who are vegetarians and taking sentient food, will manufacture more lymph and that lymph will nourish the glands and plexii and will be utilized as a food for the brain. Moreover, those who are practicing Brahmacharya Sa`dhana` - more lymph will be directed to the intellectual advancement because less will be converted into semen and finally lost. On the other hand, those who consume static food, more of animal proteins- the lymph formation will be less leading to relative intellectual backwardness. Furthermore, lymph will be converted to semen leading to less availability to nourish brain.

In case of animals, those who are granivorous like cows and monkeys will produce more lymph



because of more chlorophyll in their diet and will be more intellectually advanced and it is possible for them to do sa'dhana` in future. On the other hand, those who are carnivorous like cats, tigers, and dogs, though clever and cunning, but are less intellectual than granivorous. They will manufacture less lymph because of lack of chlorophyll in the diet and their brains will be less intellectually developed, and therefore, they cannot do sa'dhana`.

It is well said that what we think depend on what we eat and the link between eating and thinking, thereby is probably the lymph which nourishes the brain. This is purely the concept of yoga psychology and the modern science has to do research in this direction.

Lymph, milk production and motor activities

Lymph is also required for the production of milk. Till women give birth to their children, they can move fast but after their children are born, they can't move so fast. If cows give excessive milk, they can't move fast. Deer can move fast but they give little milk. Tiger and cats are carnivorous, that's why they give little milk. Cows and buffaloes give much milk because they take chlorophyll from green grass and green vegetation.

Catalysts for lymph production

There are certain factors which act as positive and negative catalysts in the manufacture of lymph. A good environment, both physical and psychic, acts as positive catalyst. Positive psychic and positive physical environments are positive catalytic agents and negative psychic and negative physical environments are negative catalytic agents. Even if food is sentient, but environment is negative, such condition is detrimental to mental progress. Cinema halls, prostitute houses, busy commercial places are negative physical environments. Bad discussions, bad books and bad thoughts prevailing among the local populations are negative psychic environments.

Positive high grade discussions create positive psychic environment. Where spiritual aspirants gather, where spiritual discussions are held (Dharma Cakra, Dharma Maha Cakra) such environments serve as positive catalyst. That is why Shiva recommended satsanga or good company for the attainment of salvation. Satsanga provides positive psychic environment. It will help in the manufacture of lymph. The creation of hormones in the other glands depends upon these positive and negative catalytic agents.

In case of spiritual aspirants or Sa'dhakas, a major portion of the lymph remains in the body. That is why their intellectual standard is higher than the common people. The surplus lymph goes to the brain



and serves as food for the nerve cells.

Lymph – for physical, mental and psycho-spiritual development

Lymph is produced from the energy and vitality acquired from the different quinequelemental factors of the Universe. Chlorophyll accelerates the speed of its production. Lymphatic glands supply lymph to the glands and surplus lymph goes to the brain (Fig. 2). Lymph is therefore responsible for energy and glamour, motor activity and production of milk, ova and semen (Physical process). It also goes to glands and plexii producing appropriate hormonal secretions responsible for psychic and psycho-spiritual development. Finally it nourishes brain, causing intellectual development. Hence, lymph is cause of all round development. Sarkar has rightly said that "Human qualities grow along with the growth of lymph".

The link between science and Yoga psychology

At first instance, it is difficult to link the two divergent concepts of lymph. Medical science accepts it as a system responsible for transportation of proteins and fats from interstitial fluid back to blood along with its immunological functions. Spiritual science, on the other hand, considers lymph as the important element having hormonal function and responsible for intellectual advancement. How lymph can be related with hormone? Yoga psychology proposes that the lymph provides raw material for synthesis of hormones. For example, the sex glands in males and females, when activated, utilize the lymph to form sperms and ova and their respective hormones. Biological science gives no comments on this concept.

An interesting coincidence is the observation of high concentration of Acquired Immuno Deficiency Syndrome (AIDS) virus in the lymph glands and the seminal fluid even though the virus enters the body

through the blood stream. Both these organs, lymph glands and testes, probably have tissues, which the AIDS virus has affinity for. It is also possible that the lymph is concentrated in the testes making it more vulnerable to the viruses. Whatever the mechanism may be, there is apparently a close relationship between lymph and the testes.

The contention of Shrii Sarkar that lymph is a hormone seems extremely logical. The parts of the lymphoid system have a structure of glands and their contents, i.e.

the lymph, is poured directly into the blood which is the requirement for being an endocrine gland, even though transport channels are involved in this function. Lymph contains the precursor of all hormones in the form of

protein and fat as well as its own hormones in the form of immunoglobulin and thymosin. In fact, the lymph is as essential for life as are hormones with the difference that hormones are secreted in minute quantity whereas lymph is produced in copious amounts.

One of the most remarkable assertions of Shrii Sarkar is the influence of physical and psychic environments on lymph formation. Physical environments such as cinema, hotels, halls, commercial counters, gatherings, and crowded shopping centers have negative effect on lymph formation. Similarly the negative psychic environment such as those created in pornographic materials, sexual fantasies and excessive sexual indulgences act as a negative catalyst for lymph formation. On the other hand, spiritual company and spiritual discussions create a positive environment facilitating the lymph formation.

It can be concluded that knowledge of the lymph and lymphoid system in modern science is relatively recent and primitive. It is only since the advent of cancer and AIDS that the lymphoid system has attracted attention of medical researchers. Even now the focus of attention is the lymphocytes and the immune response. The relationship between hormone and lymph is not recognized as yet by medical science and it is in this area that Shrii. P.R. Sarkar has given numerous clues for future research.

Microvita and lymph production

Shrii P. R. Sarkar's concept of microvita further adds to the explanation of some un-explained. A positive physical and psychic environment induced by positive microvita, therefore enhances more lymph formation (the food for the brain), which brings higher psycho-spiritual status. That higher mental status proves to be a boon for the progress of human faculties and an asset to move towards the closeness of Supreme desideratum. Generating positive microvita



environment, (physical and psychic) by increasing their concentration with the help of satsanga, swadhyaya, spiritual practice, collective meditation and kiirtana, in fact, affect the entire human endocrinology because

microvita act as positive catalytic agents for the lymph production which is the mother of all hormones.

Chlorophyll; though, accelerate the speed of lymph formation, yet it does not act as an initial stuff. The initial stuff is the energy and vitality derived from the different quinelemental factors such as light, water etc. to which we would like to add positive microvita. These positive microvita may act as initial stuff or undoubtedly, as said earlier, they act as positive catalytic agent for lymph formation. It is an assumption, a theoretical proposition which needs further discussion and verification.

References

1. Sarkar, P.R. 1998. Yoga psychology. AMPS publications, Kolkata.
2. Sarkar, P.R. 1991. Microvita in a nutshell. 3rd ed. AMPS publications, Kolkata.
3. Singh, J. 1998. Bio-psychology- a new science of body, mind and soul. First ed. Gurukul publications, Anand Nagar, West Bengal.
4. Gyton, A. C. and Hall, J.E. 2012. Text book of Medical Physiology. 12th ed. Elsevier, Delhi.

Higgs bosons and Microvita

How did the universe unfold? The actual event cannot be observed, we have to satisfy ourselves with good and rational guesswork, supported by relevant observations. Until now the Big Bang theory, with its undeniable loopholes, serves as the best medium to help us understand the workings of the Universe. Known problems of the theory are, *the horizon problem* -why is the universe so homogeneous?-, *the flatness problem* -why is the curvature of spacetime so low and even now ≥ 0.01 ?- and *the monopole problem*- why can't we find magnetic monopoles anywhere? Moreover the answer of the Big Bang did not tell us what banged, why it banged, how it banged and also whether it really banged remains very doubtful, because there was no space, no air and no one to hear¹. Yet, the Big Bang theory and the consequent standard Model of Cosmology accepts it as a workable basis for new observations and predictions.

In the first fractions of time, the densities of matter and energy were tremendously high. Energy tends to catalyze the expansion of space, but is completely dominated by the attractive potential of gravity in the early stages of the universe. Without a force, opposite to gravity, balance in the universe is impossible and space cannot remain static, cannot always be of the same dimension.

Einstein saw the necessity for a solution and came up with the cosmological constant λ . It was unclear what this constant was made of and how it was able to achieve the negative pressure. This much was clear, it could not be a property of already known matter and it would fill all space in a uniform and homogeneous way. He left the idea after observations indicated that the universe was not stationary, but expanded. Einstein also showed that mass, energy and positive pressure all contribute to positive gravity, while negative pressure contributes negatively, in a repelling way, to gravity. A vacuum gives rise to negative gravity. Because pressure and energy contribute positive gravity, negative energy must have a different origin.

Thinking about this Alan Guth replaced the cosmological constant with a Higgs-field. He discovered that, if a Higgs field has gotten caught on a plateau, it not only suffuses space and energy, but also contributes to negative pressure. The ratio between energy and negative pressure is exactly the same as in the cosmological constant. Still, it is not a constant, because quantum processes will continuously cause random changes in the Higgs-field. Einstein carefully considered a balance between the positive energy of radiation and energy in the universe and negative pressure. Guth estimated that the energy and negative pressure of the Higgs-fields were 10^{100} bigger than the cosmological constant. He combined the inability of a Higgs-field to remain for long ($< 10^{-35}$ seconds) in a condition of high energy and negative pressure and concluded the Big Bang. To distinguish this Higgs-field from the electro-weak Higgs-field that gives mass to particles, it is called the inflation-field. Cosmological inflation was initiated 10^{-36} seconds after the Big bang (ATB) and ended between 10^{-33} and 10^{-32} s ATB.

After the Big Bang, until 10^{-35} s ATB at a temperature of 10^{28} K all forces were united into one unified force. Also all photons, gluons, W- and Z- particles could be exchanged. Before 10^{-11} ATB the Higgs-field fluctuated very strongly. No Higgs ocean could be formed because the temperature was too high (10^{15} K). After cooling down the field condenses in the vacuum to a nonzero level. From that moment on the Higgs-field and its particles, the Higgs-bosons permeate all space. In general, bosons are particles that transmit the forces of nature. Another example of bosons are photons; their spin is zero² The Higgs-field is invisible, surrounds everything, penetrates everything and gives mass to almost everything that moves. Space can never be empty; Higgs-bosons are always there. For religious persons, it is tempting to make a comparison with God and it is not difficult to understand why these bosons sometimes are called the '**God particles**'. But here 'God' is a vague term; it is not wise and even meaningless to connect Him to only one thing specifically. Higgs bosons have a mean life time of 10^{-22} s, so they are virtual particles. What we experience as continuous form and weight rests on super extremely moments.

Before I wrote "... and gives mass to almost everything that moves." Yes, it does give mass to quarks and electrons, but photons are not influenced by it. Not only that, not all quarks are influenced equally; some become heavy and some extremely heavy, while electrons hardly gain mass by the touch of it. Gluons, the force particles that transmit the strong nuclear force, have a theoretical mass of 0 MeV/C² and an experimental limit of 0.0002 MeV/C². Why these differences occur is a mystery. Other interesting questions are: Also Higgs-bosons have mass; what gives rise to their own mass of 126 GeV/C²? Mass certainly does arise, but how? Many questions are waiting for interesting new views and new observations.



Henk de Weijer

Neo-humanist
Education Research
Institute, Sweden
E-mail: weije265@planet.nl

It is clear that all protons, neutrons and electrons, of which we are composed, own their mass due to their interaction with Higgs bosons. A proton is composed of 2 u (up quarks) and 1 d (down quarks), so the total mass of a proton must be the sum of the rest masses of 2u + 1d? Not so. The sum of the rest masses of the 3 quarks is 11 MeV/C², while the constituent, or overall, quark mass of a proton is 938MeV/C², 80 times more. By far the biggest part of the mass of a proton comes from its direct environment, the massless and charge less gluons. These gluons do possess energy, Quantum Chromodynamics Binding Energy (QCDBE). It is this QCDBE that contributes so greatly to the overall mass of a proton.

Shri P.R. Sarkar³ is of the opinion that “*The mass of matter has got nothing to do with energy*” and that “*No, matter is not bottled-up energy.*” These statements seem to be in clear opposition to the above, rather recent observations. But in these two statements a distinction is made between mass and matter. “The mass of matter...” and “matter is not...” and the conclusion could easily be drawn that mass *is* related to energy and can even be bottled up energy. Some analysis of the word 'matter' could be a help to get out of this split. One definition⁴ says: 'Matter is any substance that has mass and occupies space.' Quarks have never demonstrated any measurable size⁵. Their size and the size of a proton or neutron is the result of their orbitals around each other and their exchange of energy. The same applies to electrons; their presence is described by a certain orbital. All subatomic particles are clouds of possibilities, wave packets and, under normal circumstances, cannot be observed by the senses. But when human beings are in a special state sub-atomic particles/wavicles can be observed. When we define 'matter' as 'a structure with mass that potentially can be observed' the definition becomes a bit clearer. Atoms, if in sufficient quantities, can be observed and moons, if at sufficient distances, can be observed.

'Matter is not bottled-up energy' now becomes a statement, indicating that atoms, all chemical and biological forms are more than their mass can explain. It is a hint that the mass of matter cannot be known and understood only by explanations of physics according to the properties of the different kinds of energies. It is a hint that life is both mechanistic and organismic. It provides an opening for new ideas regarding subtle, knowledgeable and conscious elements, that P.R. Sarkar calls 'microvita'.

Photons do not gain mass in their contacts with the Higgs-fields and consequently are able to travel and continue to travel at the speed of light. Microvita travel and move through inferences, like touch, sound and light. If they would gain mass they would gain inertia and could not travel with the reflected photons. Like photons and gluons, microvita cannot be influenced by Higgs-fields and gain mass. Also in the earliest stages of the Universe, microvita could not unite with the Higgs field because of the extreme temperature (10¹⁵ K), at which they can only expand and hibernate³. For the same reason they also could not unite with or take part in the existence of subatomic particles. Their field of activity is atoms, molecules and cells.

References:

1. Greene, B., 2008. De ontrafeling van de kosmos. Uitgeverij het Spectrum, Utrecht.
2. Schilling, G., 2012. Higgs. Fontaine uitgevers, Hilversum.
3. Sarkar, P.R., 1991. Microvitum in a nutshell. AMPS, Calcutta.
4. <http://www.physics.about.com>
5. <http://www.newton.dep.anl.gov/askasci/phy00/phy00494.htm>



Congratulations

Mr. Kailash Choudhary, Assistant Professor at Lokmanya Tilak Teachers Training College (C.T.E.) Dabok was awarded Ph.D. on the subject "*A Study of Relationship between Personality Traits and Adjustment with Organizational Commitment of Teacher's*".

Mr. Choudhary has done this research work under the supervision of Dr. Rajendra Prasad Sanadhya Ex. Dean and Principal of Janardan Rai Nagar Rajasthan Vidhyapeeth University, Udaipur.

nr dFkkvkaea'kkYefy ¼l ey½

Mkwofrðk tš

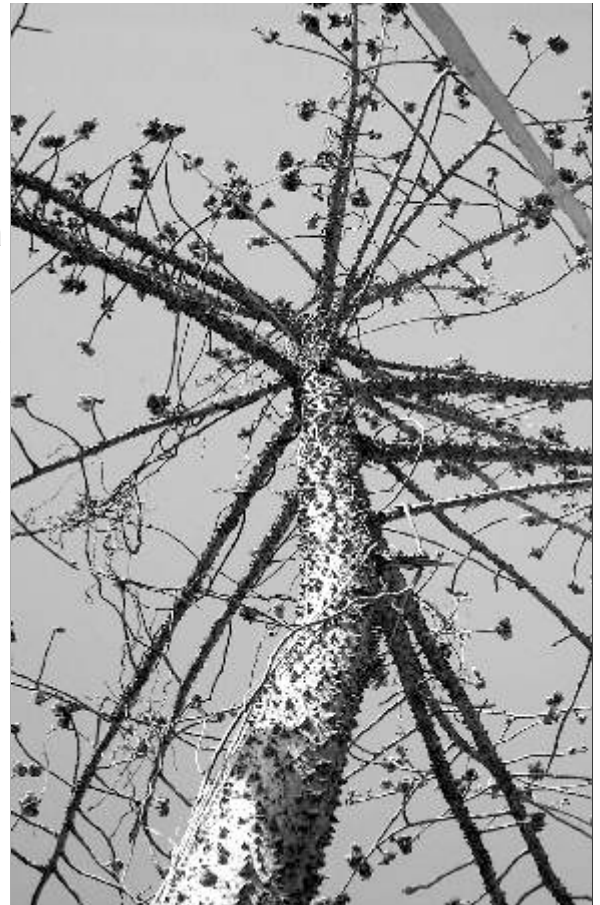
ouLi fr 'kkL= foHkkx] jkt dh; egkfo | ky;] Mpxj i j ¼j kt-½

yksd dFkk, ai ; kbj .k l j {kk dk l anš knusgrq, d l 'kDr ek/; e gqvk d jr h gñ bueal sdbznar dFkk, adn fo'kš'k i zdkj dh ouLi fr; kai j vk/kkfjr gksh gš t l l smu i kšksadh ykdfi z; rk dk vupeku yxk; k tk l drk gñ fo'kky 'kkYefy o{k kHk muea l s, d gš t l l sdbz jkp d nr dFkk, at ðh gñ gñ ^'kkYefy * oržeku eai pŷr ^l ey* o{k dk gh l ðñr uke gñ Hkkj r dsdbz i kphu xFkkj egkdk0; kavšj i j k. kkaeol d kmYy [k feyrk gñ muea soržeku l e; l s000 o"ki ðj fpr ^egkHkkj r* eacgr gh jkp d dFkkvkaeol dko.kz fd; k x; k gñ dgk tkrk gš d vt ð d j Fk dk fuekz k bl ho{k dh yd ðh ðh gñ Fkka bl h xFk eaf. kñ nks: fpdj dFkkvkaeol dko.kz; gkfd; k tk j gk gñ

I nkcgj 'kkYefy dh i fùk; kaok fxj uk

fgeky; i oñ dh rygVh ea, d fo'kky l nkcgj l ey o{k Fkk] ft l dh?kuh Nk; k dh i z ka k gj j kgxhj d jr k Fkka, d fnu i Foh i j fopj .k d jr sgq noñ kžukj n ml o{k dsl keus: dsvkš ml dh i z ka k d jr sgq dgk fd] ^gs'kDr'kkyh l ey] rēgkj h i fùk; k d Hkh ugha fxj rh gñ bl dk D; k dkj .k gñ D; k i ouno rēgkj s'kfu "B fe= gñ ft l dkj .k rē mudsvkoš l scpsj g tkrsgkš \ ni zeapj l ey o{k usmùkj fn; k fd eaf d l h i ouno dh l j {kk vkš fe=rk ugha pfg, A okLro eai ou no usdbzckj eaf sup l ku i gpkusdh dks' k'k dh gñ i j r qv l Qy j gš; kñ d eñ h'kDr mudh'kDr l scgr vf/kd gñ

bl mùkj dks l p d j ukj n cgr i l l u gq vkš viuh vknru d kj 'kh?kark l složyk d i g p d j i ouno l sfeysvkš dk Qh ukVdh; < x l sdgk] ^gsi ou nork] bl nzn] eR; qno; e] /ku no d p j] l e q n o: .k vkfn l Hkh Lohdkj d jr sgš d vki mu l Hkh l s'kDr'kkyh gñ i j r qv i Foh yk d o k l h l ey o{k vki dks 'kDr'kkyh Lohdkj ugha d jr k'A; g l p r s g h o k; qno Ø ð g k s m B s v k š 'kh?kark l s g j & H k j s v f H k e k u h l ey o{k dsi kl i g p s v k š Å p h v k o k t e a d g k] ^l ey] d b z l f n; k a l s e f u s r ē g a v i u s i z d k i l s b l f y, c p k j [k k g s D; kñ d c a k ¼ f o' o t u d ½ u s b l f o' o f u e k z k d s m i j k u r d ð n l e; r ē g k j h N k; k e a f o J k e f d; k F k k a i j r q v c r e u s e p s v i e k f u r f d; k g š b l f y, e a v i u s v k o š l s r ē g a f n u u & f H k u u d j n p k r k f d r e d H k h i p %, d H k h i ð k h u g h a i k l d k š A; g l p d j l ey o{k H k h Ø ð g k s m B k v k š d g k] i o u n o r ē g s t k s u p l k u d j u k g š d j y k š e a r e l s u g h a M j r k g h j k f = g p z v k š l ey o{k u s f p r u 'k q f d; k v k š v u h k o f d; k d h i o u n o l s m l d k v g d k j h 0; o g k j m f p r u g h a F k k a r c m l u s L o; a d k s n . M n u s d k f u ' p; f y; k v k š v i u h l k j h i fùk; k f x j k n h v k š d b z' k k [k k, a r k a l - e h a f Q j m l u s l p g g k u s r d o k; qno d k b a r t k j f d; k a o k; qno H k h 'kh?kark l s v i u h i w k z l s u k f t l e a o "k k j f o | r] x t z k] c Q j r p k u l H k h 'k k f e y F k j d s l k F k l e y o{k d s i k l i g p a i k l v k r s g h t c m l u g k u s n [k k f d l e y o{k v i u h l e l r l ð n j r k R; k x d j



Semal (Bombax ceiba)

fouer k l s f l j > p k d j [k m k g s r k s m u d k Ø k s 'k k a r g k s x ; k v k s m l u g k a u s d g k f d e s i r f e g a ; g h n . M n u s v k ; k f k k] i j a r q v c t c r f e g a
vi u h x Y k r h d k , g l k l g k s x ; k g s r k s e s i r p e l s u k j k t u g h a g l ; g d g d j o k ; m o i p a % L o x z y k d y k s x ; s v k s l e y d h ' k k [k k , s v k s
i f l k ; k j i p a % m x v k , A i j a r p l ? k V u k d k l c d l e y u s g e s k k d s f y , ; k n d j f y ; k a d g k t k r k g s f d b l h f y , i R ; d o " k z f n l E c j
l s v i s y r d l e y o { k v i u h i f l k ; k f x j k n r k g s r k f d m l s ; k n j g s f d v f H k e k u h d k f l j l n b u h p k g k r k g l

d. V d f o g h u ' k k Y e f y d k d . V d n p % c u u k

l e y o { k d h i g p k u r h { . k v u k d " k z d d k v k a l s g k r h g s t k s b l d s e f ; r u s v k s ' k k [k k v k a i j Q s y s g k r s g l ; s b r u s r h { . k g k r s
g s f d b l d k j . k d k b z H k h b l o { k d k s l ; k j l s N u u k u g h a p k g r k a e u l ; r k s N k M e b z p k s k ; s t k u o j H k h b l l s n j g h j g r s g l e g k H k j r e a
f y [k k x ; k g s f d ; s r h { . k d . V d] i k . M o k a d h i R u h n k s n h d s j k i d s d k j . k m R i U u g q g l i k . M o k a d s o u o k l d k y e j i k p k a H k k b z o u e a
t k d j H k k s t u v k s b z k u d h 0 ; o L F k k d j r s f k a t c ' k k e d k s o s f k d d j ? k j v k r s f k s r k s n k s n h i R ; d l H k k b z d s i k p k a d k s n c k d j m U g a i h M k &
e p r d j r h f k a H k h e l s u d k s v i u s v U ; H k k b z k a l s b z ; k z g k r h f k h v k s o g u g h a p k g r k f k k f d n k s n h m u d h l o k d j a b l h H k k o u k d s
p y r s , d f n u H k h e d k s n k s n h l s , d ' k j k j r d j u s d h l w h a o g l e y o { k d h y d M h d k V d j y k , A r c l e y i j d k a / s u g h a g y k d j r s
f k a l e y d h y d M h d k s H k h e u s v i u s f l r j i j p i j l s e d j j [k f n ; k v k s n k s n h d k s l a n s k f H k t o k ; k f d v k t o g l c l s i g y s H k h e
d s i j n c k , D ; k i d o s T o j l s i h f M h g l v k s o s l o ; a d e j s l s c k g j f [k M e h d s i k l N q d j [k M s g k s x ; A

n k s n h u s d e j s e a i d s k d j r s g h] f c u k p i j g v k ; s l e y d h y d M h d k s n c k u k ' k q d j f n ; k a m l s l k e k U ; f n u k a d h H k k a r H k h e
d k ' k j h j c g r d B k j y x k a m l u s d g k
' k k ; n v k i d h e k l i f ' k ; k a e a c g r n n z
g s b l f y , v k i d k ' k j h j d B k j g k s x ; k
g l ; g d g d j o g v k / s ? k a / s r d y d M h
d k s H k h e d k i k p l e > d j n c k r h j g h A
f Q j m l u s i n k] v x j b l l s d Q
v k j k e f e y k g k s r k s v c e p s t k u s d h
v k K k n h f t ; j e p s H k k s t u r s k j d j u k
g l i j a r q m l s d k b z m U k j u g h a f e y k a o g
v x y s v k / s ? k a / s r d v k s i k p n c k r h j g h
v k s f Q j i n k] v H k h v k i d k s B h d y x
j g k g k s r k s e s i k p n c k u k c m d : \ i j
f Q j H k h d k b z m U k j u g h a v k ; k a r c n k s n h



Courtesy- Kjell Bjorka

u s p i j g v k b z v k s i k ; k f d ; g r k s , d y d M h d k V p d M h g l n k s n h d s g k f k k a e a N k y s i M x ; s f k s v k s m l d h d e j e a n n z ' k q g k s x ; k f k k a
y d M h d k s n [k d j o g c g r Ø k s / k r g p z v k s m l u s y d M h d k s j k i f n ; k f d v k t d s c k n d k b z r f e g l ; k j l s l i ' k z u g h a d j x k D ; k i d v k t
l s r e p i j r h { . k d h V a m x t k ; a a ; g d g d j o g d e j s l s c k g j p y h x b l H k h e] t k s c k g j l s ; g l c n s [k j g s f k s u s f [k M e h l s d e j s e a
i d s k f d ; k v k s y d M h d k V p d M h m B k d j m l s v k x u d h f e e h e a n c k f n ; k a c k n e a o g k j , d f o ' k k y l e y o { k u s t l e f y ; k i j a r q m l
i j r h { . k d h V a f k a d g k t k r k g s f d] m l d s c k n l s g h l e y o { k i j d h V a f o l e k u g f t l d k j . k d k b z H k h m l s N u u k u g h a p k g r k a

m i j k D r y k d d f k k , s v k s i k p h u x f k k a e a o f . k r v l u ; d f k k , a ; g n ' k k r h g s f d f d l r j g l e y o { k u s e k u o e u e a v i u s
f o f H k U u x q k k a d h N k i N k M h g l b l d h l t n j r k] f o ' k k y r k] n h ? k k z q k r f k k c g m i ; k f x r k d s d k j . k ; g e k u o l H ; r k d s d b j
l k e k f t d] l k l N f r d v k s / k k f e d v u l B k u k a d k e g l o i w k z v a g l



HIGHLIGHTS OF ISMR-2012

First International Seminar on Microvita Research was successfully held at Pediatrics Seminar Hall, RNT Medical College, Udaipur (Rajasthan) on 24th March 2012. More than 100 participants from all over the country and abroad attended the Seminar. Prof. Vijay Laxmi Chouhan, Dean, Aishwarya Education Society, Udaipur was the Chief Guest of the Inauguration ceremony. She emphasized the need of incorporating Psychology in studying microvita science. Guest of Honor was Prof. Suresh Goyal, Head, Dept. of Pediatrics, RNT Medical College, Udaipur.

During the inaugural ceremony, first book written on the Spiritual (Positive microvita attracting) and medicinal plant Semal (Silk Cotton Tree) entitled **"Pharmacology of Bombax ceiba Linn."** written by Dr. Vartika Jain and Dr. S. K. Verma and published by Springer, Germany was released by the Chief Guest. The 4th Volume of the SMRIM's official bulletin **"BOMRIM"** was also released by Chief Guest.

Four invited lectures and three oral presentations were delivered in the Seminar. Mr. Henk de Weijer from Sweden delivered a lecture on **"A new ontological model to approach biology & evolution"** and Dr. Hans-Joachim Rudolph from Germany spoke on **"Microvita and the mind-body problem"**. Besides them, Prof. Uttam Pati from JNU, New Delhi delivered his excellent talk on **"Consciousness: Dimensions and interpretations"** and Prof. A.K. Bhaskar from Magadh University, Patna spoke on **"Towards total Unification- A new Approach to Matter & Consciousness"**.

On this occasion, six eminent personalities were felicitated by providing Fellowship of SMRIM for their excellent work in propagating the concept of microvita and integrated medicine. In the panel discussion session, lot of queries were resolved by the invited speakers and all agreed that research on this mysterious subject should be started at the earliest with the collaboration of different fields of science.

"There should be extensive research work regarding this microvitum or these microvita. Our task is gigantic and we are to start our research work regarding these microvita immediately without any further delay, otherwise many problems in modern society will not be solved in a nice way".

-Shrii P. R. Sarkar

Published by : Society for Microvita Research and Integrated Medicine (SMRIM), Udaipur (Raj.) INDIA
 Editor in Chief : Dr. S.K. Verma
 Assoc. Editor : Dr. Vartika Jain
 Printed at : National Printers, Bhuwana, Udaipur (Raj.) Ph. 0294-2440994

BOOK-POST

To,

From :

Society for Microvita Research and Integrated Medicine (SMRIM)
 28, Shivaji Nagar, UDAIPUR-313001 (Raj.) INDIA Mobile : 9414168910
 E-mail : skvermaster@gmail.com, smrim08@gmail.com

AIMS AND OBJECTIVES OF SMRIM

1. To propagate the knowledge and science of microvita by psycho-spiritual practice in individual and collective life.
2. To increase moral values, to generate scientific thinking, to remove dogma with the spread of knowledge of microvita at school, college and university levels.
3. To initiate and inspire about research on Yogic, Vaedic, Naturopathic, Ayurvedic and Homoeopathic schools of medicine.
4. To incorporate faculty of Physics, Chemistry, Botany and Medicine for research on microvita and integrated medicine; including research on medicinal plants and Homoeopathic medicine.
5. To organize free medical camps in villages and cities involving specialists of different system of medicine.
6. To publish result of the research in national and international journals and interact with other people working in the field in and out of the country.
7. To make judicious use of different systems of medicine and microvita for the treatment of diabetes, hypertension, heart diseases, cancer and diseases of modern era.
8. To establish laboratory and research centers for relentless research on microvita and integrated medicine for the welfare of entire humanity.

Who can join?

Any person interested in serving humanity through research on microvita and integrated medicine and abides rules and regulations of the society can become the member of the society.

Life Membership fee : Rs. 1500/- (Once)

Contact address :
 PRESIDENT

Society for Microvita Research and Integrated Medicine (SMRIM)
 28, Shivaji Nagar, UDAIPUR-313001 (Raj.) INDIA
 Telephone : +91-9414168910, E-mail : skvermaster@gmail.com

FOR MEMBERS ONLY