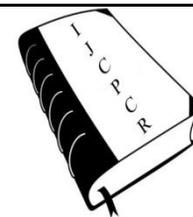




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MIND, DNA AND HEALTH INTERACTION

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ABSTRACT

In recent years, epigenetics have been studied as a possible mechanism that underlies psychopathologies. Epigenetics (literally "above genetics") is defined as chemical modifications of DNA that alter its structure and function. These modifications consist of either methylation of the DNA itself, or of several chemical modifications of the histones (proteins which bind DNA and help determine its structural conformation). Epigenetic modifications of DNA might be crucial for understanding the molecular basis of mood and somatic disorders. One reason for this is that epigenetic factors are sometimes plastic enough to react the external and internal environments. New scientific studies suggest, that these environmental factors can be not only food or chemicals, but also spiritual: emotional state or even mind content. Thoughts are like seeds. Loving and happy thoughts produce beautiful flowers and nourishing fruits; or thoughts can be spiteful and depressed, producing painful brambles or poisonous weeds. We can master our life by producing those „fruits“ which are wholesome, attractive and nourishing, and which give us the utmost happiness and contentment. By creating a self discipline to reflect peace, joy, love and pure feelings consistently every day we can change a negative atmosphere to a positive one.

Key words: Genes, DNA, Health. , Behaviour.

INTRODUCTION

Most genes have switches, called promoters that control how, when, and even if they become active, a phenomenon known as gene expression [1,2]. Other regulatory elements, called gene enhancers, also play a role [3,4]. Even slight alterations in promoters or enhancers can lead to dramatic changes in gene expression. The "epigenetic hypothesis" of depression, states that faulty of expression of important genes in the brain are occurring because of abnormal modifications to the DNA sequence [5] . These abnormal modifications may be randomly occurring, or may be driven by environmental effects, such as life style and content of thoughts. Recent scientific studies determined that humans that had experienced child abuse, and then committed suicide in their adulthood, had abnormal DNA methylation in a gene that controls our response to stress and trauma. Numerous studies in animal models have also suggested that lifetime experiences may alter our DNA's structure in the brain, and therefore lead to mood disorders. Genetic systems and nervous systems are

dynamic (cybernetic) in contrast to previous conceptualizations with genes and brains fixed in form and function. Questions of nature versus nurture are meaningless, and we must turn to epigenetics—the way in which biology and experience work together to enhance adaptation throughout thick and thin. Defining endophenotypes—road markers that bring us closer to the biological origins of the developmental journey— facilitates our understanding of adaptive or maladaptive processes. For human mood disorders such as depression and bipolar disorder, the inherent plasticity of the nervous system requires a systems approach to incorporate all of the myriad epigenetic factors that can influence such outcomes [4-7] .

The aim of this article is to provide a conceptual background for studies by reviewing key findings from different forms of investigation about the role of genetic and spiritual factors in keeping health and in the development of disorders.

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Personal responsibility for minds content

The energy of the human mind is one of the greatest, but least understood energy resource of the universe. When we understand and harness this energy, we possess the keys to happiness and contentment as well as to improving our relationships and circumstances [8-10].

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The mind is constantly producing thoughts. Our thoughts and feelings form our attitudes towards anything in the world. Repeated patterns of thoughts create a ripple of energy. It is similar to a stone dropping in the water and creating ripples. Our attitudes are always influencing our lives and those around us. These thoughts cannot be seen but they fill the atmosphere all around and have a great effect on matter and the thoughts of others. These thoughts waves can be termed vibrations. We are radiating energy at all times and these ripples then create strong vibrations that form an energy field which is called atmosphere. Depending on the quality of thoughts one is having, there will be an equivalent effect. For example, when we are in a room with an angry person, even if he is not outwardly expressing anger, we can feel the tension in the room.

On the other hand, the effect of positive thoughts would be a calming effect. A stable, lovable individual can have such an effect on even the most distraught person. With our thoughts we are creating the atmosphere around us all the time. A public event, a social, political or cultural event or a group activity of any scale will produce a kind of atmosphere. You can feel the atmosphere at a sports event, in an examination hall, in a hospital, or in a temple. The cumulative energy of all the thoughts and feelings of all the people participating in an event creates a powerful atmosphere of a kind.

Media is a very powerful tool that creates an atmosphere that has a very widespread reach and a long span of time. News channels that constantly play out sensational news and pictures produce a strong ripple effect of emotions and reactions. Most of it is a sort of negative energy that sucks in the masses in the drama that is unfolding on screen or elsewhere in the world and affects their mental and emotional balance. We then absorb such negative energy, carry it within and generate it in our real lives. This kind of exchange of energy and creating and sustaining an atmosphere can go on for many months, years or even for a lifetime.

A man can change a negative atmosphere to a positive one because all of us have the ability to transform energy. We have to become aware of the negative energy that we repeatedly create and project. We have to realise that we can take responsibility for creating and releasing

positive vibes no matter what kind of energy others are creating around us. If we wish to have a peaceful and happy atmosphere around us we have to emanate the energy of peace in our thoughts, words and behaviour. All human interactions and relationships are shaped by exchange of energy by means of our attitudes and vibrations. The energy exchange begins in the invisible realms of thoughts and attitudes and emerges into „the visible“ through behaviour and interaction. The ripple effects create a positive or negative atmosphere at any place or time. Whatever we think, talk and feel with strong belief and emotions will create a certain kind of atmosphere.

We have to be careful about what kind of energy we are absorbing and engaging with. We can choose to block and filter such vibes that are detrimental to a healthy and positive atmosphere. The next step is to consciously engage our attention and time in positive and healthy thoughts and actions. By paying attention to the quality of our feelings and thoughts we can weed out the negative and wasteful and nurture pure and positive values and attitudes.

Basics of quantum genetics

Complex information can be encoded in electromagnetic (EM) fields, as we all know from coding and decoding of television and radio signals. Even more complex information can be encoded in holographic images [3,6]. DNA also can act as a holographic projector of acoustic and EM information which contains the informational quintessence of the biogram. Only 3% of human DNA encodes the physical body. The remaining 97% of the 3 billion base pair genome contains over a million genetic structures called transposons, that have the capacity to jump from one chromosomal location to another [3]. A model of the mind-body relationship is developed in which novel biophysical principles in genome function generate a dynamic possessing attributes consistent with both our psychophysical nature and consciousness. The Gariaev group has proposed a theory of the Wave-based Genome where the DNA-wave functions as a Biocomputer. They suggest (a) that there are genetic "texts", similar to natural context-dependent texts in human language; (b) that the chromosome apparatus acts simultaneously both as a source and receiver of these genetic texts, respectively decoding and encoding them; (c) that the chromosome continuum acts like a dynamical holographic grating, which displays or transduces weak laser light and solitonic electro-acoustic fields.

The experimental data presented above represents critical evidence that forces to conclude that some key elements are missing in our current understanding on life. In other words, our western scientific paradigm is incomplete. And now mankind articulate an extended paradigm which provides a natural and simple conceptual framework to account for those experiments. Of course,

many researchers made contribution in this area and we do not claim originality. These data make hope that our emphasis on connections to experimental data will stimulate research in this new and exciting area [3]

The Wave genome theory, being developed by the group of P. Gariaev, is one of the first examples of a scientific theory emerging within this new paradigm. And it will be outlined below.

A Nobel prize winner Luc Montagnier experiments

Furthermore novel experiments were performed by Luc Montagnier (who shared the Nobel Prize for Medicine in 2008 for his part in establishing that HIV causes AIDS). A Nobel prize winner is reporting that DNA can be generated from its teleported "quantum imprint" [11,12].

At first a storm of skepticism has greeted experimental results emerging from the lab of a Nobel laureate which -- if confirmed -- would shake the foundations of several fields of Science. "If the results are correct," says theoretical chemist Jeff Reimers of the University of Sydney, Australia, "these would be the most significant experiments performed in the past 90 years, demanding re-evaluation of the whole conceptual framework of modern Chemistry."

Luc Montagnier says he has evidence that DNA can send spooky electromagnetic imprints of itself into distant cells and fluids. If that wasn't heretical enough, he also suggests that enzymes can mistake the ghostly imprints for real DNA and faithfully copy them to produce the real thing. In effect, this would amount to a kind of quantum teleportation of the DNA [11,12].

Full details of the experiments are not yet available, but the basic set-up is as follows. 2 adjacent but physically separate test tubes were placed within a copper coil and subjected to a very weak extremely low frequency electromagnetic field of 7 hertz. The apparatus was isolated from Earth's natural magnetic field to stop it interfering with the experiment. One tube contained a fragment of DNA around 100 bases long. The second tube contained pure water. After 16-to-18 hours, both samples were independently subjected to the polymerase chain reaction (PCR) -- a method routinely used to amplify traces

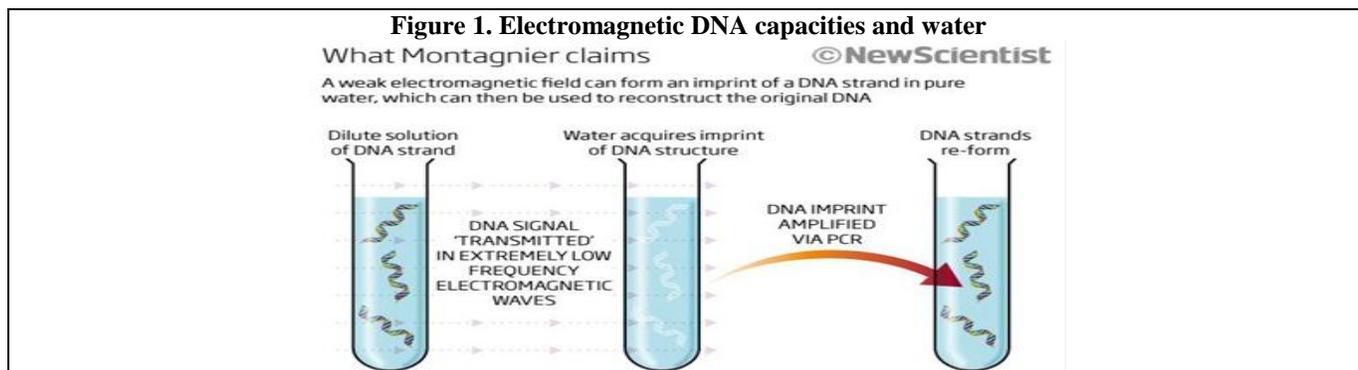
of DNA by using enzymes to make many copies of the original material. The gene fragment was apparently recovered from both tubes even though one should have contained just water (Figure 1) [11].

DNA was only recovered if the original solution of DNA -- whose concentration has not been revealed -- had been subjected to several dilution cycles before being placed in the magnetic field. In each cycle, it was diluted 10-fold and "ghost" DNA was only recovered after between 7 and 12 dilutions of the original. It was not found at the ultra-high dilutions used in homeopathy.

Physicists in Montagnier's team suggest that DNA emits low-frequency electromagnetic waves which imprint the structure of the molecule onto the water. This structure, they claim, is preserved and amplified through quantum coherence effects. And because it mimics the shape of the original DNA, the enzymes in the PCR process mistake it for DNA itself and somehow use it as a template to make DNA matching that which "sent" the signal.

Despite the skepticism over Montagnier's explanation, the consensus was that the results deserve to be investigated further. In a peer review paper (Interdisciplinary Sciences: Computational Life Sciences), Montagnier described how he discovered the apparent ability of DNA fragments and entire bacteria both to produce weak electromagnetic fields and to "regenerate" themselves in previously uninfected cells. Montagnier strained a solution of the bacterium *Mycoplasma pirum* through a filter with pores small enough to prevent the bacteria penetrating. The filtered water emitted the same frequency of electromagnetic signal as the bacteria themselves. He says that he has evidence that many species of bacteria and many viruses give out the electromagnetic signals as do some diseased human cells.

Multiple findings indicate that psychoeducation at epigenetic level is effective and may prevent mood disorders or improve functioning in depression, highlighting the need for "mind hygiene". People with a strong motivation to live healthier must understand that they take responsibility for their mind content and for lives instead of being victims of events. Each and every patient has the resources within to affect mental health and prevent the development of depression.



CONCLUSIONS

The scope of involvement of epigenetic modification in long-lasting regulation of genome function is wider than has originally been thought. Epigenetic DNA methylation acts as a mechanism for providing differential identities to similar DNA sequences. Multiple data in both animals and humans support hypothesis that DNA methylation can act as a mechanism for adaptation of the genome to different psychological environments. The studies presented in this review provide support for the effect of thinking manner and behaviour on brain functions

that are responsible for the development of mood disorders and that these effects are rendered permanent throughout life by epigenomic reprogramming. These data highlight the importance of spirituality and personal responsibility of mind content required for mood disorders prevention at genetic and epigenetic level.

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CONFLICT OF INTEREST:

The authors declare that they have no conflict of interest.

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