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The Quantum Functioning of Stem Cells in Autism and in Certain Somatic Diseases

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Abstract

Human life is not only a matter of biology and biochemistry, it is also a cybernetic-information and bioelectronic construct that affects health, disease and human behavior. In this new bioelectronic paradigm, human cognition begins to emerge in the aspect of quantum processes taking place in an integrated circuit. In bioelectronic terms, an organism is understood as an integrated system made of biological piezoelectrics, pyroelectrics, ferroelectrics and semiconductors, filled with bioplasma and managed by quantum processes electronically using biocomputers.

The human biological system, apart from the biochemical way, uses the transfer of information by means of electromagnetic, acoustic, soliton waves, electric, electromagnetic, torsion (spin) fields and bioplasma. In stem cells, quantum processes play a significant role, it depends on them human psychophysical development. In the Universe, the primordial information "ingeneza" works, which is encoded in atoms. Each DNA atom is encoded with specific genetic information. Ingeneza programs are quantized and create all stages of development, cell, organism, biosphere and cosmos. Water molecules are carriers of information.

Keywords: stem cells; autism; quantum processes.

Stem cells

Stem cells are primordial, non-specialized cells that have enormous potential for multiplication and the ability to develop into specialized cells. Stem cells are the basis for building all organs and tissues of the human body. These highly specialized cells that make up the human body come from a pool of embryonic stem cells formed shortly after fertilization. They are found in umbilical cord blood, umbilical cord, bone marrow, etc. (Sharma et al. 2013).

During development, they undergo specialization, starting from totipotent cells (which are the only ones that can differentiate into any cell type, such as a zygote), through pluripotent cells (differentiating up to three germ layers: mesoderm, ectoderm and endoderm), multipotent cells (differentiating in different types of cells within one germ layer, e.g. those from the mesoderm can give rise to bone marrow, blood or muscle cells), up to unipotent (which differentiate into only one, strictly defined type of mature cells, e.g. epithelial cells (Siniscalco, 2012).

Hematopoietic stem cells, the source of which is human umbilical cord blood, belong to the group of multipotent cells (Siniscalco, Sapone, et al. 2012).

New directions of therapy using stem cells are a new future for the development of strategies for the treatment of diseases that have been incurable so far (Siniscalco, Bradstreet, et al. 2012).

Thanks to stem cells, it is possible to regenerate tissues and organs, such as skin, hair, blood, intestinal mucosa, are used by the body throughout life, but to a much limited extent. The development of stem cell therapies may lead to the replacement of missing or malfunctioning: corneal endothelial cells in various types of dystrophy, chemical or thermal burns; retinal ganglion cells in glaucoma; retinal and pigment epithelial photoreceptors in hereditary and age-related macular degeneration, and retinal and choroidal cells in diabetic retinopathy (Lv et a. 2013).

List of diseases treated with stem cells.

- Acute leukemias.
- Chronic leukemias.
- Myelodysplastic syndrome.
- Diseases caused by a stem cell defect.
- Myeloproliferative syndromes.
- Proliferative syndromes of the lymphatic system.
- Diseases of the phagocytes.
- Diseases associated with disorders or lack of enzyme function.
- Hereditary platelet disorders.
- Plasma cell diseases.
- Malignant tumors such as breast cancer, Ewing's sarcoma, neuroblastoma (germinal ganglion), kidney cancer.
- Hereditary abnormalities of red blood cells.
- Hereditary disorders of the immune system.
- Histiocytosis.
- Autism and cerebral palsy.

Brain imaging methods in people with autism Magnetic resonance imaging (MRI) is most often used in the examination of children with autism, which allows to visualize individual brain structures and determine their volume (Schumann et al. 2010), (Redcay 2008).

Volume indicators, both of the entire brain and its selected structures, are based on gray matter thickness measurements. At birth, the brain of a child with autism does not differ in terms of volume from the brain of healthy children. Around the age of 4 months, intensive growth of brain tissue is noticeable until the child is 6 years old (Courchesne et al. 2001), (Zatorre, Belin 2001).

A rapid increase in brain volume was found in the frontal and temporal lobes (after: Wan, Schlaug 2010).

The changes concern the increase in the volume of structures such as the frontal and temporal lobes, the cerebellum, the commissure major, the amygdala and the limbic system (Ichim et al. 2007).

Although the available results do not give a clear answer, they often indicate an excess of white matter in the child's brain. Researchers agree that the observed changes appearing before the age of 2 are related to the disturbed process of neuron formation and migration. It is assumed that anatomical abnormalities occur at a very early stage of brain development, i.e. before the 3rd month of fetal life (Pontious et al. 2008), (Constantino et al. 2003).

These structural brain changes seem to be common in people with autism, but they are not specific to the disorder. For example, enlarged basal ganglia, particularly the caudate nucleus, associated with increased repetition and stereotyped behaviors in ASD, also occur in people with obsessive-compulsive disorder, without a comorbid diagnosis of ASD (Langen et al. 2007).

Similarly, an enlarged amygdala in children with ASD is a hallmark of children with generalized anxiety disorder without ASD. Finally, abnormalities in the frontal lobes that are a hallmark of ASD have also been found in other neurodevelopmental disorders such as schizophrenia (Lisik 2014).

So far, it has not been possible to determine whether common or separate genetic conditions underlie the common neuroanatomical variation (Campbell 2014).

The functional improvement observed after stem cell therapy gives children with autism a greater degree of independence, thus helping them integrate with their environment (Graziano 2013).

Knowledge about autism is growing tremendously, since the phenomenon of autism was first formulated in 1943, there is still no cure for the brain changes that create the symptoms of autism. Medicine and psychology each year brings better ways to understand the disease and help patients adapt, but it does not give a full explanation of what autism is. There are different types of speech, behavior, vision, hearing, as well as drug and dietary recommendations, but they are often ineffective because treatments should be tailored to the individual needs of the patient. The author of this work will pay attention to the corrective movement therapy and the mechanism of imitation, these two factors do not show synchronization in autism. Children with autism have disturbed movement symmetry and lack a mechanism to imitate. The results of my research support the view that the movement disorder and the mechanism of imitation are inherent in the phenomenon of autism. They can serve as an early indicator of autism diagnosis (Adamski 2021).

In certain specific areas of the brain (the medial temporal region and the cerebellum) the blood supply is reduced, which in turn may cause altered functioning of these areas. Combined with a general imbalance in brain activity, this phenomenon may account for the symptoms associated with autism. To maintain adequate pressure control and capillary flow regulation, the body requires proper synchronization between the parasympathetic and sympathetic, autonomic nervous systems. Instead of acting synergistically, they are partially opposed to each other, changing their mutual synchronization may lead to minimal changes in the cardiovascular system (Ming et al. 2005, Thapa et al. 2019).

In other words, in the presence of capillaries with greater resistance to blood perfusion, the heart must raise blood pressure levels. In this way, blood flow resistance can be influenced by the elasticity of the blood vessel wall (Jann et al. 2015).

Arterial stiffness, or reduced elasticity of blood vessel walls, affects the ability to impart pulsating force to the bloodstream (Heffernan et al. 2018).

Altered blood pressure in children with ASD, in addition to the regulation of vascular volume, also found changes in the electrocardiogram (heart rate variability) that seem to be associated with anxiety disorders - intrusive and obsessive thoughts affecting daily activities (Chrousos et al. 2009).

American research from 2013 showed that dysfunctions of the autonomic control of the heart are directly related to dysfunctions in the sphere of attention, emotions, cognitive processes, as well as in the area of social interaction with peers. This is particularly noticeable in children with neurodevelopmental disorders, especially attention deficit hyperactivity disorder (ADHD) or other disorders showing features of hyperactivity (Graziano et al. 2013).

The importance of movement and the mechanism of imitation in autism

The child receives movement from nature, while the mechanism of imitation the child receives in whole or in part, or not at all. This mechanism works with movement, consciousness and is the core of a child's life. A properly developed imitation mechanism is a sign of a child's proper psychobiological development. Such a child from the first days of life learns from his family and loved ones, feelings, movements, words and thoughts. The baby reacts to changes in the parents' facial expressions, tone of voice and movement. Research conducted by Moore Meltzoff shows that infants can imitate their mother's movements, such as opening their mouths or sticking out their tongues (Ros et al. 2004).

The main characteristic of innate behavior mechanisms is the possession of information and knowledge that directs the action of a given individual in a particular situation. An example of this may be that newborns less than a day old can imitate the faces of their caretakers. At first glance, it might seem that the ability to imitate is interesting and charming, but not very significant, but when we delve into the content of this phenomenon, we will notice that it carries a lot of information. There are no mirrors in the womb, so newborns have never seen their own face before. How do they know to pull their tongues out of their mouths when their mother does? In order to imitate, newborns must somehow understand the similarity between the inner, kinesthetic feeling and the expression of the face they see. A similar situation is when we play with a child - when you talk to the baby, the baby freezes, when you interrupt, he takes the baton and there is an explosion of cooing, fist flapping and leg kicking. What you see is two people synchronizing their gestures, only to each other and no one else. This constant synchronicity of movements develops the bond between these people (Wojtkowiak 2008).

A baby in the period of babbling in the fourth month of life, makes articulate sounds; like, go, da, ba ma, la, etc. The mother should establish a dialogue with the child, connects syllables and pronounces; baba, lala dodo, mama, dada, gogo, etc. A normal child repeats what its mother says and proves that it has an active imitation mechanism. A child with autism won't do that. A child with autism does not imitate an older person, e.g. a mother, a rhythm teacher, but imitates the same thing when the NO robot does it. The lack of a child imitation mechanism and the asymmetry of movement provide us with information that a psychologist is able to diagnose the development of autism in a 3-month-old child. In autistic therapy, the task of the psychologist, the teacher's parent, is to awaken this mechanism of imitation from the earliest months and years of life, because it creates a mature personality (Adamski 2021).

Healthy children learn various complex behaviors by imitation, while autistic children have a hard time with this. An autistic child does not want to join other children in the group and imitate their movements, which causes chaos in play. Children with autism have movement disorders, they lack movement symmetry. Movement disorder and imitation mechanism are inherent in the phenomenon of autism. The study of movement disorders in children and the mechanism of imitation can serve as an early indicator of the diagnosis of autism. In children with autism, movement disorders are noted in the shape of the lips, sitting, crawling, walking and moving in all movements. In healthy children, the movements of the arms and legs are symmetrical. There is asymmetry in a child with autism (Suchowierska, Ostaszewski 2012).

Movement is one of the natural needs of a child that determines its proper biological and mental development. Dance as a natural form of movement satisfies not only the movement needs of the child, but also develops a number of his psychophysical dispositions: perceptiveness, memory, concentration, reaction speed, eye-hand coordination, orientation in the scheme of his own body and space. It activates the child's body and mind, develops his imagination, provides new impressions and experiences in the field of communication and interaction in a group, develops self-discipline, teaches conscious control over body movement. In autism, an important phenomenon is the development of interpersonal communication through self-building. In a healthy child up to the age of 3, there is a unity between mother and child in mental structures. During this period, the child says "I" to the mother. After the third year, the child is distinguished as "I" and the mother as "you". In an autistic child, this form is disturbed. It expresses itself as "You", mother and surroundings are a form of "You".

The baby's first breath activates the alveoli, which contain collagen and elastin fibers - these are piezoelectrics. The polarization of these bioelectronic structures triggers an electric field that affects the abundance of bioplasma. This first breath is an electronic shock to the bioplasma, its parameters have increased, there has been a strong synchronization of the mother's bioplasma patterns with the baby's bioplasma. During birth, there is a transition of the newborn from oxygen supply from the placenta to its own respiration - the partial level of oxygen in the arteries suddenly increases, and thus the level of oxygen radicals increases. This sudden increase in the level of radicals causes a realignment of nuclear spins, which is associated with an increase in the spin wave, the quantum of which is the magnon. Pumping magnons into the bioplasma causes the bioplasma to emit light and a very strong biological field that creates a strong connection with the maternal bioplasma. Through this field, the child and the mother form a unity up to the age of 3. During this period, the child perceives the mother and himself as me. The child does not understand the phenomenon that the mother is a separate entity from him. After 3 years, the child begins to use the pronouns me and you. This unity is beginning to fade. Previously, the child's

mind perceived that mother and child were one (Ros et al 2004).

Bioelectronic interpretation of the work of the heart

In the process of functioning, the heart contracts and then relaxes. The left ventricle is the main chamber that pumps blood from the heart. This is called the left ventricular ejection fraction, or LVEF. The LVEF for a healthy heart is between 55% and 70%. LVEF may be lower if the heart muscle has been damaged as a result of a heart attack, heart failure, or other heart disease (Money 2009).

The author of this paper is of the opinion that during the ejection fraction of blood in the heart water and acoustic solitons are generated. The heart rate is controlled by solitons, the functioning of solitons is conditioned by electric and magnetic fields. Arterial stiffness, or reduced elasticity of blood vessel walls, affects the ability to generate solitons. The altered blood pressure in children with ASD is affected by changes in the electrocardiogram (heart rate variability) that appear to be related to anxiety disorders - obsessive thoughts that interfere with daily activities. This is due to the fact that the heart generates less solitons. The task of solitons is to restore the homeostatic balance of the body and the proper functioning of the biological cell (Brizhik L, 2016), (Adamski 2016).

A soliton is a solitary wave of unchanging shape, located in time and space. There are solitons of light, water and sound that can strongly interact with other solitons, but after a collision they remain unchanged, only a phase shift occurs. Form and structure remain unchanged. This means that they penetrate each other without losing their identity (Brizhik 2003), (Brizk 2014).

Solitons can spread across the universe and do not disappear. They exist from the beginning of life until the present. The cosmos is densely filled with a solitonic network, carrying content and meaning (Brizik 2015).

Solitons are responsible for the proper functioning of a biological cell. The human biological system has the ability to generate and receive soliton fields, which take an active part in the processes of human life and determine their health, illness and personality development. The movement of solitons is affected by the density and thickness of the biological membrane in the cell, as it determines the size of the piezoelectric, pyroelectric and feroelectric effect from which the electric field flows, interacting with the solitons (Adamski 2016 c), (Trabka 2003).

Solitons bring signals, meanings, conceptual content from the cosmos to the human psychosphere. It happens in such a way that the DNA molecules of the genetic material emit laser light, which creates the Bose-Einstein condensate needed to generate solitons. Laser radiation also activates ion pumps on cell membranes and helix bioplasmic antennas that pull solitons from outer space to the inside of the cell, and simultaneously to the bioplasma of the biological system. (Adamski 2020 b), (Fukada, Hara 1969).

The action of solitons and spins in the human biological system provides the basis for seeing psychobiological processes in a different light than is currently done by psychology and medicine. Spin and soliton waves create a different picture of the world than the electromagnetic wave received by the sight receptor. It can be concluded that we are dealing with the second center that creates the structure of the image of the world and is responsible for the psychophysical development of man, health and disease. Soliton images can convey our emotional states, thoughts, or patterns of behavior in the form of archetypes. The solitonic image obtained from the Cosmos by the bioplasma is evaluated and compared with its own model, corrects it and creates a unique specificity of the organism, with its full energy and information characteristics about its personality structure, age, health or disease, or way of thinking. The transfer of solitonic signals takes place not only to biological structures, but also to the psychic and spiritual spheres. Stations generating soliton waves are found in every living human organism and are responsible for the circulation of semantic messages experienced in thoughts, dreams and daydreams.

Quantum processes in the functioning of stem cells

The control of the human biological system is carried out through a network of information channels: electronic, ion, photon, phonon, solitonic, free radical and bioplasmic - in the bioplasm each of these channels can be a carrier of information for the biological system itself, or it can function as a team (Sedlak 1980), (Adamski, 2020a).

The light bioplasma is composed of solitons, photons, phonons, magnons, and gravitons. It takes an active part in morphogenetic processes, in the integration of biosystems and in the exchange of information between the biosphere and the cosmos. The bioplasma of light circulates in the biosphere and the cosmos, enables the transfer of information from the cosmos to biological systems. All life on Earth exists only thanks to this bioplasma, because it is intelligent, active, permeates and organizes all reality. It is a state in which the laws describing the behavior of waves and fields, individual interactions and collective interactions come to the fore at the same time. Life and bioplasm are interdependent. Life takes place thanks to the bioplasma of light, and life processes create it (Adamski 2016,a).

Bioplasma is passed from parent organisms to offspring. It is "exemplary" and so far unique in nature (Sedlak W. 1979).

It takes an active part in morphogenetic processes, in the integration of biosystems and in the exchange of information between the biosphere and the cosmos. The human biological system is equipped with quantum biocomputers that work on soliton programs, they organize perceptual images and transfer them to bioplasma, giving them a pattern of biological behavior or a way of thinking and emotional reactions. Solitons are information transmitters in a biological cell, they contain constant patterns of biological plasma that determine health, disease and the way of perceiving the surrounding world. The human biological system has the ability not only to receive solitons from the Cosmos, but it can produce them itself using free radicals, spin fields and the Bose-Einstein condensate that occurs in the human biological system (Stöferle, et al. 2015), (Adamski 2016 b).

According to Teller (2009), Ingeneza is the wisdom of the laws of development of the Universe, encoded in atoms. The carrier of ingeneza is bioplasma. Ingeneza consists of logons, which are the program for the development of the biological system and the entire universe. The development and operation of organisms is controlled by ingeneza from within the DNA atoms (Teller 1994).

Ingeneza designs the shape of a snowflake, the structure of DNA, but also the structure of honeycombs.

Summary

The presented new directions of stem cell therapy offer hope for the development of treatment strategies for so far incurable diseases, including autism. Evaluation of the effectiveness of new therapeutic techniques is difficult, however, due to the unpredictable immunological defensive effects of the recipient's body. Although scientists are getting closer to the goal, a sufficient level has not yet been reached to consider these therapies as effective and fully safe. The author of the work drew attention to the corrective-movement therapy and the mechanism of imitation. Children with autism have disturbed movement symmetry and do not have a mechanism to imitate. The study of these phenomena can serve as an early indicator of the diagnosis of autism. The study of the phenomenon of autism should be based on the action of solitons and spins in the human biological system, which gives the basis for seeing psychobiological processes in a different light than currently done by psychology and medicine. It is conditioned by the work of the heart and brain. It should be recognized that we are dealing with the second center that creates the structure of the image of the world and is responsible for human psychophysical development, health and disease. Stations generating soliton waves are found in every living human organism and are responsible for the circulation of semantic messages experienced in thoughts, dreams and daydreams.

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