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# КВАНТОВА ФІЗИКА ЖИВОГО ТА ЇЇ ТЕОРЕТИЧНІ ОСНОВИ

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## ILLUSION OF SUPERPERMISSION

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**Abstract.** This article is devoted to analysis of the problems connected with the modern tendency in biology and medicine which had arisen as a result of the successes in cloning of human's genes in DNA of more simple organisms.

**Key words:** Physics of the Alive, Quantum Medicine, Quantum Mechanics, clone, gene, DNA, morphogenesis.

Last time there are appearing the speculations in the scientific literature as well as in a mass media, concerning the prospects of cloning of human's genes in the chains of DNA of more simple organisms. The survival of such organisms gives some scientists ground to make a conclusion about possibility of growing up the different human's organs for further implantation them in a human body in exchange of the damaged organs. There is discussed the perspective of breeding the persons with features, abilities, level of intellect, given in advance. Moreover, many political and religious leaders, public figures and organizations are taking part in these speculations. I am going to show that from the position of modern science of animate nature – Physics of the Alive [1] – and its medical application – quantum medicine [2] – these speculations are absolute nonsense.

Well known “deciphering” of gene code begins and closes on the level of cell and its prolonging on the level of the whole organism is a matter of **belief**, which is based only on nondirect experience. This experience convinces us, that the gene information determines indeed the morphological structure of organism, but we have not got any experimental evidence, that such or another gene (one and only) really “is responsible” for the growing of such or another organ of an organism. The more so this concerns such notions as features of character, abilities, colour of eyes and so on. I don't understand the meaning of very often used word combination, of a type “We are seeking the gene responsible for.....”, and further indicated is the morphological structure or intellectual characteristic of a person. It's interesting to know how these authors imagine this “responsibility”. I know what it meant, for example, when we were talking about “responsibility” of every citizen of the former Soviet Union regarding the Communist Party of the USSR. Thousands and thousands party committees, millions of KGB agents ensured the realization of such “responsibility”.

Joking apart, but how we could in earnest talk about responsibility of a few molecules (even included in the DNA's chain!) regarding, for example, mentality of a person or his stomach. or his hand or colour of his eyes having thousands nuances?

The cause of this paradox is the so-called “chemical paradigm”, dominated in classical sciences, connected with animate nature. This paradigm is based on stipulation of existence of only one type of bond between elements in living system, chemical one. Here the total analogy with the situation in non-living systems described with the physics of solid state takes place. In other words, the traditional approach to the study of the alive does not stipulate the difference between dead and alive matter on the level of fundamental physical laws of Nature [3]. However, intuitively everybody recognizes the deficiency of such traditional approach.

The main contradiction between objects of traditional physics and biology is that the traditional physics studies the existent objects (“being” in accordance with I. Prigogine's terminology [4]), meanwhile in biology we deal with the developing objects (from zygote

to adult ones). No wonder, that so long as physics ignored life's inherent and fundamental features the life itself was not able to become an object of physical knowledge. The situation has drastically changed during last twenty years owing to the creation of universal theory of self-organization (synergetics) [5] and theory of dissipative structures [6]. Treating self-organization of complex systems as an object of exact science, the modern scientific revolution not only has spread out the sphere of interest of physics including in it the "becoming" (in accordance with I. Prigogine's terminology [4]), but has offered an ample and essentially new scope for physical knowledge of the alive. In such a way on the methodological level it has been overcome the gap between the alive and the inanimate.

The concrete realization of such a new approach is being carried out in framework of the physics of the alive. As it's known, the gist of this branch of fundamental physics is the idea about quantum-mechanical nature of genetic entirety and varied differential stability of the alive. It means that the alive occupies fourth step on the Weisskopf's "quantum ladder", after nuclear, atomic and molecular ones [1].

The problem of reality of quantum-mechanical entirety of macroscopic object is toughly connected with feasibility of unitary nonlocal self-consistent potential of this physical system. Under ordinary conditions the existence of such potential is impossible for solids. That's why usually in macroscopic physics we deal only with "quantum effects", when extraordinary conditions are arisen, in case, for example, of superconductivity, superfluidity, inverse inhibition (laser's regime), plasmas state and so on. But in living systems the existence of such a potential is becoming the reality.

We have shown [7] that the system of Channels, well known in ancient Chinese medicine [see, for example, 8] has the electromagnetic nature, that reflects the existence of non-local self-consistent electromagnetic potential of the whole body and consequently the existence of the effective long-range forces (interactions) providing the quantum-mechanics entirety of the organism beyond threshold of non-equilibrium phase transition into the regime of laser generation. What is the source of these long-range connections?

First of all we have to recollect that the protoplasmic membranes of all cells of living organisms are under huge electrical field ( $\sim 10^5$  V/cm), which is permanently sustained due to proton transport. For realization of this mechanism cells use the great share of their energy of metabolism (Mitchell). By the way, this fact contradicts to chemical paradigm, according to which the whole energy can be stored in cells only in chemical form.

Keeping in mind, that physical properties of the membranes give them possibility to oscillate with the eigenfrequencies in the range of ( $10^{10}$ – $10^{11}$ ) Hz (i.e. in mm-wave length band for vacuum) we have to conclude that every cell of every living organism enables one to be considered as an active centre (i.e. the source of electromagnetic radiation) in the regime of laser generation. And if we take into account the identity of the genom of all cells of the given organism, one might make the next step in recognition of the role of the coherent electromagnetic eigenfield [9] in the mechanism of the realization of gene information on the level of macroscopic entirety of organism.

So if it's talked about gene's hereditary information it does not mean that such or another gene is really responsible for definite morphological structure or peculiarity of living object, or, moreover, traits of a person's character, level of mentality, ability for different sciences and so on. Genom (set of genes of an organism) defines the regime of forming of non-local self-consistent potential well and the rules of the forbidden for transitions between levels in this well. In other words genom defines the main spectroscopic characteristic of the organism (as a quantum-mechanics entirety) – its spectrum of characteristic eigenfrequencies. And this spectrum being simultaneously quantum-mechanics and macroscopic (measurable) characteristic, is the absolute passport of living object (similarly to the situation on three other steps of quantum ladder – nuclear, atomic and molecular ones). It means, that any distortion of genotype (due to cloning, for example) can induce only non-controllable changing of phenotype, in other words can bring about, as a

rule, deformities and disabilities only. From the position of quantum medicine any attempt of growing up of new human organs out of its own body can lead only to deadlock.

There are no such notions as a “hand”, “heart”, “stomach” “liver”, “cleverness” in biology, separated from concrete persons, as well as does not exist the gene responsible for each of such a type of morphological or mental characteristic. From my point of view what is realistic and may be realized in not a far future, it's the restoring of the damaged organs by the combination of surgery with microwave resonance therapy (MRT). The last one is technology, which realizes the ideas of quantum medicine on the level of its practical application [3,10].

The Nature permits mutations but only in case of their matching to the conditions of surrounding world (environment) and first of all the electromagnetic part of this surroundings [11].

In conclusion I could not help but tell that the speculation and boom around cloning have not so much scientific as a financial base.

## ЛЮЗІЯ ВСЕДОЗВОЛЕНОСТІ

С.П. СІТЬКО

У статті аналізуються проблеми, пов'язані з сучасною тенденцією в біології та медицині, що виникла внаслідок відкритих можливостей клонування успіхів в клонуванні людських генів у ДНК простіших організмів.

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