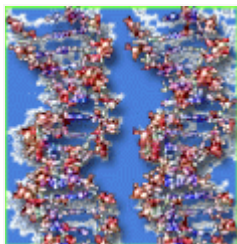# Hot questions of biology on which the wavegenetics search for the answer

In spite of successes of molecular genetics and cellular biology, till now the key mechanisms of functions of the genetic apparatus in relation to transmission of complexity of organization of life remain unclear. In fact, the following fundamental paradigm question remains unanswered. What type of a mechanism to look for to be able to account for the phenomena of information about the organization of super complex biosystems to be packed in a relatively simple chromosomes structure and then unpacked in a most sophisticated cosmic formation: a human being?
This question was especially strongly highlighted as a result of publication of a work by the R. Pruitt's team (Purdue University, U.S.A.) which elegantly showed that Mendel's laws in genetics are not always satisfied [1]; and this shocked geneticists. This work showed that a normal gene HotHead in adult plants Arabidopsis, which was not present in the initial mutant seeds but only in those belonging to ancestors of the plant, was expressed (?) .

A "virtual" gene HotHead, absent in the chromosomes, replaced a real mutant gene hothead. There is no explanation yet to this phenomenon. An assumption was made, that the normal gene was stored as its revertase RNA copy in genome or cytoplasm of a mutant plant. This is a weak and vulnerable explanation which does not have an experimental validation, which is acknowledged by the authors themselves. For the sake of the argument, let us accept this assumption, then all the evolutionally "old" and not mutant genes must be stored in RNA revertase copies, at least in sexual cells. In such a situation those sexual cells will have the size of the Mont Blanc mountain. This phenomenon of return of an ancestor gene, inexplicable from positions of classical genetics, has brought to the surface a host of suppressed and unresolved fundamental questions not only in genetics and embryology, but also biology as a whole. Let us briefly summarize these questions.

- a / 'Vobblation' of the 3-rd nucleotide in the codon makes the classical table of genetic code into an arena of potential mistakes during the process of protein synthesis, as it automatically shows a homonymy of the significant doublets in codons when pairs of identical doublets code different amino acids [2]. During this process, the third nucleotide in the codon can be any of four, as postulated by F. Crick [3] . Nevertheless, mistakes during this process of selection of amino acids are extremely rare, and this is a surprising fact. The explanation of this fact can be found in other "dimensions" of the real genetic code responsible for development of total organism from a zygote, and not just for proteins biosynthesis;

- b / The situation when 98% of human genome is considered to be "junk" or, at the best, a certain strange assistant of the triplet code or a "cemetery" of the virus genomes;

- c / 2% of human coding DNA (about 30,000 genes) are very similar to those of pigs, donkeys, flies and even bacteria. At the same time, thousands of genes are found in human DNA, which are not protein coding [12] (in addition to known so-called "silent" genes), and this raises a question (for which there is no answer yet) about their purpose;

- d / For some unknown reasons and laws, genes are transpositioned in the 3-D chromosome continuum into "precisely appointed" places. It is not clear "who" and for "what reason" appointed these places, and how exact "piloting and landing" of this "flying" DNA occurs;

- e / For some unknown reasons genes are divided into introns and exons portions(?), and the biological meaning of introns is unclear;

- f / Matrix independent synthesis of certain kinds of RNA (so-called 6S RNA), carried out by the Qb replicase, as well as the RNA synthesis with the help of RNA polymerase of bacteriophage T7 [4,5] break the "fundamental" principle only material (matrices) replication of DNA ←--> RNA;

- q / Phantom leaf effect, where a part of a living plant's leaf remembers its whole image [6,7] ;

- h / Distant functions, with unknown mechanisms, of selector genes of morphogenesis (for example, a Drosophila's 'kruppel' gene) when the kruppel's protein products are synthesized in one location of an embryo, while their action occurs in a different location of the embryo far away from the original one: at a distance of hundreds of embryo cells.

All these and other poorly understood manifestations of the functions of chromosomes, associated with transmission of complexity of organization of life, force one to hypothesize, and start verifying those hypotheses, that genetic memory has other attributes essentially supplementing the protein code. These functions are likely to have the wave nature [8,9,10,11].

Work in this direction is the main content of this website. Наши работы в какой-то мере на них отвечают.

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