

CAD OF BIOLOGICAL OBJECTS (C. elegans, Part 1)

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Where in a living cell is the processor located? Who and how gives the command for a cell to divide? In order to build an organism out of cells, it is necessary to give each cell an instruction: when it should divide, in which direction, and what properties it should acquire. How, in your view, is this implemented? Let us avoid vagueness. Imagine that I am speaking as follows. Each cell is numbered. DNA contains information about when a specific cell should divide, in which direction it should divide, what number it will acquire, and what properties it will obtain. Propose who implements this and how it is implemented in a real cell. Let us discard speculation and think exactly as requested. Cells are numbered; otherwise it is impossible to place them correctly to form an organ. Cell divisions must be synchronous; otherwise, for example, an arm would begin to grow first and only later a leg. However, the embryo grows proportionally. Each cell is prescribed when and in which direction to divide, which number to take, and what properties to form for itself. Think in this framework and find confirmation for it. At the beginning, from the fertilized cell, a control system for constructing the organism is formed, with a growing informational network that will later become the brain and the nervous system. If cells are not numbered, then vague “potentials” would have to be arranged, which is unrealistic. In that case, each realization of an organ would be different. However, organs are identical from organism to organism, differing only in size. Calculate the proposed VK-DNA code of the worm *C. elegans*. Compare the result you obtain with the real, decoded DNA code of *C. elegans*. Now imagine that this enormous code represents the behavioral programs of this object, its reactions to various situations in its life. Further, imagine that you have obtained information about the growth of the cells of this worm within the framework of the proposed code. How can one determine where the code of division directions, timing, and numbering is written, and how can it be isolated, assuming that no errors occurred during sequencing, although even that could have happened? Can you find and write, for all 1,000 cells of this worm, the cell number, time of division, and designation, not “fate,” but rather a property, such as nervous system, digestive system, or body covering? Try to proceed step by step. Can you do at least the first 10 cells?

Sources of information:

1. <https://vks-ai.ru/>
2. <http://vkcdnk.ru/>
3. https://vks-vk.ucoz.ru/index/nkhu_novyj_khristianskij_universitet/0-227