

The processes that primitive cell prepared to produce protein by using DNA - Evolution of primitive cell membrane for biochemical reactions -

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1. Materials for first life were made from carbonated water with iron

The electro-negativity of carbon atom is larger than hydrogen atom. So, iron atom takes out the oxygen atom in carbon dioxide, and the isolated carbon atom forms iron carbide. The iron carbide reacts with the water, and iron oxide was made. Organic materials are made from the remains i.e. carbon atoms, hydrogen atoms and water.

The organic molecule floats because it is light. The organic molecules at surface of the water forms a membrane. Amino acid is made from the carbon that bonds with amino and carboxyl group. The protein formed on the membrane makes the membrane robust. A long line of protein is obtained by dehydration of the amino acids.

On the other hand, the spiral structure of water penetrates through a hole of the cell membrane. A spiral thread of protein is made at the hole in the membrane. The thread of protein is able to make the mold that is able to reproduce the thread of protein. The thread of protein becomes the original protein, if the thread is released to the outside.

2. Brownian motion and adaptability of electronic structure caused biochemical reaction

Since a carbon atom is possible to occupy many kinds of electronic structure, it makes many kinds of organic molecule. Adaptability of atom for circumstances in water makes chain reactions. The chain reaction in water makes an organization of chain reaction. That is the biochemical reaction. The size of first creature is small and it does not need to walk around, because the Brownian motion due to energy of temperature makes possible to change the neighboring atoms. And the small cell is able to interact with neighboring atoms sufficiently, because the ratio of surface to volume on a small cell is large.

3. The birth of the creature of which heredity is central dogma

The creature adapts to the surroundings. So the same unicellular organism is born in the same environment. If the cell divides the work, it can do it more efficiently. Each cell in such society holds many of fundamental activities with everyone and activates a special function. If a creature evolves the mechanism of reproduction, it will prosper. But the facilities to reproduce the protein must reproduce in each cell of cell division system.

A thread of protein is reproduced in the cell from the RNA that is made as a mold of spiral thread state of the protein. The DNA is made as the mold that reproduces RNA in the cell. When a cell becomes big the range of Brownian motion becomes narrow. Then, the eukaryote of which heredity is central dogma appeared on the earth. It stores the thread of long DNA in a nucleus, and it makes possible to possess many possibilities such as cytoplasmic streaming in a cell.