

*Materials of the Conference*

**STRUCTURAL BASIS OF HUMAN LIFE**

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In the base of human life is circulation of fluids with different composition: cell production, motion in tissue channels, connective tissue and vessels, filtration from capillaries and reverse motion with conservation of connection with external environment. The circulation is organized by proteins and their complexes with different substances (proteins, carbohydrates, lipids, nucleic acids and another), including cells (polyprotein complexes capabling to self-reproduction). Their polyformed networks cover water solutions of inner environment and convert them into jellies with different solidity, regulate their composition and motion (gel $\leftrightarrow$ sol) by integral gradient of

physiological activity of cells and tissues (oncotic, osmotic, hydraulic and mechanic pressure), form skeleton of intracell and intercell spaces, walls of tissue channels and vessels, divide spaces between cells and border tissues (epitheliums, mesotheliums, endotheliums) on polyformed compartments with local features of structure. Human development is accompanied by changings of his circulatory system accordingly complication of organism structure: division of moving, changing inner environment on polyformed compartments and connective channels creates conditions for local concentration of different proteins and cells in their walls, specialization of their changing and more effective functional cooperations (proteins, cells, tissues, organs, systems, apparatuses).

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