

INFECTIOUS DISEASES

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Immune mechanism as the mechanism maintenance stability of both internal energy of an organism as well as internal energy of cells of an organism

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Biophysical mechanism of immune system of an organism is dependent on the immune mechanisms of all cells of an organism. The interactions of cellular transport across cellular wall promote stability internal energy of a cell via an extracellular chemical potential and an intracellular chemical potential which induce different electrical charges on external cellular membrane and internal cellular membrane of a cellular wall. Thus the formed different cellular capacitors into cellular wall are functioned. Just the mechanism of mutual interactions between cellular capacitors of all cells and an organism promote remote reactions across distance for immune responses on strange objects. The interactions between nuclear processes, due to nuclear capacitors, and mitochondrial processes, due to mitochondrion capacitors, determine stabile basophilic chemical potential in cytoplasm, i.e. stability cellular Internal Energy. Interactions between all cells of an organism occur due to remote reactions across distance as the results of cellular capacitors operations via production of resonance waves. Interactions between cellular capacitors of cells maintain common stability of Internal Energy, according to first law of thermodynamics, both in cells and in an organism. Penetration of strange high-molecular substance into an organism creates local change of chemical potential and promotes remote reactions across distance of cellular capacitors via resonance cellular waves on common molecular wave of strange high-molecular substance, due to the wave function of any molecule which is determined as the total wave functions of the nuclear orbitals, according to Schrodinger equation of linear combination of atomic orbitals (MO LCAO). The forming resonance waves cause attraction of the immune cells to strange high-molecular substance and create the contact reaction of decomposing the high-molecular substance of the strange object, ruining it. Biophysical mechanism of immune cells, remote reactions transit into contact biochemical immune reactions for decomposition of the strange object.

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