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Genetic mechanisms of development an organism from its birth to death

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The mechanism forming and development of a human eukaryotic organism from the single pluripotent cell was described from the point of view of thermodynamics, biophysics, and biochemistry. The metabolic mechanisms of an organism during its life are subjected as to outer influences from surroundings as well as to inner influences. An organism expends some energy from Basic Internal Energy which is stored energy in stem cells sequentially in Basic stem cells → Totipotent stem cells → Pluripotent stem cells → Multipotent stem cells → Oligopotent stem and then distributing between cells various types and leading to cells' proliferation. However, this expenditure Basic Internal Energy results in senescence of an organism. Just mechanisms of genomic processes activity are the links of mechanisms stem cells operations which cause advance an organism during its life. In a developing embryo, stem cells generate differentiation into all the specialized cells forming corresponding tissues (ectoderm, endoderm, mesoderm etc.). These transformations of stem cells maintain the stability of each tissue of an organism, such as blood, skin, intestinal tissues etc. These transformations of stem cells are the potency of obtained energy which specifies differentiation into different cell types of the stem cell. Also, there were described mechanisms Gametogenesis, impregnation ovum by sperms and fetus growth from single cell considering flows energy from stem cells to cells types which cause transition diploid cellular division through mitosis into haploid cellular division through meiosis and back into diploid cellular division through mitosis. The genesis and development of an organism were explained using famous Prigogine theorem and Glansdorff and Prigogine theory sharing into such stages of human life development: born of an organism, babyhood, childhood, young age, juvenile age, middle age, full age, elderly age, old age. There was estimated levels of metabolic activity of each stage of human life. Also, all stages of human life development were considered via energy flow which generates cells developments through stem cells into cells types. The mechanisms of these transformations cells were described from point of views of thermodynamics, biophysics, and biochemistry. In a development babyhood and childhood, stem cells exert expression metabolic processes operations stimulating hormonal processes and immune defensive processes. In a development young age years and juvenile age years, stem cells continue exertion metabolic processes operations stimulating hormonal processes and immune defensive processes as well as forming sex organs, sex characters and Gametogenesis with possible generating fetus cells which receive energy from mother's stem cells. In a development middle age years and full age years, stem cells continue maintenance stability Internal Energy an organism, its hormonal and immune functions. In elderly age years, stem cells have less energy than in middle age and full age for continue maintenance stability Internal Energy an organism, its hormonal and immune functions. In aging organisms, stem cells have the insufficient energy for continue maintenance stability Internal Energy an organism, its hormonal and immune functions.

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