

## NATURE OF ENERGETICAL TRANSFORMATIONS OF MITOCHONDRIA AND CHLOROPLAST

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Physical mechanism of functioning of mitochondria and chloroplast is identified with the phenomenon of irregular series of colloid chemistry.

Идентифицирован физический механизм функционирования митохондрий и хлоропластов с явлением неправильных рядов коллоидной химии.

*Key words* — mitochondria, chloroplast.

In oscillating regime of functioning of mitochondria and chloroplasts the conformation of ferments, pH, permeability, electrolyte composition, potentials, form, sizes, etc. are changing. The basis of these changes is the process of structural recharge of frames of electric double layers of energotransforming membrane [1, 2].

Various types of charged states of membrane of cells and organelle in a standard and pathology are shown on the fig. 1. Similar structures are



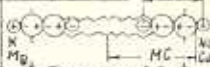
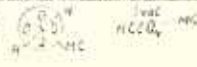
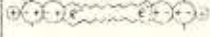

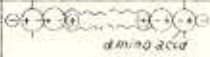
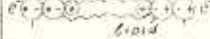
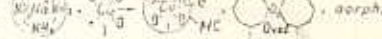
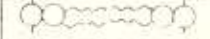

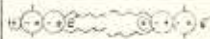

N	Summed	Type of membrane	Region of existence	Complexes
1	MC <sup>+</sup>	Inside Outside 	muscle	 factor of electric charge less energy consumption
2	MC <sup>-</sup> -MC		Highly dil. lum. cells, neuron cone	$H_2SO_4(0.1), H_2S$ 
3	MC <sup>-</sup> -MC			
4	MC <sup>+</sup> -MC <sup>+</sup>		Sarcomats, rod	valonizime enafates, $0(NH_2)-CuCl_2$ $H_2O_2$ $H_2O_2$
5	MC <sup>-</sup> -MC		Electro-conductive super-conductive	 porpharans
6	MC <sup>-</sup> -MC			
7	MC <sup>-</sup> -MC		Galvanic element Accumerobacteris Beta, Alpha fibrinase	MC - molecular composition DL - electric double layer
8	MC <sup>-</sup> -MC		Galvanic element Non-malignant lum cells	

Fig. 1. Types of charged states of membrane cells and organelles.

discovered in complex combinations, which has brought to light the constancy of element valency.

On the fig. 2 the hypothetical diagram of mitochondria and chloroplast function in the frames of irregular series is shown.

Today energization of mitochondria is imagined as accumulation of  $H_2O$ , Ca, Na, ADP, Pi,  $O_2$ , feeding substrates, etc. Then H is released, the carbon skeleton is transformed into  $CO_2$ ,  $H_2O$  and ATP are synthesized. The released energy is spent on synthesis, ATP in an unknown way. In phenomenon of irregular series the change of electrolyte

concentration is the lever of transformation  $-MC \rightleftharpoons +MC$  [3]. The facts of biology testify about functional changes of electrolyte composition of organism, cells, organelles, mitochondria, chloroplasts, double spiral of DNA, etc. in accordance with the phenomenon of irregular series and

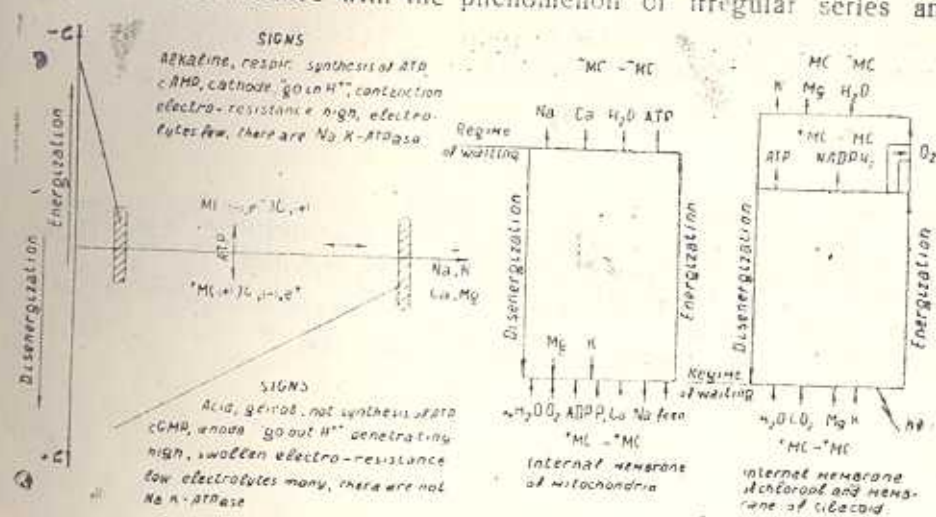


Fig. 2. Diagram of work of mitochondria and chloroplast in accordance with phenomenon of irregular series.

oxidized reactions, which are accompanying it. Behind this little known phenomenon is hiding one of basic laws of living and lifeless nature, which is still necessary to understand and formulate in a correct way.

The disintegration of feeding leads to the accumulation of products in which the sham cations  $Ca$  and  $Na$  are transformed from  $+M(\oplus)C, \ominus, e$  into  $-M(\ominus, e)C, \oplus$ , and are thrown out from matrix, moving thus the concentration of electrolytes to the left.

After recharging into  $-MC$  of both membrane monolayers, the transformed ATPase synthesizes the ATP, taking up the stored energy and excluding its thermal release. The protoxidation of incubation medium is connected with recharging of both membrane monolayers from  $+MC$  into  $-MC$ , and not with the release of  $+H$  from matrix. In disenergized state matrix is acid, that is why the observed absorption of medium takes place. The existence of electron-transporting chains is becoming a problem. It is important to notice, that energization and disenergization disagree with presentation that is assumed in our days. In chloroplasts and disks of rod the same processes take place taking into account the heightened sensibility  $+MC$  to radiation.

Tilacoid space (anode) must be connected with outer environment for formation of galvanic element compartments  $+MC - -MC$  and release of  $O_2$ .

Electrolytical composition of mitochondria-new-comers is the same as that of neuron, etc., so called normal cells. Without an additional, specialized unscrewed membrane, mitochondria would be founded in an antagonical surrounding and couldn't function. The same can be said about other doubled membranes. It can be also stated, that charging and signs of charges don't reflect the real picture of manifestation of struc-

tural energetical state of membrane in the definition of potential of rest, action, etc.

In accordance with all this one can approximately formulate the living state. The phenomenon of life is a dirigible transformation of the structure of galvanical elements in two closed double molecular layers of membrane with difference in energy of ATP.

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