

DOI: 10.21767/2576-1412.100020

Anterograde to Adjusting, as System Organization of Localization of Arg-X of, Proteo-Processing in the Topological Associated Ensembles of Karyogenomics Suprastructure Interphase Nucleus, at Induction of Growth Morphogenesis of Mature Germs of Wheat

EA Ivanova*

Ufa Institute of Biology, Russian Academy of Sciences, Ufa, Russia

*Corresponding author: EA Ivanova

✉ Evilinaai@mail.ru

Ufa Institute of Biology, Russian Academy of Sciences, Ufa 450054, Russia.

Tel: 7+3472+356066

Received: March 15, 2018; Accepted: March 21, 2018; Published: March 28, 2018

Keywords: Organoids; Heteropolimer; Genetic

Commentary

Interphase of nuclear highly compartmentalized organoids, where chomone suprastructure occupy different territories that is dynamic and are not hardly envisaged. In this plan deep interest proceeds in works, on "Structural stability and morphogeny" [1]. Modern biology all more often began to pay attention to the dynamic transitions of topological processes of supermolecules in heteropolimer suprastructures, from position of the programed self-organizing information based on uncovalently, intermolecular cooperation [2]. It is known that all genome is packed within the limits of borders of nuclear. By such method, that the areas of genome remain accessible for the dynamic co-operating not only with the nuclear microenvironment of internal regulative factors but also by possibility to carry out the regulator anterograde and retrograde co-operating with cellular organoids.

Presently, all more obvious the necessity of understanding of intracellular polygenetic organization and her realization becomes for subcellular organoids at implementation of vital processes of vegetable organism. This knowledge is included in the digit of complex problems of questions of storage, realization and inheritance of genetic information [3]. From the moment of discovery in mitochondria of own DNA became clear that organization of this genetic material substantially differs from organization of chromoplasm. The point of view is lately widespread, that in mitochondria it is needed unit of inheritance of genome to count not mtДHK, and mitochondria chromosome [4]. However, in respect of data of mtДHK plants, then them extremely small, because, it is related to more difficult organization of mt- genome and, first of all, with the extraordinarily largeness of mtДHK (some kinds have more than 1 million s.n). The Molecular-genetic analysis of such mtДHK

requires more difficult experimental going near the analysis of mt-genome in the cells of this group of organisms.

In hired as a model object of researches the mature seed of hexaploid are taken, cariogenome wheats Mironovsky spring from a gene pool VIR. Presently, with the purpose of penetration in new essence of cognition of deep features of research object, a term is entered "kariotipe", specifying his genome organization and characterizing systematic unit (family), uniting the group of views of kariological of the one-type [5]. Such going near the analysis of morphogenic features of object of researches is needed. Because to establishment of stability of arising up kariotipe, in each of initial ancestral genomes, most paralogism genes are lost or inactivated. All these events, undoubtedly, are associated with a mitochondrial genome. It should be noted that the specific of the modern stage of development of "genomics" is built on model plants with a small genome. Difficulties of study of hexaploid genome consist of that his size makes 16000-18000 million s.n.

The mitochondrial genome of plants has difficult organization also. Therefore, in this case, logically to confront researches of co-functionalities of intracellular total genome from position of proteomics. In this connection, the self-optimizing topological associated chromosome blocks in morphogenic processes acquire the aspect of consideration at biochemical level of supramolecular ensembles that eat, "chemistries of the programed information-

carrying molecules" [2]. Such look is needed for bio informative science that with the purpose of understanding of base basis of conformities to law of associate intracellular development develops effective informatively-computer technologies, coming from that sign of stability an interactive genic network is the basis of - the coordinated expressed genes. Connection between the blocks of genic networks is carried out by signaling molecules. In this case, particular interest presents an arginine. Because, arginine rich histones on amino acid after birth.

Because, arginine rich histones on an amino acid sequence - evolutionary stable proteins, that testifies to their important role in maintenance and realization of genetic information at eukaryotes. The analysis of the DNP-complexes distinguished from cleared mitochondrial allowed to estimate the co-localization of individual albuminous molecules with DNA [4]. For mitochondrial of plant cell the fusiform of mt-chromosome is characteristic. A calculation over of amount of nucleoides is usually brought on a cell, but not on mitochondrial. Because, mitochondrial in many cells look as spherical discrete little not bodies, and have a form of "mitochondrial network" constantly changing the form from regularly what be going on confluence - crushing (fusion/fission). Such state of mitochondrial is characteristic for young, actively divided cells.

By an aim, presented work, there was determination of spatio-temporal (0h→3h→6h→) localization of Arg-X of proteases-activity, topological associated compartments, interphase of chromatin matrix, as a possible navigators outpost, to the anterograde adjusting in intracellular alarm cooperation of internodes induction of growth morphogeny of mature germs of wheat.

The topological associated ensembles of compartments interphase of chromatin matrix were distinguished on the basis of salt gradient on patents [5]. This supramoleculars are heteropolymers structures: nucleoplasm (NP), chromoplasm unfirmly--(Ch-I) and durable knitted (Ch-II) with a nuclear matrix (Nuc. mat) and actually nuclear matrix. It is shown that in tissue of mesocoty in the period of initiation of growth processes, due to tension of cells, the inside the clock rhythm of Arg-X of protease-active zones changes, during dynamic reorganization of the topological associated blocks of interphase of chromatin matrix. Physiologically, induction of growth morphogeny in mesocoty, this period, is, change of preceding form, because of origin of mechanical pull of the fluently deformed cellular layers under influence of factors of environment. Maybe, initiation of Arg-X of protease-active in the topological associated blocks of interphase of chromatin matrix of mesocoty during the period of active absorption water: 3h→6h is characterized by the formation of a signal intranuclear navigators outpost, not only in connection by the conformation reconstruction of interphase matrix but also by appearance of the alarm short Arg-X peptides influencing on the anterogradnay adjusting. Fundamental bases of experimental biochemistry in area of cellular nuclear of plants were stopped up in Ufa of VG Konarev [6], as continuation of scientific school of NI Vavilov [7]. Presently consideration of questions of self-organization of difficult genic networks in the polygenetic intercellular systems passes to the digit of analysis of supramolecular biochemistry [8], where the worked out experimental approaches can be interesting and for mitochondrial proteomic and also bio informative, young and interdisciplinary, sciences on the whole.

References

- 1 Logos M (2002) Tom structural stability and morfogenes.
- 2 Len Ch-M (1998) Supramolecular chemistry.
- 3 Konstantinov YM, Ditrich A, Veber-Lotfi F, Ibrahim H, Klimenko ES, et al. (2016) Import of DNA in mitochondrye. *Biochemistry* 81: 1307-1321.
- 4 Kolesnicov AA (2016) The mitochondrial genome. The nucleoid. *Biochemistry* 81: 1322-1321.
- 5 Ivanova EA (2017) Arg-X proteo-processing as model system for organization of karyogenomics Interphase chromatin of mature germs of wheats, formed in the conditions of cold stress. *J Stress Physiology and Biochemistry* 13: 65-73.
- 6 Konarev VG (1966) *Cytochemistry and histochemistry of plants.*
- 7 Konarev VG, Vavilov NI (1991) Problems of kind is in the applied botany, genetics and selection.
- 8 Stid Dch V, Etvud Dch L (2007) *Supramolecular chemistry (Supramolecular biochemistry).* MIKC Akademkniga 2: 416.