

## **Methodological aspects of the study branch of science histology (as electron microscopy) under the formation of a new technological order (Russia, the second half of the XX century - the beginning of the XXI century)**

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After analyzing the obtained during the investigation, the information we can talk about the existence of several major periods in the development of electron microscopy of the XX century in Russia. The first period is descriptive, on the basis of works on the history of certain biological sciences, cytology, histology, as well as the basic approach to the presentation of their main methods [E.M. Vermel, 1970; R.F. Kapustin, A.A. Gorbach, 2014], which states that no matter how improved the microscope, he would not allow to penetrate the secrets of cell morphology, if not at the same time to improve the technique of material processing, machinery manufacturing "microscopic sample» [Z.S. Katsnelson, 1963]. Destinations many studies have allowed through the use of modern methods of microscopy to link all stages of development of an organism with certain cell structures [L.Y. Blyakher, 1968]. The next period is associated with the development of technologies in the improvement and dissemination of electron microscopy. There has been a real surge of new directions in mikropostroenii are absorbed microscopes that meet all modern technical requirements [B.K. Ioannisianni, 1960; M.P. Panfilov, 1970]. Out of electron microscopy in the sphere of large-scale production and export to the world markets, identified the third stage of development of electron microscopy. Methodological analysis of the results allows us to determine the following main tendencies of development: use of nanoelectronics, the ability to explore the structure of organisms; in the formation of a new technological order play an important role public investment in microscopy, which form the basis of the spread of this method in the world and Russian economy [S.Yu. Glazyev, 2009]; scientific justification for ways to optimize physical resources and production processes, which are of a purely applied character, its practical importance can be manifested in the following forms: nanoelectronics, nanomaterials, nanobiotechnology and nanoequipment [S.Yu. Glazyev, 2010]. Thus, such a timely practical development can provide investment and the leading position of this sector in the crest of the wave of a new economic order.

### Keywords

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Electron microscopy; economic order.