The aim of the work was to analyze the range of mathematical methods and to choose the most
prospective ones from the point of view of application in biology and medicine. After analyzing of approximately 200 current publications, a list of respective methods was completed. This list includes both the most recent, intensively developed methods as well as traditionally used ones — mathematical statistics, stochastic methods, regression analysis, and others. From the first group the methods of cluster analysis, artificial neural networks and image processing were subdivided. A description of each of these methods and examples of their application in practice are given. A separate group is dedicated to complex modern works, in which the problems requiring the complex application of several methods are present. In conclusions a brief assessment of the methods of cluster analysis, artificial neural networks, image processing methods are given as well as recommendations for their practical application.

**Key words:** processing, data bases.

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{spoiler title=References}


10. Vecht-Lifshitz S. E., Ison A. P. Biotechnological applications of image analysis: present and
future prospects. 


