

Ie. A. NASTENKO

## **Mathematical Statistic in Life Sciences. What is Desirable?**

*National M. Amosov Institute of Cardio-Vascular Surgery,  
National Technical University of Ukraine 'Kyiv Polytechnic Institute'  
(Intercollegiate College of Medical Engineering), Kyiv, Ukraine  
E-mail: nastenko@inbox.ru*

The problematic situations at application of mathematical statistics in biomedical researches, including the gene investigations, will be considered.

Some physiological models of human organism oxygen transport and hemodynamic obtained with special methods of cluster analysis will be discussed.

The cellular automaton of mathematical model of capillary network developed on the base of obtained physiological characteristics will be presented and demonstrated its very complex behaviour.

Statistical recognition of real physiological characteristics from archived data samples allows us to transform the scientific researches in form of dialogue between biologists, physicians and statisticians.

Such approach allows to increase the safety of clinical trials and researches, decrease the expenses on projects and to increase an efficiency of scientific research.