ID: 2015-12-28-T-5688

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Тезис

## History of Medicine: From the Past to the Future

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Historically we can distinguish three important stages in the development of medicine. During the first stage which lasted for tens of thousand years, superstitions, witchcraft and rumours prevailed in medicine. In that period some useful herbs and chemical substances, such as aspirin, were discovered, but there was no any scientific method of searching new medicines and ways of treatment. The second stage of medicine development started in the 19<sup>th</sup> century when microbe theory of diseases appeared and the idea of hygiene was formed.

The third stage of the medicine development is molecular medicine. It penetrates inside a substance to atoms, molecules and genes. The things that seemed impossible some years ago get a realization in life today. In scientists' opinion mankind is speeding up in the sphere of scientific, fundamental, technical and medical discoveries. Nanomedicine development is closely connected with revolutionary achievements in genomic and proteomic areas which allowed scientists to approach to understanding of molecular principles of diseases. Nanomedicine is developing when genomic and proteomic data combine with the possibilities of creating materials with new qualities on the nanometric level.

Nanomedicine as an interdisciplinary branch of medical science is at the stage of formation at present time. Its methods are only coming out of laboratories and most of them still exist only as projects. However most experts think that these methods will become fundamental in the 21<sup>st</sup> century. The National Cancer Institute in the USA in the nearest time is going to apply nanomedicine achievements in treating cancer. Some of scientific centers abroad have already demonstrated experimental models in the spheres of diagnostics, treatment, prosthetic appliances and implantation. The scientists from Michigan affirm that with the help of nanotechnology it will be possible to insert microscopic sensors that will warn of signs of radiation and the development of illness. The nanotechnologies that are applied at present time are harmless and as an example we can see nanochips and sunproof cosmetics produced on the basis of nanocrystals. Such technologies as nanorobots and nanosensors are still in process of development.

Key words: history, medicine, nanomedicine