FORMATION AND DEVELOPMENT OF BIOMEDICINE

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Annotation: The historical aspects of the development and formation of views on biomedicine as an integral direction combining biological, medical, physico-chemical sciences and providing the formation of the foundations of clinical medicine are considered.

Key words: Biomedicine, historical background, nonspecific resistance, prospects.

Аннотация: Рассмотрены исторические аспекты развития и формирования взглядов на биомедицину как целостное направление, объединяющее биологические, медицинские, физико-химические науки и обеспечивающее формирование основ клинической медицины.

Ключевые слова: биомедицина, исторический фон, неспецифическая резистентность, перспективы.

Medicine, as a complex of fundamental and applied aspects of knowledge in the practice of a doctor, is a set of measures to strengthen and preserve health, prevent and treat diseases and prolong people's lives. It covers all aspects of human life in the form of a system of scientific knowledge about his health and diseases, the conditions of individual and social life, in which the biological and social constitute an interaction of unity and contradictions. Medicine, as a complex of fundamental and applied aspects of knowledge in the practice of a doctor, is a set of measures to strengthen and preserve health, prevent and treat diseases and prolong people's lives. It covers all aspects of human life in the form of a system of scientific knowledge about his health and diseases, the conditions of individual and social life, in which the biological and social constitute an interaction of unity and contradictions. Medicine developed thanks to the efforts of scientists and thinkers, many of whom were not doctors. Aristotle (384-322 BC E.) was not a doctor and did not treat patients, but gave an anatomical description of animals and, with the permission of his student Alexander the Great, performed a section of corpses. Aristotle identified four commonalities of man and animals: the ability to move,

reproduce, the need to eat, sensitivity to external factors and the ability to think. But unlike animals, man, according to Aristotle, has a thinking soul, i.e. both reason and reason [1,2].

An outstanding scientist was Bishop Isidore (570-636) from Seville, who wrote 20 volumes on the human body, health and diseases. The greatest genius of the Renaissance is undoubtedly Leonardo da Vinci (1452-1519). He is not only an artist, mathematician, engineer, but also a biologist and anatomist, who made many sections of animals and human corpses during the years of inquisitorial repression that were vital for such work, and gave more than 800 anatomical sketches with detailed explanations, as well as laid the foundations of ergonomics. During the Middle Ages, the foundations of biomedicine were laid by Arnold de Villanova (1235-1311). Girolamo Frascatoro (1478-1553), Miguel Servet (1511-1553), Andrei Vesalius (1514-1564), Ambroise Pare (1516-1590), Li Shi Zheng (1518-1592), William Harvey (1578- 1657), etc. Their works show the morphological proximity and unity of the biological processes of various human and animal organs. Marcello Malpighi (1628-1694) and Atbrecht von Peeler (1708- 1777), unaware of the biochemical foundations of blood circulation, respiration and digestion, with exceptional insight gave their comparative descriptions in humans and animals, as well as general biological concepts of excitability, sensitivity and automatism. Anthony van Lievenhoek (1632-1723). Lazzaro Spallanzani (1729-1799), who created the first microscopes, and a naturalist professor from sunny Calabria, were the first people to look at the "animacules" of the world of microorganisms. Spallanzani proved their reproduction by division. [3,4]. The rapid development of biological medicine and the rapid differentiation of related sciences in the XX century did not arise by themselves.

The aspiration to the sky is not predetermined by the timid deeds of the Great Doctors of the past. Even if we take the works of Paracelsus as reference points for building the biological foundations of medicine, we will see that they are based on the use of some and the rejection of other views of his predecessors. The evolution of science is akin to the evolution of life. Like Okama's razor it cuts off everything that does not exist [5].

At the same time, in the interpretation of the results obtained with the help of ultra-modern computerized devices, the ideas of the great predecessors of science of today, whom we respectfully call the line of Great doctors, are overlooked. 17 Июль 2021 22-қисм Тошкент During the late Middle Ages, the connection between medicine and chemistry was identified, the iatrochemical direction was born, which played a significant role in the development of medicine of the XVII—XVIII centuries, which received such medicines as opium, cinchona bark, camphor, etc. The critical spirit

permeates all branches of natural science and biomedicine. "Medicine plunges the healthy into illness, and the sick into death," the Italian poet F. F. stigmatized scholastic doctors in the XIII century.Petrarch. Biomedicine is closely connected with fundamental biology, which establishes general and particular laws inherent in life in all its manifestations and properties (exchange of substances, reproduction, heredity, variability. adaptability, growth, mobility, etc.). There is no doubt that biomedicine is connected with developmental biology, which studies the mechanisms and driving forces of individual development of organisms. This direction was formed by the middle of the XX century on the basis of embryology. cytology, genetics, physiology and molecular biology. One of the most important achievements in this regard can be considered the creation of the theory of receptor relationships. Substances with a rigid structure have a high selectivity according to the principle of complementary to a certain type of receptors [6].

For thousands of years of the development of natural sciences, the "dissect and describe" approach has dominated. If you study the object without breaking it, it remains to observe the reactions. It is known that the most important processes take place at the interface of media, where "tensions are created between opposite poles, between soul and body, between content and form, between particles and waves, between numbers and sensations." This historically predetermined the following maxim: "act and see." However, the result of this approach is not always obvious. We often encounter the phenomena of invariance or insensitivity. when the information received is not classified, although it is understood and realized. But, without getting into the right "cell" of scientific ideas, it does not initiate reflections in the right direction, does not open horizons. It seems to be a highlight, but the result is silence [7,8]. That is why we can say that modern medicine is not only about technologies and the skill of healing. This is primarily the use of achievements and constantly updated knowledge of related sciences that make up the integral field of biomedicine.

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