

ALCHEMISTS' CONTRIBUTION TO THE DEVELOPMENT OF PHARMACY

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Introduction. Alchemy is a peculiar culture phenomenon, especially widespread in the West Europe in the period of Middle Ages. Alchemy period in the chemistry history and pharmacy covers twenty centuries (IV–XVI ages) and takes origin from places where Latin formed and developed. The primary alchemists' goal was transformation ("transmutation") of basic metals to noble metals, using image substance - "Stone of Wisdom". In the process of their activity alchemists have disclosed first elements of chemical knowledge. Without even knowing, they have found a lot of helpful substances which down the ages were put in the service of humanity.

Aim. The purpose of this work is to try, based on researches in the field of the history of alchemy, to characterize the territorial frameworks in the context of the historical epochs in which alchemy originated and developed, with consideration of the prevailing alchemical philosophy and world view, as well as the contribution of well-known alchemist scientists with the purpose of a more complete explanation of the main directions of the development of pharmacy in general. However, the main accent in this work has been placed, nevertheless, on a historic period of Europe.

Materials and methods. In the course of writing the work different methods were used, particularly: research and analysis of literature, generalization, comparison, induction and deduction methods.

The material for the study was the work of researchers in the history of chemistry and the ways of its development, most of which contain a description of the alchemical period and represent a wide range of alchemical processes, detailing and exploring all kinds and forms of alchemical vessels, signs and much more. At the same time, it is extremely rare to find a generalization of materials within the framework of the direct contribution of alchemy to the pharmacy, which in fact became the main direction of this study.

Results and discussion. To understand the essence of the influence on the pharmacy of its alchemical period, it is necessary to be deeper into a history that goes back to ancient antiquity.

Alchemy prospered only in the countries, where carried out the regularly and stable exchange of goods and money, how it was in the Hellenistic or Islamic

States and later, in Renaissance era, in Europe.

On the ground of the facts, presented in the work, it can be concluded that, without knowing the substance of effects and processes, alchemists of all historical eras carried out a great experimental work. They set as their main goal the transformation of cheap metals into gold, often aiming their efforts at obtaining a universal leaven that would help transform one substances into another.

Alchemists were well educated people, who know different languages. They revealed sulphuric, benzoic, nitric acids, corrosive sublimate and a number of another substances. As a result of their experiments, they developed and improved such processes as: precipitation, filtering, crystallization, constructed appliances for receipt of distilled water, alcohol, essential oil and turpentine. With the object of getting more concentrated distillation products of spirits, alchemists applied thrice-repeated and fivefold distillations.

All of this promoted development of the chemical and drug production, as well as had a great effect on development of a lot of sciences. However, a lot of alchemists' misconceptions for some time directed pharmacy to the wrong way. The idea of panaceas and elixirs of immortality did not leave experimentalists for a long time, that allowed them constantly to search and develop.

Later, on the ground of enormous factual material, that was collected by alchemists, formed a recent trend in the medical and chemical field, that gave birth to the modern pharmacy, known formally as iatrochemistry and medical chemistry. In general, rational courses in alchemy - iatrochemistry and technical chemistry – have achieved quite significant experimental successes and provided a base for scientific chemistry, the formation of which began in the middle of the XVII century. Alchemical traditions were preserved in the science for a long time. Nowadays, this field is presented in the form of union of alternative medicine with phytotherapy.

Conclusions. All alchemical period is characterized by the development of practical and craft chemistry. In each of its fields one can see the rudiments of positive knowledge. Without scientific evidence of the processes taking place in nature, the alchemists strived to penetrate into its secrets by countless experiments and thus paved the way for the formation of pharmacy and medicine. To carry out all this knowledge through the ages helped the Latin language, which has its own unique history and, ironically, became the main element in the word formation of the modern world.