

INTELLECTUAL RESOURCES: ESSENCE, ACTUALITY AND SPECIAL ASPECTS IN PHARMACY

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Introduction: the current stage of drug production is characterized by intensive development of science and technology, the expansion of intellectual property, rising of the role of science in the development of society and the improvement of the productive forces. In this connection, exactly intellectual resources have become a major factor in the development of the pharmaceutical industry.

Purpose: to analyze the essence, the structure of intellectual resources in pharmacy, as well as indicators of their evaluation.

Methods: it was analyzed the statistics of Ukrainian patent office, the State enterprise “The State Expert Center” of the Ministry of Health of Ukraine, laws and government regulations of Ukraine, the data from the World intellectual property organization. It was studied materials of congresses, symposia, scientific conferences.

Results: intellectual resources are the most important resources used by companies for the production of economic goods. High rates of production and dissemination of knowledge, a great need for innovation define the high significance of intellectual resources today. Unlike other resources, intellectual resources have universal properties to improve efficiency use of resources at all stages of their life cycle. It will be appreciated that the intellectual resources in pharmacy are total of accumulated knowledge, skills, innovation technologies, commercial information that can be used for the creation and production of drugs, including innovation, in order to improve the quality of life of the population. Science based approaches to the formation and management of intellectual resources are principal conditions for innovation development of the pharmaceutical company in a competitive market.

It should be noted that in Ukraine, despite the existence of a range of programs for innovative development, the share of innovative enterprises, volume of expenses for basic and applied research and development which were conducted at research institutions and higher educational institutions in recent years has steadily reduction. Such a situation is typical for the pharmaceutical industry. This is evidenced by the following data: the share of generic drugs compared with innovative products in Ukraine is over 90 % , compared to Russia – about 80 % , USA – 25 % , Germany – 35 % , Great Britain – 55% , Poland – 61 % , Japan – 22 % , France – 35 % . In this regard, the development of methodological approaches to the management of intellectual resources in the domestic pharmaceutical companies, research institutes and higher educational institutions of medical and pharmaceutical profile will contribute to the preservation and growth of their scientific potential, to ensure the competitiveness of domestic drugs, as well as preservation the “drug independence” of Ukraine.

According to E. Bruking, intellectual resources include several elements: intellectual property, human resources, infrastructure assets, market assets. It should be noted that the intellectual resources in the pharmacy don't have a science-based assessment methodology. But, as a necessary part of the transition to innovative development of pharmacy, they require the establishment of appropriate methods of their assessment. Let's consider these indicators of intellectual resources in the pharmacy.

It was established that the following indicators as assessment criteria of productivity of intellectual property: the number of file applications for inventions, utility models, industrial designs, the number of received titles of protection, use traditionally. Take into account special aspects of the pharmaceutical field, it is necessary to analyze the main areas of patenting drugs according the ATC classification, the structure of the patent portfolio and trends of drug registration, the geographical structure of the patenting in order to identify advanced countries in the development of drugs, and the countries have the most receptive market, index of keeping a patent valid, etc.

Scientific potential is very important in pharmacy with the purpose of human intellectual resources increase. Ukraine has traditionally been considered a country with significant research potential in the field of pharmacy, internationally recognized research schools in the field of technology drug production, advanced training system. It is possible to evaluate human resources in pharmacy by use of following indicators: the number of graduate and doctoral students, the number of doctorate and master's thesis, the number of researchers, the number of publications, citation index in scientometric databases (Scopus, e-library, etc.), the number of published reports and abstracts at conferences, symposia, congresses in the field of pharmacy and medicine.

Infrastructure assets – those technologies, methods and processes that make the work of pharmaceutical companies, research institutions and higher educational institutions effective. In the pharmaceutical field there are the following indicators of infrastructure assets: the amount and structure of financing of scientific and technical work, the volume of scientific and technical work performed using one's own resources, the number of completed and implemented the scientific and technical work, the number of registered drugs including innovation drug, availability of data bases, methods of risk assessment.

Market assets is the potential that provided intangible assets associated with market operations, such as trademarks, license agreements, business portfolio. It is possible to evaluate the amount of finance received from the transfer of drug technology, the amount of finance received under contracts with companies to perform R&D in the pharmacy.

Conclusion: the proposed indicators as assessment criteria of productivity of intellectual property in the pharmacy will improve the objectivity of a complex evaluation of innovative development of pharmacy in Ukraine and the effectiveness of management decision making in the field of science. Analysis of publications has showed that the intellectual resources form the intellectual capital of pharmaceutical companies, research institutions and higher educational institutions and ensure their sustainable development and prospects.