

Medical Research Agency

<https://abm.gov.pl/en/news/209,Government-plan-to-develop-biotechnology-sector.html>
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Government plan to develop biotechnology sector

Poland needs to design and implement a coherent development plan for the biotechnology sector. Despite having a lot of potential, the resources disbursed to date have been scattered, and insufficient coordination and consolidation of activities has resulted in relatively low conversion of financial resources into tangible, product-service project results.

The period of operation under the conditions of the COVID-19 pandemic has further confirmed the need for a strong national biomedical sector, which translates into strengthening the country's drug security, the efficiency of the health care system and clear economic results.

With regard to the aforementioned needs, the Medical Research Agency has been entrusted with the task of designing the Government Plan for the Development of the Biomedical Sector in Poland in 2022-2031, for the implementation of which a budget of PLN 2 billion has been secured from two sources - the National Reconstruction Plan and the Medical Research Agency's funds from a grant from the Ministry of Health.

One of the key elements of the plan is the development of the country's biomedical sector through the creation of a friendly ecosystem, clearly defined development goals, universities, start-ups, scale-ups and mature companies, friendly laws and administrative services, and financing focused on supporting innovative projects that address strategic needs for the sector, with the potential for rapid commercialization and scaling.

The pharmaceutical industry is currently in the midst of a deep reorganization. Traditionally slow to adopt new technologies, the industry is undergoing rapid change thanks to the successful use of biotechnology and bioinformatics in treatment and diagnostics.

Currently, there is a so-called new wave of innovation in healthcare, which is mainly related to cell, gene, stem cell or RNA-based therapies. These trends are key factors in the development of the biomedical sector and a source for designing the directions of the biomedical sector in Poland. R&D activities in this sector, although they have already resulted in valuable and effective solutions, such as vaccines based on mRNA technology or CAR-T cell therapies, which are supported by the Medical Research Agency, are still high-risk activities and require large investment expenditures - including government support, cooperation of multiple institutions and specialists from many fields, specialized R&D infrastructure and an interdisciplinary approach," stresses

Medical Research Agency President Radosław Sierpinski, MD,
PhD.

The rapid progress made in the life sciences in recent years as a result of the accumulation of knowledge, research and experimentation, as well as the accelerating development of computer science, data processing and artificial intelligence (AI), is driving a new wave of bioinnovation, with potentially disruptive impacts on the economy, healthcare, agriculture or consumer products.

The growing global capacity to understand the genome and use bioengineering, thanks in part to the sharp decline in the cost of DNA sequencing and new techniques for gene editing and cell reprogramming, are broadening the prospect of improving disease prevention and treatment. New methods of automation, machine learning and the increasing availability of biological data are increasing the efficiency of research and development.

The government's Biomedicine Development Plan brings together a strategy of action to specifically support medical devices and innovative drugs, such as small-molecule drugs. More than half of the funds allocated in these activities are intended to support the increasingly dynamic development of companies engaged in innovative drugs or medical devices using artificial intelligence. This measure is also expected to lead to an increase in the relevance of the medical biotechnology sector in the national economy.

Innovative biotechnology and pharmaceutical companies are currently focusing on the use of information technology solutions in medicine and pharmacy. Intensive work is underway on tools for processing and analyzing large data sets using artificial intelligence and machine learning algorithms. 45% of start-ups and 36% of scale-up companies specialize in this area.

For the past 15 years, we have been developing projects in our country that can not only affect a significant leap in innovation in the Polish economy, but also allow more accurate diagnosis, as well as more effective and safer treatment of patients around the world - including, of course, Poles. Polish medical biotechnology companies have diverse competencies, including in the areas of small-molecule drugs, monoclonal antibodies, aptamers, small-molecule-monoclonal antibody conjugates (ADCs), therapeutic proteins (e.g., hormones), nucleic acid-based therapies, cell and gene therapies, nanocarriers, peptides or nucleic acids to address unmet health needs. They are also successfully developing diagnostic projects and technologies to support R&D processes. We believe that the Government's Plan for the Development of the Biomedical Sector in Poland, will take into account these broad competencies and allow to support work on completely new technologies and effective competition in the race with companies from all over the world, which will

permanently inscribe Poland in the global bloodstream of innovation in the biomedical sector," stresses Marta Winiarska, President of the Board of the Polish Association of Innovative Medical Biotechnology Companies (Bioinmed).

The implementation of the sector development plan, prepared by ABM, will be directed at seeking solutions with the greatest potential, which can have a fast path to commercialization and a real impact on improving the sector (including higher curability, lower costs, improved quality of life). Through the implementation of the plan, the Medical Research Agency will aim, within a decade, to make Poland a leader in the biomedical sector in Central and Eastern Europe, as well as to bring about the first Polish innovative drug.

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