



Future is Bright – Here and Now of Polish Biotech Sector

The biotech industry has been present in Poland for less than twenty years, with the first businesses emerging after the year 2000. The beginnings were very difficult due to the absence of infrastructure, lack of demand, shortage of competence and the investors' unwillingness to finance highly *capital-intensive* ventures. Nearly two decades later, the sector is enjoying the best time ever for conducting research as evidenced by continuously rising investment in science and the valuation of the Polish companies exceeding one billion Polish zlotys.

How big is biotech business in Poland?

According to statistical projections, there will be over 300 businesses operating in the Polish biotech industry by the end of this year. They will be employing over 12,000 persons, with research and development absorbing over one billion Polish zlotys in investment. The growth trend in biotech is global. Out of 50 companies classified as unicorns, i.e. start-ups whose valuation is higher than USD 1 bn, as many as seven come from the Life Science sector and Deloitte expects the value of the entire Life Science market to exceed USD 10 bn within the coming years. The Polish biotech's figures are less spectacular but it is not lagging much behind the world in terms of growth rate [1].

Many companies are growing in the Polish biotech sector. In addition to a number of undisputed market leaders, there is a whole group of smaller businesses that are aspiring market leaders for the time being. Potential global investors are also showing interest. However, given that the process of drug discovery and commercialisation is a long one, the investment is made primarily on the basis of the product's potential and R&D activities. Both corporate investment funds linked to the market leaders (J&J, Amgen or Pfizer) and the entities that have little in common with Life Sciences on an everyday basis are investing in biotech start-ups. Good examples include Google Ventures or Amazon that are active primarily in the US market.

Governmental priorities and the biotech leaders

In Poland, the prime minister and the Ministry of Health have also noticed the potential of biotech. Hence, the ideas to launch the Medical Biotechnology Institute and the Medical Research Agency. The Medical Biotechnology Institute (IB-Med) is to finance and conduct research into new drugs, whereas the Medical Research Agency is to pursue its own non-commercial clinical trials relating to rare diseases as well as therapies used in paediatrics [1, 2, 3, 4].

The biggest players in the Polish market include Selvita, Celon Pharma and Mabion closely followed by highly ambitious researchers from Oncoarendi Therapeutics, Pure Biologics or Captor Therapeutics.

There is no need to present Selvita to anyone even slightly interested in biotech in Poland. The company's shares have been listed at the stock exchange for a number of years now and it develops its drug discovery projects at an impressive pace. Following commercialisation of its first molecule, SEL24, the company concentrated on research on another drug hopeful, namely SEL120, which is currently at the stage of advanced pre-clinical trials. The company's management is ambitiously projecting the company's value at PLN 2 bn by 2021 [5].

From generic to innovation

On the other hand, Celon is a company that started with generic drugs to implement innovative projects after years. The Warsaw-based company funds its operations from the sale of a generic asthma drug. At the same time, it works intensively on original molecules in oncology, neurology and inflammatory diseases.

Oncoarendi, an innovative biotech founded by the researchers who worked for many years in the US and decided to commercialise their ideas in Poland, is also based in Warsaw. Oncoarendi conducts research in oncology, immune-oncology and rare respiratory disease therapies. The company had its IPO at the Warsaw Stock Exchange in 2018 [2, 6].

Some of the most interesting reports in the recent months come from the Lower Silesia province where two very ambitious biotech companies confidently looking into the future have their headquarters. One of them, Pure Biologics, debuted in NewConnect market towards the end of 2018. Researchers from Pure Biologics are working on antibodies and aptamers for potential therapeutic use, inter alia, in cancer immunotherapies.

The other company, Captor Therapeutics, is a biotech start-up with an extremely innovative and bold research approach, namely drug discovery research based on protein degradation. Only the biggest players in the Western European markets and in the US have embraced the challenge. Both companies have been noticed by the investors and have so far succeeded in raising R&D capital running into tens of millions of Polish zlotys, inter alia, from the National Centre for Research and Development (NCBR) [7, 8].

The Polish biotech industry has never been in a better position and this should be no mystery to anyone. The value of investment in the Polish biotech market is growing steadily, both in terms of public funding and international capital, with big pharma giants eyeing Poland. Owing to a sizeable pool of talents, Poland is able to demonstrate its research potential and the current developments suggest that there is still plenty of room for growth. If the current trends are maintained, we may say with absolute certainty that the future is bright.

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