

generation of toxic methane gas and bad odor, high energy consumption and slow reaction kinetics. Moreover, no valuable product is generated from these processes [2]. Bioconversion of waste/byproducts with microorganisms is a greener and sustainable alternative. In this regard, there is a rising interest in valorization of these wastes into value-added products such as astaxanthin. Astaxanthin is a renowned carotenoid antioxidant with huge industrial and economic value. One of the most promising natural sources of commercial astaxanthin is *Phaffia rhodozyma*. This yeast is able to utilize different carbon substrates including agro-food industrial wastes and as such it offers an opportunity to minimize environmental problems related to the disposal of these wastes while concomitantly reducing the production cost of natural astaxanthin.

References

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CURRENT STATE AND FUTURE PROSPECTS OF BIOTECHNOLOGY IN RUSSIAN FEDERATION*

Keywords: biotechnology, biotechnology market, trend, innovation.

According to Russian national standard GOST R 57095 [1], biotechnology is «the application of science and technology to living organisms, as well as parts, products and models thereof, to alter living or non-living materials for the production of knowledge, goods and services». This industry is a mixture of modern knowledge from genetics, molecular biology, biochemistry, microbiology, bioinformatics and its practical applications for creating innovative products.

Today, biotechnology is one of the most dynamically growing areas of science and technology. Potential benefits from its use can be found in the following fields: healthcare, development of new materials and alternative fuels, agriculture, food industry, environmental protection, etc.

Biotechnology is one of the leading trends in the 21st century due to its wide scope of application and huge space for further development. It is safe to say that conducting research & development (R&D) in the field of biotechnology, providing financial support to biotech companies and ensuring public access to their products are key tasks for any country in the world.

At the moment, the Russian Federation is not among the world leaders in the biotechnology market, but this situation may change in the future. Biopharmaceutics is considered one of the most developed biotechnological industries in our country, the most promising areas are bioenergy, industrial, food and environmental biotechnology [2]. In this article the main trends in the development of the biotechnology market in Russia and in the world are examined.

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A NEMATODE AS A MODEL TO INVESTIGATE ALZHEIMER'S AND PARKINSON'S DISEASES: POTENTIAL OF *C. ELEGANS* UNLOCKED?*

Keywords: *C. elegans*, Parkinson's disease, Alzheimer's disease, neurodegenerative disorder, nematode model.

C. elegans is one of the best and most preferred model system to study Neurodegenerative Disorders (ND) like Alzheimer's disease (AD) and Parkinson's