

**Division:** *School of Medical Biology*

**Academic programme:** *19.03.03 Biotechnology, Food Systems Bioengineering*

**Mode of study:** *part-time*

**Programme length:** *2.5 years*

**Programme level:** *Master's degree*

**Language of instruction:** *Russian*

**Programme description:** *The Master's degree programme is designed to form and develop competencies and practical skills in the field of creating new-format food systems, having a directed action in relation to reducing the risks of disruption of biological processes in the human body. The use of bioengineering methods as a tool for solving biotechnological problems when creating new food products allows students to master unique professional competencies.*

*The field of professional activity of graduates is connected with biotechnological production of new types of food products and food raw materials, functional foods, dietary (therapeutic and preventive) products, monitoring the quality and safety of foods, with the development of innovative biotechnologies in accordance with the state policy of the Russian Federation in the field of Healthy Nutrition of the Population and Bioindustry and Bioresources (BioTech2030) technological platform.*

*Professional competencies are aimed at:*

- *Creating technologies of acquiring new-format food systems using microbiological synthesis and nanobiotechnologies;*
- *Obtaining and applying enzymes, microorganisms, cell cultures of animals and plants, products of their biosynthesis and biotransformation;*
- *Biotechnologies of processing and disposal of industrial and agricultural waste and environmental protection;*

*The Master's degree has a number of advantages:*

- *Demand for graduates at food industry enterprises, research institutes, microbiological and biotechnological laboratories.*
- *Mastering practical skills in the field of development and production of biotechnological products using bioengineering methods.*
- *Opportunity to obtain world-class knowledge and practical experience at leading industry enterprises.*

- *Unique theoretical and practical module with the participation of world-class scientists and leading experts from key industry enterprises.*

**Main programme-specific classes:**

- *Convergent Technologies for Control of Biotechnological Processes*
- *Seminar on the Problems of Sustainable Use of Renewable Resources in Biotechnology*
- *Omics Technologies for Functional Food Systems*
- *Bioengineering of Nature-like Food Systems*
- *Bioinformatic Methods for Assessing the Composition and Properties of Food Systems*
- *Biosynthesis of Food Additives and Functional Ingredients*
- *Biodegradable Packaging Materials*

**Programme manager:** *Irina Yu. Potoroko, Doctor of Sciences (Engineering), Professor, Director of the School of Medical Biology*