



BELARUSIAN COLLECTION OF MICROORGANISMS AS THE BASIS FOR DEVELOPMENT OF BIOTECHNOLOGY

*Dr. Alena Ladutska
Institute of Microbiology BNAS
Minsk Belarus*

Biotechnology development in Belarus is a priority trend of scientific-technological activity supported by governmental programs

Institute of Microbiology, National Academy of Sciences, Belarus is a leading research center specializing in microbiology and biotechnology.

It coordinates implementation of several state scientific programs, including international task program financed by Euro Asian Economic Community



research areas

- Physiological-biochemical and genetic aspects of microbial applications in biotechnological processes
- Elaboration of biotechnologies for various industries, agriculture, medicine and environmental protection



AGRICULTURE

feed protein, aminoacids, enzymes, biological control agents for plant and animal species, microbial fertilizers, etc.

POWER GENERATION

Biofuels:
butanol, ethanol, biodiesel fuel, biogas, etc.

MEDICINE

drug substances and biopharmaceutic technologies

INDUSTRIAL BIOTECHNOLOGIES

FOOD INDUSTRY

yeasts, enzymes, sugar substitutes, food additives, ferments, functional and therapeutic nutrition products

PETROCHEMISTRY, EXCAVATION OF VALUABLE FOSSILS

reagents, biopolymers, preparations for oil extraction and biogeotechnology

ECOLOGY

biodegraders of pollutants, biosensors for environmental monitoring

COLLECTION OF NON-PATHOGENIC MICROORGANISMS DEPOSITED AT INSTITUTE OF MICROBIOLOGY – NATIONAL ASSET OF BELARUS

COMPRISES

- **bacteria,**
- **mycelial fungi,**
- **yeast-like fungi,**
- **bacteriophages**



Registered in the World Federation of
Culture Collections (WFCC)



STRUCTURE OF BELARUSIAN COLLECTION OF NON-PATHOGENIC MICROORGANISMS

Major collection fund

Incorporates over **2100** microbial strains from diverse taxonomic groups, **390** cultures are included into specialized depositories:



**Bank of
valuable
industrial
microorganisms
(185 strains)**



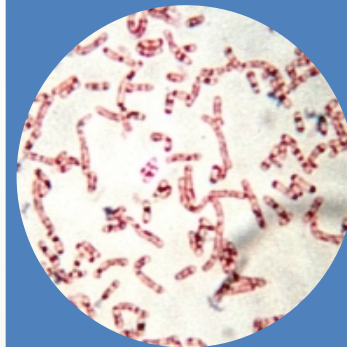
**DNA Bank of
valuable
industrial
microorganisms
(90 specimens)**



**micromycetes –
agents
responsible for
 biodeterioration
of construction
materials
(40 strains)**



**phytopathogenic
microorganisms
(100 strains)**



**microorganisms –
degraders of
xenobiotics
(65 strains)**

Specialized collections