

Institute of Microbiology and Biotechnology

MD.78.

Title

Procedures for obtaining *Spirulina* biomass – source of multifunctional remedies.

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Proceedings for the cultivation of cyanobacterium *Spirulina platensis* are proposed in order to obtain raw material for new anticancer, immunomodulatory, antiviral, antibacterial remedies.

The new proceedings include the cultivation of *Spirulina platensis*, using:

- *Cu nanoparticles (5nm) in a concentration of 3,15 ... 3.18 µg/L;*
- *Au nanoparticles (5nm) in a concentration of 8,8 ... 9,1 µg/L*
for the stimulation of biomass production and lipid biosynthesis.

As result of the proceedings application, the spirulina biomass production increased by 35 - 44% and the lipid content in the spirulina biomass - by 28 - 68%.

**Description
EN**

The proceedings ensure the production of new raw materials and the arsenal of new products with multifunctional effects.

In addition, it could be opened new technological lines and created clusters between biotech and pharmaceutical companies that can produce and place on the local and external markets new ecologically pure natural products for human consumption.

Applications: Biotechnology, Bionanotechnology, Pharmaceutical and biotech producing companies, Human health, Cosmetics.

The inventions were created based on scientific results obtained within the project 20.80009.5007.05 „Biofunctionalized metal nanoparticles - obtaining using cyanobacteria and microalgae”, funded by National Agency for Research and Development (NARD), Republic of Moldova.

Class no.

Agriculture and Food Industry - Medicine - Health Care – Cosmetics.