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Title	**Process for obtaining the biomass of the red microalga *Porphyridium cruentum* - source of omega 3 lipids with polyvalent properties**
Authors	RUDI Ludmila, CHIRIAC Tatiana, CEPOI Liliana, RUDIC Valeriu, VALUȚA Ana, DJUR Svetlana, MISCU Vera, IAȚCO Iulia
Institution	Institute of Microbiology and Biotechnology of Technical University of Moldova
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Description EN	The invention relates to a proceeding for cultivating the red microalga of biotechnological interest *Porphyridium cruentum*, in order to obtain biomass with a high omega-3 lipid content. The proceeding involves the cultivation of microalga *Porphyridium cruentum* CNMN-AR-01 on a nutrient medium containing citrate-stabilized gold nanoparticles 5 nm in size, in the concentration range of 4.8 - 5.1 nM, for 14 days at a constant temperature of 25-28^{0}C and continuous illumination with an intensity of 50-57 µmol photons/m^2 and periodic slow stirring. The result of the invention consists in increasing the lipid content of algae biomass by about 52%. This result is due to the use of gold nanoparticles 5 nm diameter as a stimulator of lipid biosynthesis by the marine microalga *Porphyridium cruentum*, a valuable producer of omega-3 lipids. Porphyridium biomass obtained according to this proceeding can be used as a raw material for the manufacture and development of new nutraceuticals and original remedies based on omega-3 lipids with antioxidant, anti-inflammatory, antiatherogenic and regenerative properties. *The research was carried out within the project 20.80009.5007.05 "Biofunctionalized metal nanoparticles – obtaining using cyanobacteria and microalgae", funded by NARD, Republic of Moldova*