Program	Program NUCLEU PN 09-13.03.12
Project title (ENG):	**Alternative solution for wastewater treatment by using the microalgae – activated sludge system**
Project title (RO):	**Soluție alternativă de epurare ape uzate utilizând sistemul microalge – nămol activ**
Duration	2013 - 2015
Team Leader	Tricolici Olga (Tiron)
Summary (short description) ENG	The project was addressed to the development of an alternative biotechnology for wastewater treatment by using mixed microalgae – activated sludge system. As the main goals, mixed microalgae-bacteria system was tested in wastewater treatment processes following the analyses of the system's efficiency and the influence of the operational parameters on treatment performance. Another project's goal was to develop and test an alternative microalgae – bacteria system (granular-type) which could answer to the current requirements of the microalgae harvesting step.
Summary (short description) RO	Proiectul constă în implementare/optimizarea unei biotehnologii alternative de epurare a apelor uzate utilizând sistemul mixt microalge - nămol activ. Printre obiectivele proiectului se identifică evaluarea eficienței de utilizare a sistemului mixt microalge – bacterii în procese de epurare a apelor uzate, a influenței parametrilor de operare asupra performanței de îndepărtare a poluanților și dezvoltarea și testarea în procese de epurare a apelor uzate a unui sistem biologic alternativ microalge – bacterii (tip granular) care să răspundă cerințelor actuale ale etapei de recoltare a biomasei microalgelor.
Dissemination of results	
PhD Thesis – Title RO, ENG	Soluție alternativă de epurare a apelor uzate folosind sistemul mixt microalge – bacterii., Olga Tiron, 2016 Alternative solution for wastewater treatment by using mixed microalgae – bacteria system.
Full-paper ISI	**Tricolici O.**, Bumbac C., Pătroescu V., Postolache C., Dairy wastewater treatment using activated sludge-microalgae system at different light intensities, *Water Science and Technology*, **2014**, 69 (8), 1598-1605, ISSN: 0273-1223, DOI: 10.2166/wst.2013.752, WOS:000335976700002
	Tricolici O., Bumbac C., Postolache C., Microalgae-bacteria system for biological wastewater treatment, *Journal of Environmental Protection and Ecology*, **2014,** 15 (1), 268-276, ISSN 1311-5065, WOS:000334131100034
	Tiron O., Bumbac C., Pătroescu V., Bădescu V., Postolache C., Granular activated algae for wastewater treatment, *Water Science and Technology*, **2015,** 71 (6), 832-839, ISSN 0273-1223, DOI: 10.2166/wst.2015.010, WOS:000352978200005
	Tiron O., Bumbac C., Pătroescu V., Ștefănescu M., Activated algae granulation: a biological solution for efficient microalgae harvesting, *Journal of Biotechnology*, **2015**, 208, S19, ISSN 0168-1656, DOI: 10.1016/j.jbiotec.2015.06.046, WOS:000359087000046
Full-paper BDI	**Tricolici O.**, Bumbac C., Postolache C., Evaluation of combined activated sludge – microalgae system for wastewater treatment, *Proceedings of the 17th International Symposium "The Environment and The Industry"*, 29-30 october, **2013,** Vol. I, 53-61, ISSN-L 1843-5831.

Conferences (platform, poster, abstract / full-paper	**Tricolici O.**, Bumbac C., Pătroescu V., Bădescu V. R., Procedure for obtaining mixed microalgae – bacteria granules for wastewater treatment (patent application), **2014**, Invention and Innovation Show INVENTIKA, 15-18 october, Bucharest.
	Tiron O., Bumbac C., Pătroescu I. V., Bădescu V. R., Cristea I. Alternative solution for wastewater treatment using microalgae – bacteria system, Romanian Research Convention, 15 – 18 october, **2014**, Bucharest.
	Tricolici O., Bumbac C., Pătroescu V., Bădescu V. R., Procedure for obtaining mixed microalgae – bacteria granules for wastewater treatment (patent application), The International Exhibition of Research, Innovation and Inventions PRO INVENT, XII Ed., 25-27 march, **2015**, Cluj-Napoca.
	Tiron O., Bumbac C., Pătroescu V., Cristea I., Postolache C., Optimization of dairy wastewater treatment using microalgae-activated sludge system, The 8th International Conference "Environmental Engineering and Management, 9-12 september, **2015**, Iași.
Patents (approved or proposal)	Patent application **Tricolici O.**, Bumbac C., Patroescu I. V., Badescu V. R., Procedure for obtaining mixed microalgae – bacteria granules for wastewater treatment, RO 130247-A0

Program	Program NUCLEU PN 09-13.03.14
Project title (ENG):	Transposing the properties of the lichens' symbiosis in the biotechnology for pollutants removal from aqueous media.
Project title (RO):	Transpunerea proprietăților simbiozei lichenilor în biotehnologia îndepărtării poluanților din sisteme apoase.
Duration	2014 - 2015
Team Leader	Tricolici Olga (Tiron)
Summary (short description) ENG	The project was addressed to the use of different taxa groups (bacteria, microalgae, fungi) for dyes decolouration/degradation. Research activities involved three types of experiments: 1) dyes degradation/decolouration using ligninolytic fungi biomass, 2) degradation of the chromophore bonds using an extracellular enzymatic complex obtained after white-rot fungi cultivation on solid media rich in polysaccharides, and 3) dyes degradation/decolouration by using microalgae – bacteria system.
Summary (short description) RO	Proiectul s-a adresat valorificării proprietăților metabolice ale diferitor categorii taxonomice (bacterii, microalge, fungi) în procese de decolorare/degradare a coloranților. Activitățile de cercetare au inclus trei tipuri de experimente constând în: 1) utilizarea biomasei fungice ligninolitice; 2) degradarea grupărilor cromofore utilizând un complex de enzime extracelulare obținut prin cultivarea fungilor ligninolitici pe mediu solid bogat în polizaharide și 3) utilizarea sistemului microalge-bacterii.
Dissemination of results	
PhD Thesis – Title RO, ENG	-
Full-paper ISI	**Tiron O.**, Bumbac C., Cristea N. I., Cosma C., Textile dyes decolouration by white-rot fungi *Fomes fomentarius*, *Journal of Environmental Protection and Ecology*, **2016**, 17 (1), 331 - 340, ISSN 1311-5065, WOS:000375503300038
Full-paper BDI	-
Book, book chapters	-
Conferences (platform, poster, abstract / full-paper	**Tiron O**., Bumbac C., Cristea I., Applications of the white-rot fungal laccases in dyes decolorization processes. *The 8th Eastern European Young Water Professionals Conference*, 12-14 may, **2016**, Gdansk, Poland.
Patents (approved or proposal)	-

Program	Program NUCLEU PN 16-25.03.03
Project title (ENG):	Analiza efectului cumulat al activității (micro)organismelor asupra eficienței proceselor de biodegradare a poluanților în medii apoase.
Project title (RO):	The analysis of the cummulative effect of (micro)organisms activity on the efficiency of pollutants biodegradation from aqueous media.
Duration	2016 - 2017
Team Leader	Tiron Olga
Summary (short description) ENG	The aim of the project is to develop an alternative biotechnology for treatment with a high performance of wastewater resulted after textile/leather dyeing processes by using a complex biological system comprised from different taxa.
Summary (short description) RO	Scopul proiectului constă în obținerea unei variante biotehnologice care să permită o performanță ridicată de epurare a apelor uzate rezultate din procese de vopsire textile/piei prin utilizarea unui sistem biologic complex constituit din diferite categorii taxonomice de (micro)organisme.
Dissemination of results	
PhD Thesis – Title RO, ENG	-
Full-paper ISI	-
Full-paper BDI	-
Book, book chapters	-
Conferences (platform, poster, abstract / full-paper	-
	Tiron O., Bumbac C., The efficiency of using laccases for Acid Blue 193 dye decolouration, *The 18th International Symposium "The Environment and The Industry"*, 13-14 october, **2016,** Bucharest.
Patents (approved or proposal)	-