

New trends in marine Biotechnology at CIIMAR

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CIIMAR IN NUMBERS

Members: 312
133 PhD
156 students (PhD, MSc, BSc)
23 administrative and technical staff
19 nationalities

Current research projects: 76
62 Portuguese Science and Technology Foundation and other national projects

14 international projects (e.g. FP7, Interreg Atlantic Area, Interreg POCTEP, Interreg SUDOE, Eurostar/Eureka)

Publications in 2012: 283
15 books and books chapters
258 papers in SCI Journals

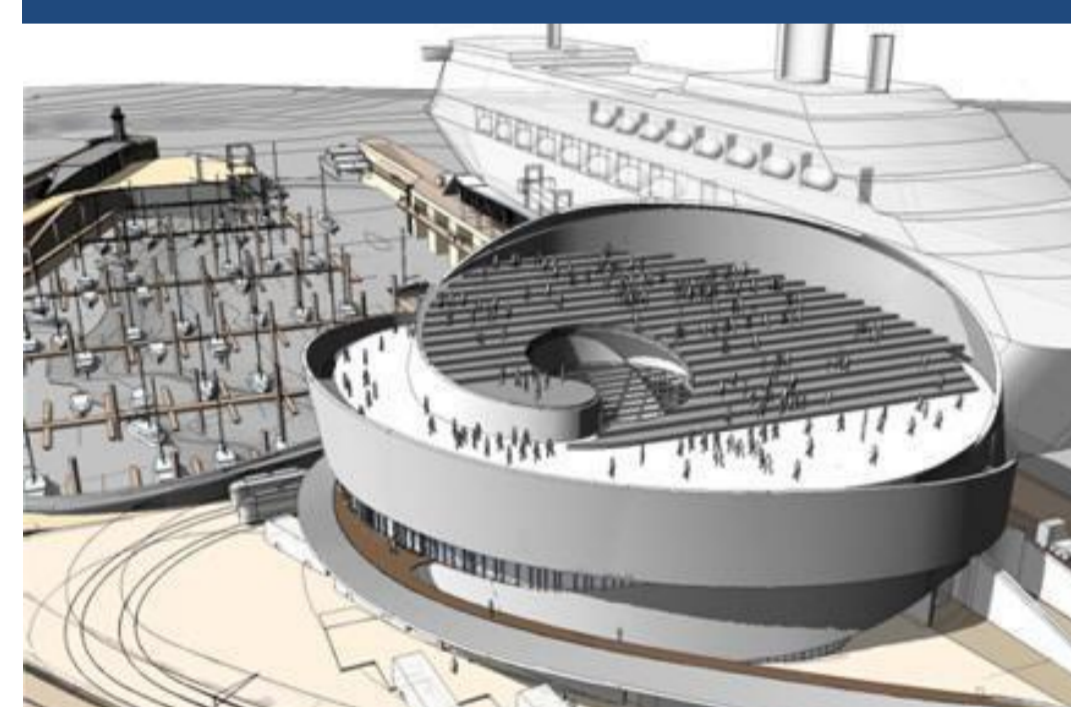
Research lines: 5

Research groups: 19

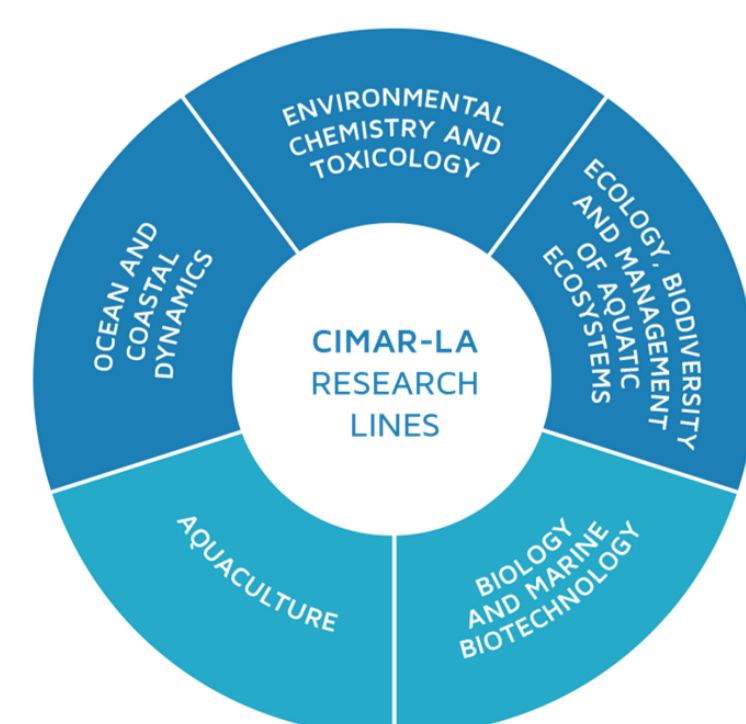
Aquatic bioterium: 1

Outreach facilities: 2 (CMIA Vila do Conde and CMIA Matosinhos)

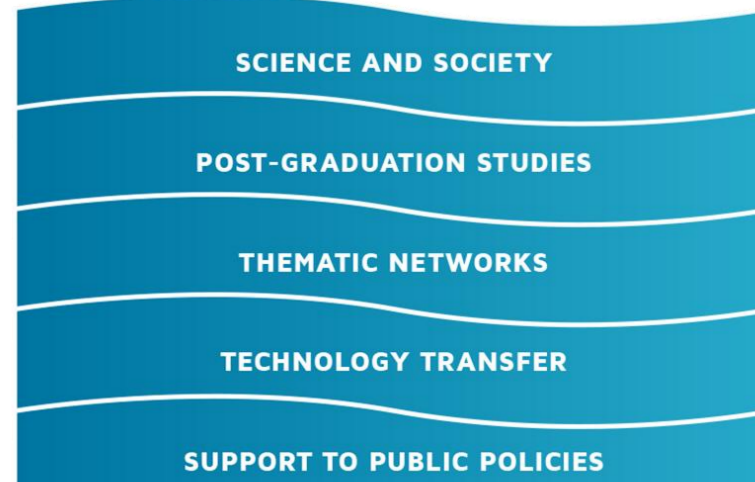
CIIMAR in 2015



RESEARCH LINES



TRANSVERSAL PROGRAMMES



Areas of interest

Marine Natural Substances

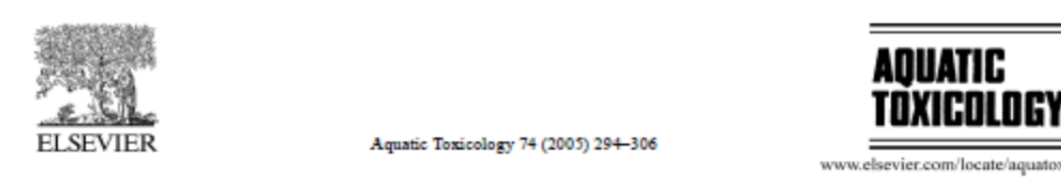
Pharmaceutical and Biomedical applications

Antiviral



Cytotoxicity in L929 fibroblasts and inhibition of herpes simplex virus type 1 Kupka by estuarine cyanobacteria extracts
Viviana R. Lopes^{1,2}, Michaela Schmidtke³, M. Helena Fernandes⁴, Rosário Martins^{1,4,5}, Vitor Vasconcelos^{1,2,6}

Anticancerigenous



Neuro-apoptogenic and blood platelet targeting toxins in benthic marine cyanobacteria from the Portuguese coast
Frode Selheim^{1,2}, Lars Herfindal^{3,4}, Rosário Martins^{5,6}, Vitor Vasconcelos^{5,6}, Stein Ove Døskeland^{1,4}

Biomedicine



The effects of *Anodonta cygnea* biological fluids on biomineralization of chitosan membranes
Anabela Lopes¹, Manuel Lopes-Lima^{2,3}, Iulius Bobos⁴, Jorge Ferreira⁵, Sílvia Gomes⁶, Rui Reis⁷, João Mano⁸, Jorge Machado^{2,3,9}

Aquaculture



Replacement of fishmeal by increasing levels of plant protein blends in diets for Senegalese sole (*Solea senegalensis*) juveniles
E.M. Cabral^{1,2}, M. Baccalar^{1,3}, S. Battista^{4,5}, M. Castro-Cunha⁶, R.O.A. Ozório⁷, L.M.P. Valente^{8,9}



The effect of dietary methionine and white tea on oxidative status of gilthead sea bream (*Sparus aurata*)
Amalia Pérez-Jiménez^{1,2,3}, Helena Peres⁴, Vera Cruz Rubio⁵ and Aires Oliva-Teles^{1,4}

Environmental and industrial applications

Allelopathy



The chemical ecology of cyanobacteria
Pedro N. Leão¹, Níckas Engene², Agostinho Antunes³, William H. Gerwick^{4,5} and Vitor Vasconcelos^{6,7}

Microbial Community Changes Elicited by Exposure to Cyanobacterial Allelochemicals
Pedro N. Leão¹, Vitor Ramos², Micaela Vale³, João P. Machado⁴, Vitor M. Vasconcelos⁵

Antifouling



Toxicity assessment of crude and partially purified extracts of marine *Synechocystis* and *Synechococcus* cyanobacterial strains in marine invertebrates
Rosário Martins^{1,2,3,4,5}, Nuriá Fernandez⁶, Ricardo Beiras⁷, Vitor Vasconcelos^{8,9}

Effects of Marine Toxins on the Reproduction and Early Stages Development of Aquatic Organisms
Vitor Vasconcelos^{1,2,3}, Joana Azevedo⁴, Marisa Silva^{1,2} and Vitor Ramos⁵

Allelopathy

Allelopathic activity of cyanobacteria on green microalgae at low cell densities
PEDRO N. LEÃO¹, M. TERESA S.D. VASCONCELOS^{1,2} AND VÍTOR M. VASCONCELOS^{1,3}

Synechocystis

Synechocystis allelochemicals from a freshwater cyanobacterium
Pedro N. Leão^{1,2}, Alban R. Pereira³, Wei-Ting Lii⁴, Julio Ng⁵, Pavel A. Pevzner⁶, Pieter C. Dorrestein^{6,7}, Gabriele M. König⁸, Vitor M. Vasconcelos^{9,10}, and William H. Gerwick^{11,12}

Bioremediation

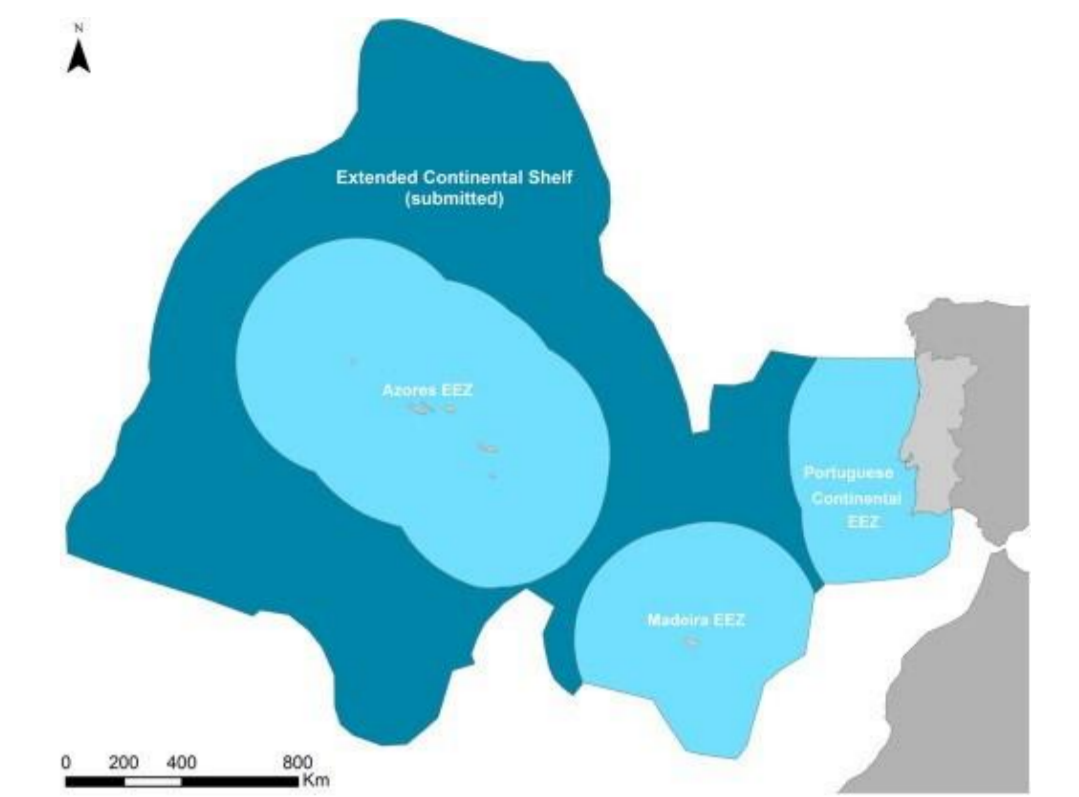


Hydrocarbon degradation potential of salt marsh plant-microorganisms associations
Hugo Ribeiro¹, Ana P. Mucha², C. Marisa R. Almeida³, Adriano A. Bordalo⁴



Potential of the microbial community present in an unimpacted beach sediment to remediate petroleum hydrocarbons
C. Marisa R. Almeida¹, Isabela Reis², M. Nazari Couto³, Adriano A. Bordalo⁴, Ana P. Mucha⁵

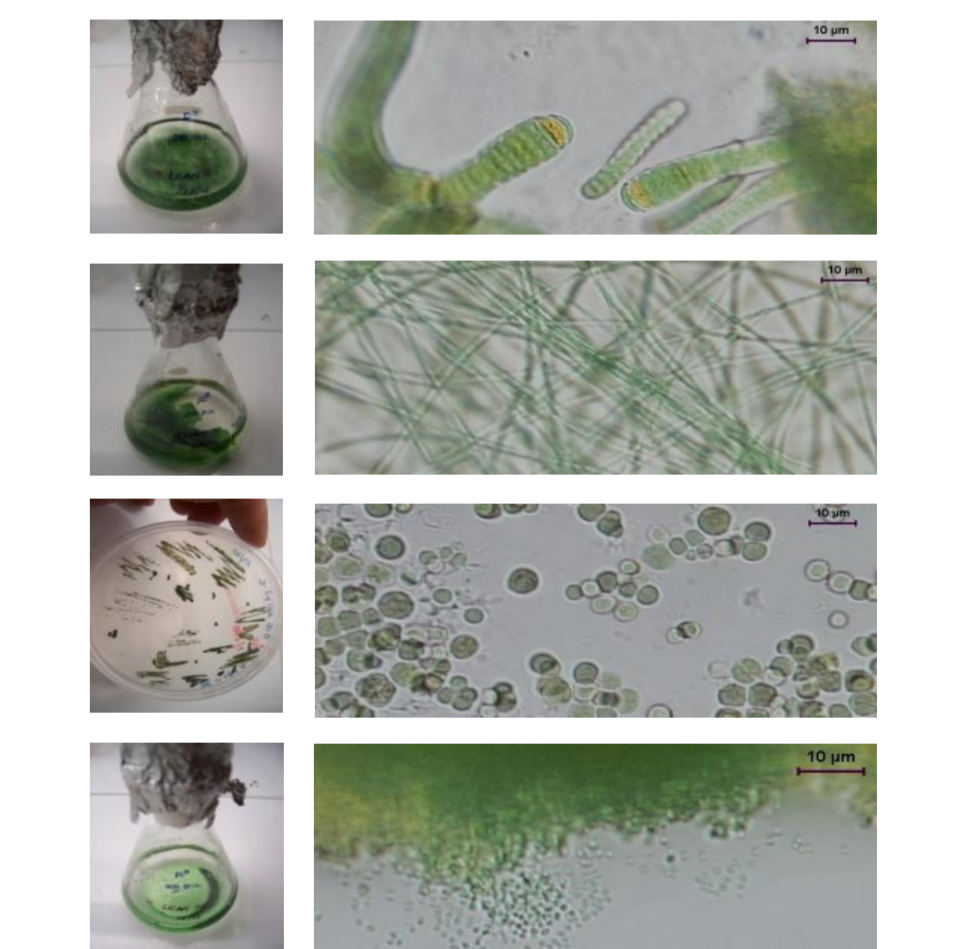
Opportunities



Actual and proposed extension of the Portuguese continental platform)



Access to samples of continental Portugal, Azores and Madeira Islands



Culture collection of cyanobacteria with more than 350 strains



Culture facilities for cyanobacteria, algae and invertebrates

Current European projects:



Funding institutions:



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