

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 book chapters
258 papers in SCI Journals

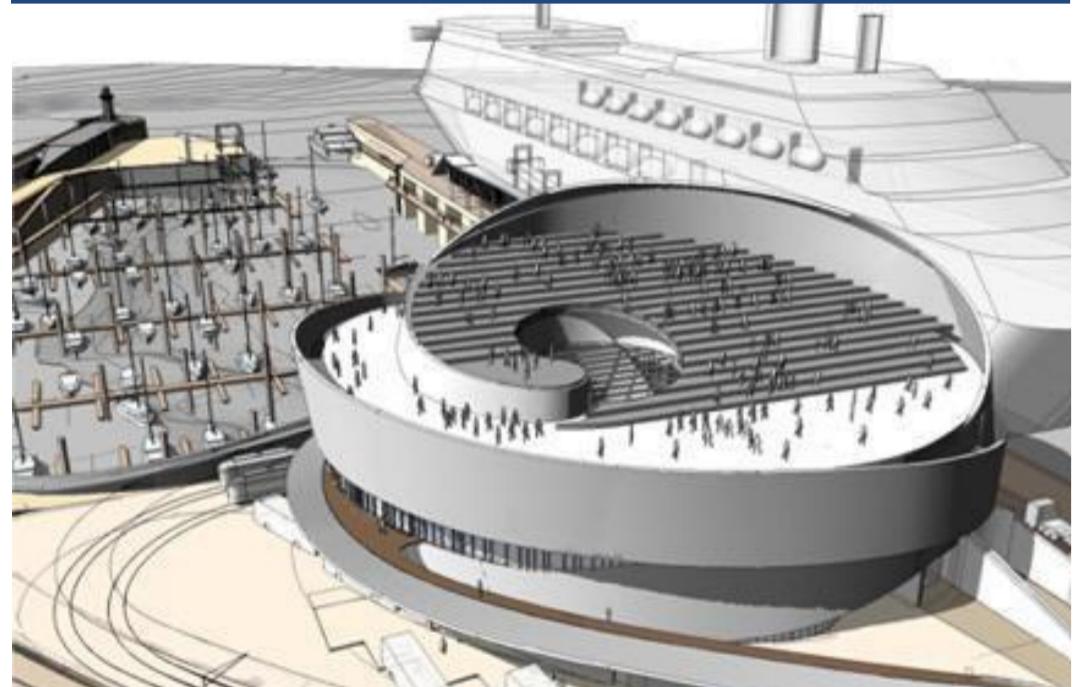
Research lines: 5

Research groups: 19

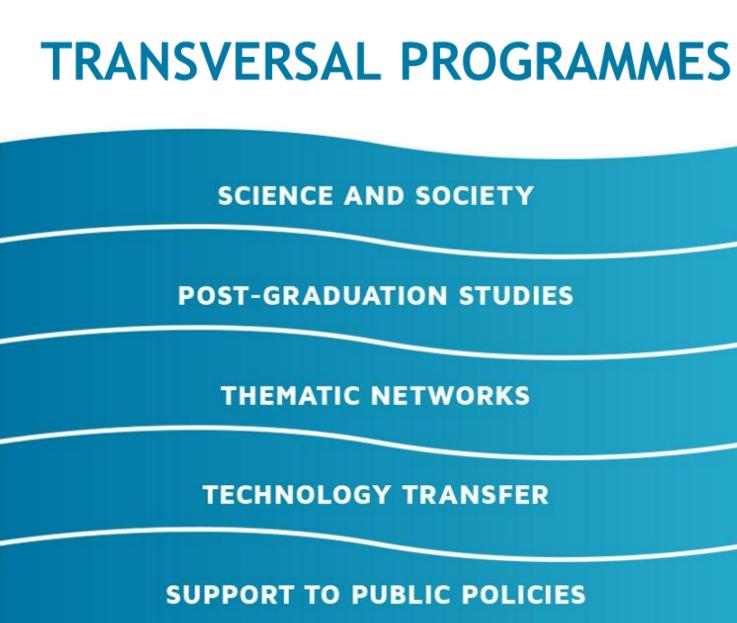
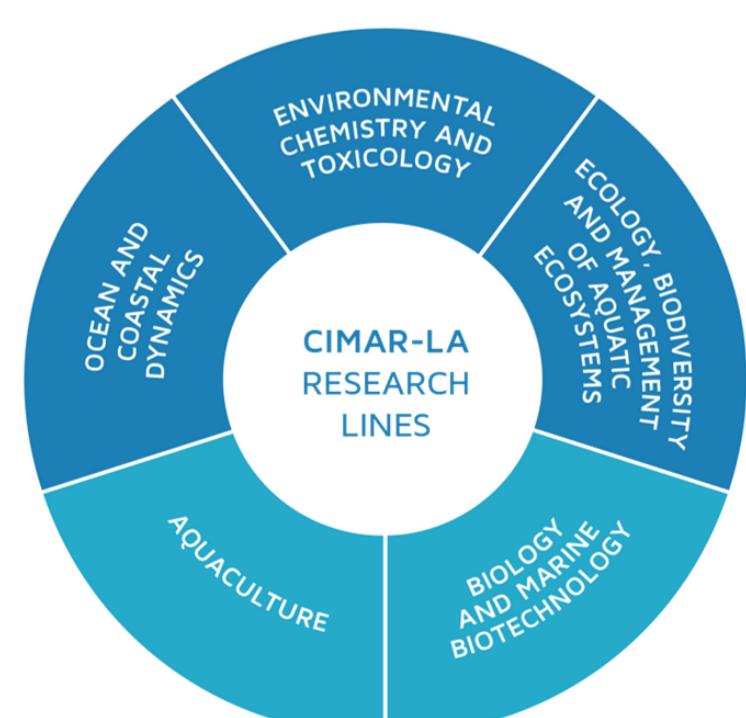
Aquatic bioterm: 1

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

CIIMAR in 2015



RESEARCH LINES



Current European projects:



Funding institutions:



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Areas of interest

Marine Natural Substances

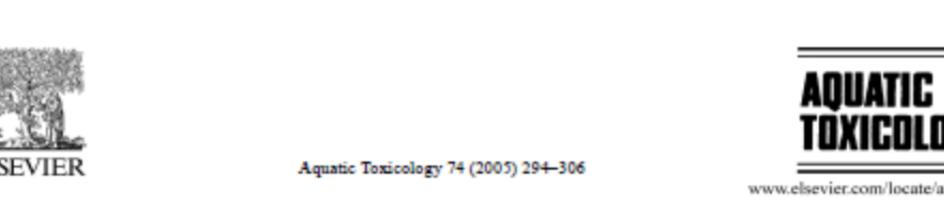
Pharmaceutical and Biomedical applications

Antiviral



Cytotoxicity in L929 fibroblasts and inhibition of herpes simplex virus type 1
Kupka by estuarine cyanobacteria extracts
Viviana A. Lopes^{a,*}, Michaela Schmidleitner^b, M. Helena Fernandes^c, Rosário Martins^{a,c,d}, Vitor Vasconcelos^{a,b,e}
^aCentro Interdisciplinar de Investigação Marinha e Ambiental, Universidade do Porto, Rua das Bragas, 289, 4050-122 Porto, Portugal
^bDepartment of Biomedicine, Faculty of Medicine, University of Porto, Rua das Bragas, 289, 4050-122 Porto, Portugal
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^eFaculdade de Farmácia da Universidade do Porto, Faculdade de Ciências da Saúde da Universidade do Porto, Rua das Bragas, 289, 4050-122 Porto, Portugal

Anticancerigenous



Neuro-apoptogenic and blood platelet targeting toxins in benthic marine cyanobacteria from the Portuguese coast
Frode Selheim^{a,1}, Lars Herfindal^{a,1}, Rosário Martins^{b,c}, Vitor Vasconcelos^{b,c}, Stein Ove Dalseland^a,
^aDepartment of Biomedicine, University of Bergen, Jonas Lies vei 31, N-5009 Bergen, Norway
^bCentro Interdisciplinar de Investigação Marinha e Ambiental, Universidade do Porto, Rua das Bragas, 289, 4050-122 Porto, Portugal
^cDepartamento de Zoologia e Antropologia, Faculdade de Ciências, Universidade de Vigo, 3631-053 Vigo, Galicia, Spain

Biomedicine



The effects of *Anodonta cygnea* biological fluids on biomineralization of chitosan membranes
Anabela Lopes^a, Manuel Lopes-Lima^{a,b}, Iurius Bobos^a, Jorge Ferreira^a, Silvia Gomes^a, Rui Reis^a,
João Mano^a, Jorge Machado^{a,b,*}

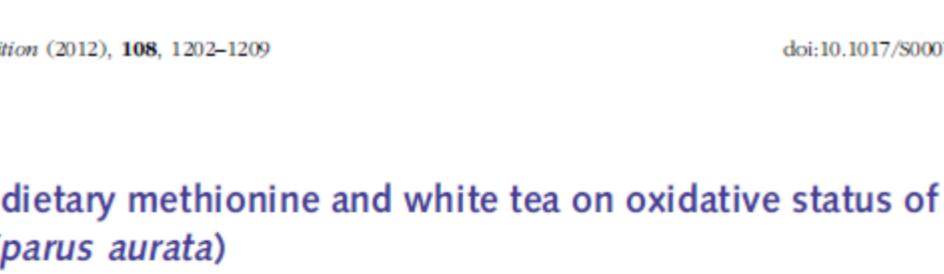


TI2BioP: Topological Indices to BioPolymers. Its practical use to unravel cryptic bacteriocin-like domains
Guillermo Agüero-Chapin^a, Giselle Pérez-Machado^a, Reinaldo Molina-Ruiz^a,
Yannick Pérez-Castillo^a, Aluska Morales-Helguera^a, Vitor Vasconcelos^a, Agostinho Antunes^a

Aquaculture



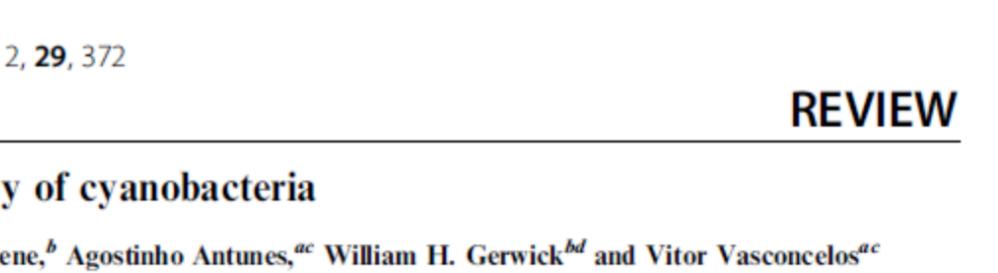
Replacement of fishmeal by increasing levels of plant protein blends in diets for Senegalese sole (*Solea senegalensis*) juveniles
E.M. Cabral^{a,b}, M. Bacelar^{a,b}, S. Batista^{a,b}, M. Castro-Cunha^a, R.O.A. Ozório^a, L.M.P. Valente^{a,b,*}



The effect of dietary methionine and white tea on oxidative status of gilthead sea bream (*Sparus aurata*)
Amalia Pérez-Jiménez^{1,2*}, Helena Pérez¹, Vera Cruz Rubio³ and Aries Olivas-Teles^{1,4}
¹CIIMAR-CIMAR – Centro Interdisciplinar de Investigação Marinha e Ambiental, Universidade do Porto, Rua das Bragas 289, 4050-123 Porto, Portugal
²Departamento de Biologia, Faculdade de Ciências, Universidade de Granada, Campus Fuentenueva s/n, 18071 Granada, Spain
³Centro Oceanográfico de Múrcia, Instituto Español de Oceanografía (IEO), Carrer de la Azohía s/n, Puerto de Mazarrón, 30800 Murcia, Spain
⁴Departamento de Biología, Faculdade de Ciências, Universidade do Porto, Rua do Campo Alegre, Edifício FC1, 4169-007 Porto, Portugal

Environmental and industrial applications

Allelopathy



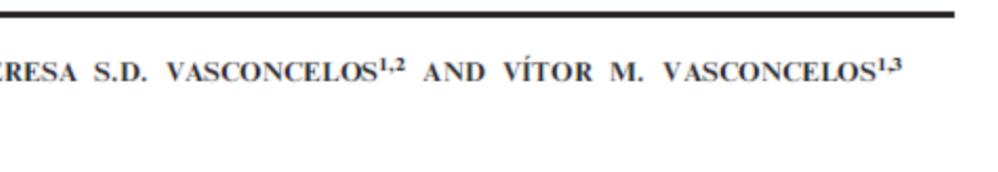
Cite this: *Nat. Prod. Rep.*, 2012, **29**, 372
www.sci.org/npr
The chemical ecology of cyanobacteria
Pedro N. Leão^{a,*}, Nicolas Englek^a, Agostinho Antunes^{a,c}, William H. Gerwick^{b,d} and Vitor Vasconcelos^{a,c}
^aReceived 1 October 2011
DOI: 10.1039/c2np00751j
Covering: up to September 2011
This review covers the literature on the chemically mediated ecology of cyanobacteria, including ultraviolet radiation protection, feeding-deterring, allelopathy, resource competition, and signalling. To highlight the chemical and biological diversity of this group of organisms, evolutionary and chemotaxonomical studies are presented. Several technologically relevant aspects of cyanobacterial chemical ecology are also discussed.



Microbial Community Changes Elicited by Exposure to Cyanobacterial Allelochemicals
Pedro N. Leão^a, Vitor Ramos^a, Micaela Vale^a,
João P. Machado^a, Vitor M. Vasconcelos^a



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}



Synergistic allelochemicals from a freshwater cyanobacterium
Pedro N. Leão^{1,2}, Albán R. Pérez^{1,3}, Wei-Ting Liu¹, Julio Ng¹, Pavel A. Pevný¹, Pieter C. Dorrestein^{1,4,5}, Gabriele M. König¹, Vitor M. Vasconcelos^{1,2}, and William H. Gerwick^{1,2}



www.pnas.org/cgi/doi/10.1073/pnas.0914347107

PNAS | June 22, 2010 | vol. 107 | no. 25 | 11183–11188

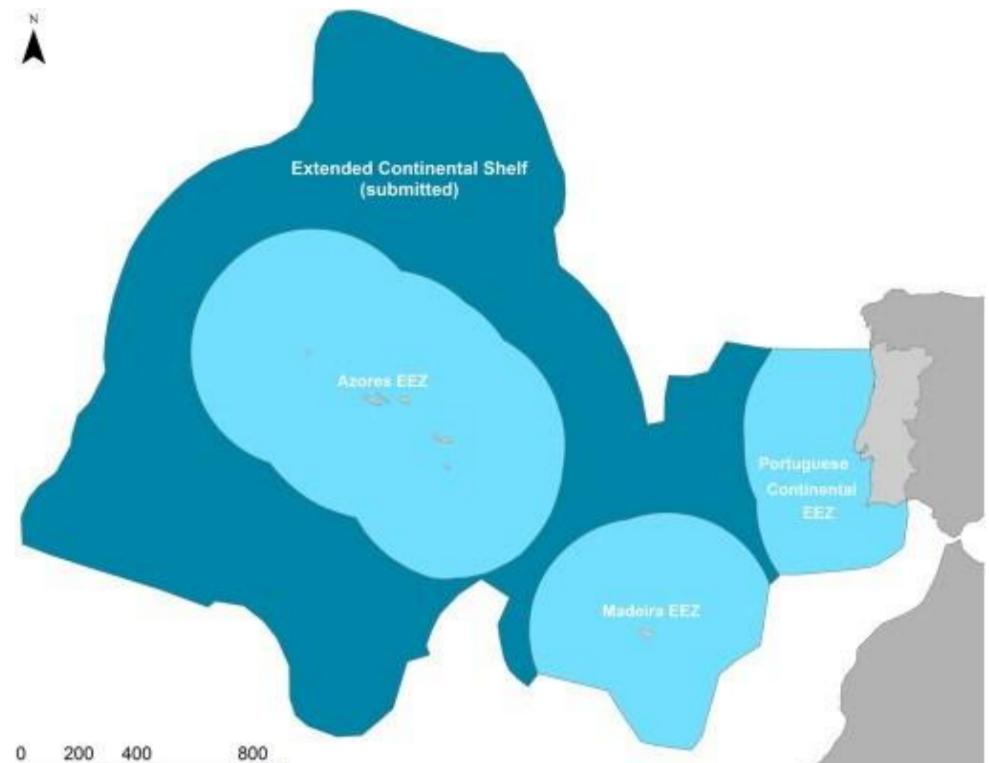
Bioremediation



Hydrocarbon degradation potential of salt marsh plant-microorganisms associations
Hugo Ribeiro^a, Ana P. Mucha^a,
C. Marisa R. Almeida^a, Izabela Reis^a, M. Nazaré Couto^a, Adriano A. Bordalo^a, Ana P. Mucha^a



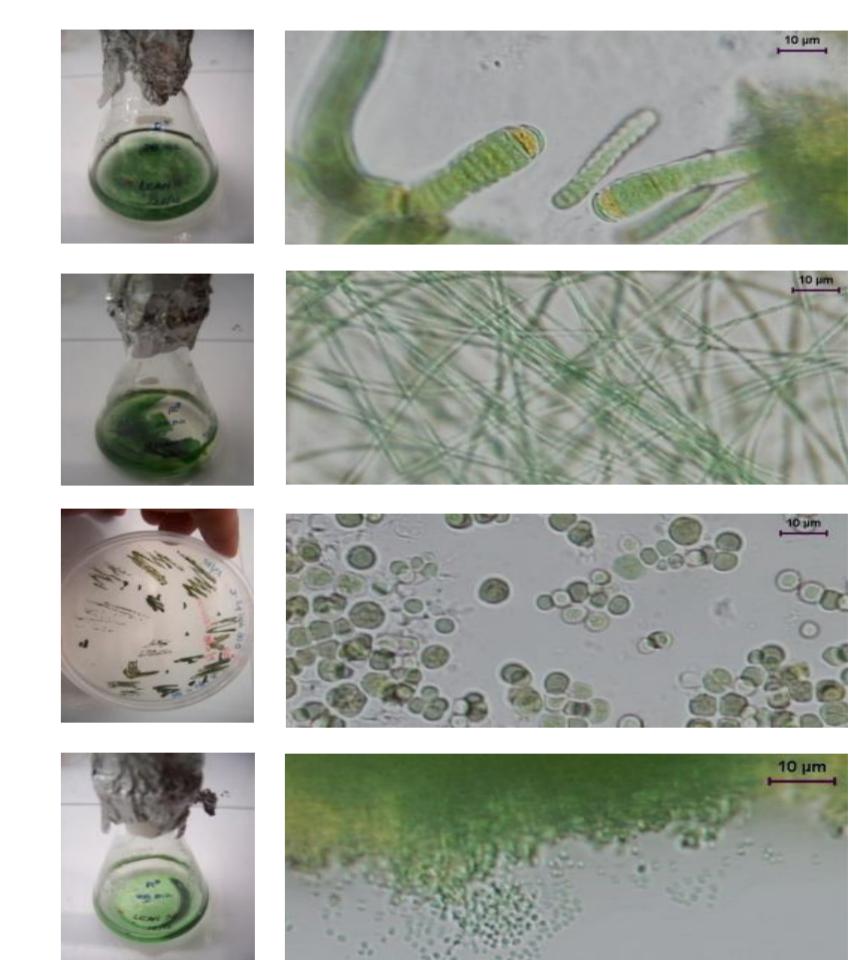
Opportunities



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

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