

**ROSA FREITAS**

**UNIVERSIDADE DE AVEIR**
**PORTUGAL**

# AVEIRO, PORTUGAL

The population is approx. 80,000, it is the second most populous city in the centro region of Portugal.



# AVEIRO UNIVERSITY

Created in 1973, the University of Aveiro has now around 14,000 students distributed by 16 Academic Departments and 4 Polytechnic Schools.

The research and projects developed by UAVR ar developed under 19 research centres, of many differen scientific areas, namely environmental and marine

# DEPARTMENT OF BIOLOGY

The Biology Department originated in Biology Sector of

University of Aveiro, in 1974.

The Biology receives every year 100 students (Biology degre

ERASMUS agreement with 10 Italian Institutions

Our lab: actually 2 PhD students; several MSc and undergraduate students every year

# ECOMARE

**UPRAM -** Unidade de Pesquisa e Recuperação de Animais Marinhos

**CEPAM -** Centro de Extensão e de Pesquisa Ambiental e Marinha

# **UPRAM -** Unidade de Pesquisa e Recuperação de Animais Marinhos

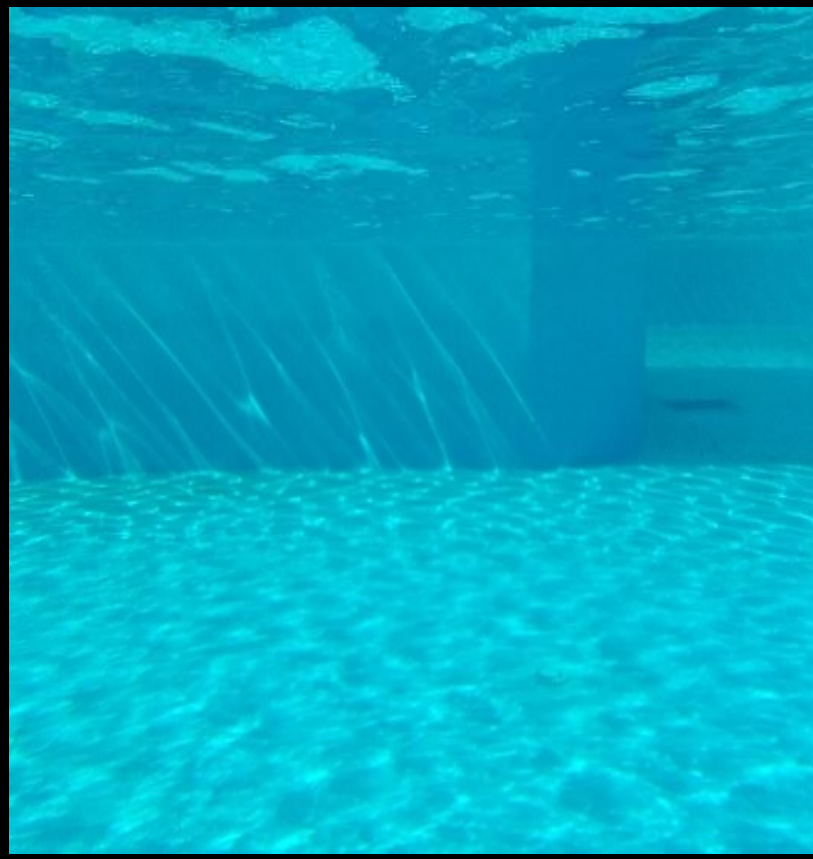
Conservation and Ecology of cetaceans, seabirds and shorebirds, marine turtles a their environment.

ponsible: **Catarina Eira**
earcher (Catarina.eira@ua.pt)

**CPRAM –** CENTER FOR RESEARCH AND REHABILITATION OF MARINE ANIMA

## MARINE ANIMAL REHABILITATION

live marine animals are carefully transported to the rehab center.

ponsible: **Catarina Eira**
earcher (Catarina.eira@ua.pt)

**CPRAM –** CENTER FOR RESEARCH AND REHABILITATION OF MARINE ANIMA

## MARINE ANIMAL REHABILITATION

**CRAM**

The rehab center is equipped with saltwater tanks, diagnostic equipments, etc

MARINE ANIMAL TISSUE BANK
PORTUGUESE WILDLIFE SOCIETY
UNIVERSIDADE DO MINHO
UNIVERSIDADE DE AVEIRO

**MATB**

The marine animal tissue bank includes samples from cetaceans, seabirds, marine turtles

**Research LABs**

Several rooms and equipmer dedicated to marine animal hea and ecology

onsible: **Catarina Eira**
archer (Catarina.eira@ua.pt)

**CPRAM –** CENTER FOR RESEARCH AND REHABILITATION OF MARINE ANIMA

# MARINE ANIMAL REHABILITATION

Rehabilitation mitigates
effect of some threats, e
marine litter, in the case
turtles and seabirds
presenting ingested or
entangled litter.

Rehabilitation also
mitigates bycatch impac
a large proportion of the
admitted animals prese
evidences of interaction
with fishing related
activities.

onsible: **Catarina Eira**
archer (Catarina.eira@ua.pt)

**CPRAM –** CENTER FOR RESEARCH AND REHABILITATION OF MARINE ANIMA

## TOXIC ELEMENTS AND ORGANIC COMPOUNDS IN MARINE BIRDS

Marine Pollution Bulletin 108 (2016) 311–316

Contents lists available at ScienceDirect

Marine Pollution Bulletin

journal homepage: www.elsevier.com/locate/marpolbul

Baseline

### Persistent organic pollutants and inorganic elements in the Balearic shearwater *Puffinus mauretanicus* wintering off Portugal

R.A. Costa [a,*], J. Torres [b], J.V. Vingada [c,d], C. Eira [a,d]

Balearic shearwater (*Puffinus mauretanicus*)

## TOXIC ELEMENTS IN MARINE TURTLES

Chemosphere 179 (2017) 120–126

Contents lists available at ScienceDirect

Chemosphere

journal homepage: www.elsevier.com/locate/chemosphere

### Trace elements in loggerhead turtles (*Caretta caretta*) stranded in mainland Portugal: Bioaccumulation and tissue distribution

Lídia Nicolau [a, b, *], Sílvia S. Monteiro [a, b], Andreia T. Pereira [b], Ana Marçalo [a, b], Marisa Ferreira [b, c], Jordi Torres [d, e], José Vingada [b, c, f], Catarina Eira [a, b]

Loggerhead turtle (*Caretta caretta*)

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## MARINE LITTER IN MARINE TURTLE SPECIES

Marine Pollution Bulletin 103 (2016) 179–185

Contents lists available at ScienceDirect

Marine Pollution Bulletin

journal homepage: www.elsevier.com/locate/marpolbul

Ingestion of marine litter by loggerhead sea turtles, *Caretta caretta*, in Portuguese continental waters

Lídia Nicolau [a,b,*], Ana Marçalo [a,b], Marisa Ferreira [b,c], Sara Sá [a,b], José Vingada [b,d], Catarina Eira [a,b]

**-Loggerhead turtles:**

**High ingested litter prevalence**

**No lethal effects**

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## MARINE LITTER IN OFFSHORE CONTINENTAL WATERS

Marine Pollution Bulletin 104 (2016) 269–278

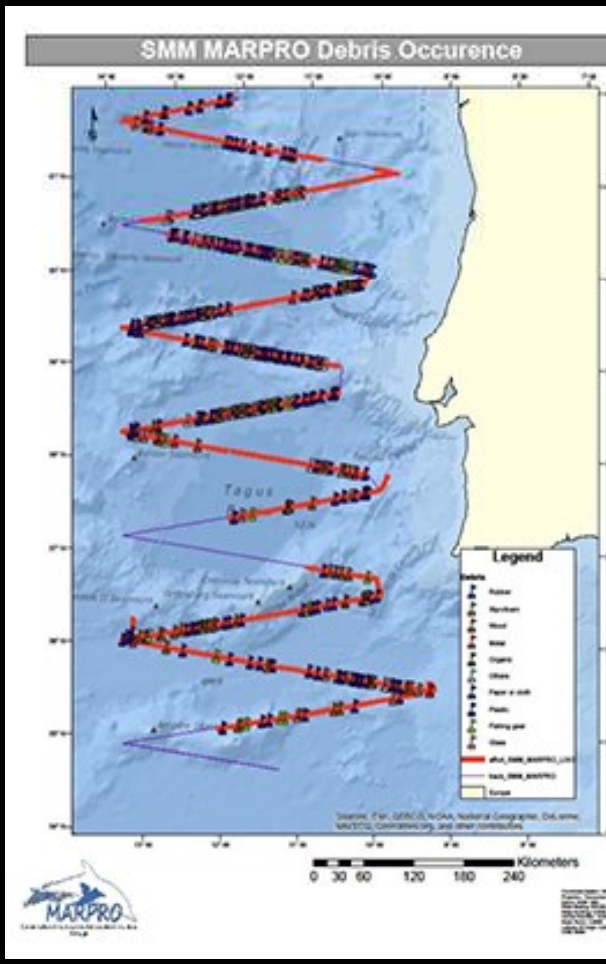
Contents lists available at ScienceDirect

Marine Pollution Bulletin

journal homepage: www.elsevier.com/locate/marpolbul

### Spatial distribution of floating marine debris in offshore continental Portuguese waters

Sara Sá [a,b], Jorge Bastos-Santos [a,b,c,d], Hélder Araújo [a,b,c,d], Marisa Ferreira [b,f], Virginia Duro [b], Flávia Alves [b], Bruno Panta-Ferreira [b], Lídia Nicolau [a,b], Catarina Eira [a,b,*], José Vingada [b,e]




**Floating Marine Debris**

- **higher amount of Plastics**
- **local sources: discharges from vessels and derelict material from fisheries**

# CEPAM - Centro de Extensão e de Pesquisa Ambiental e Marinha

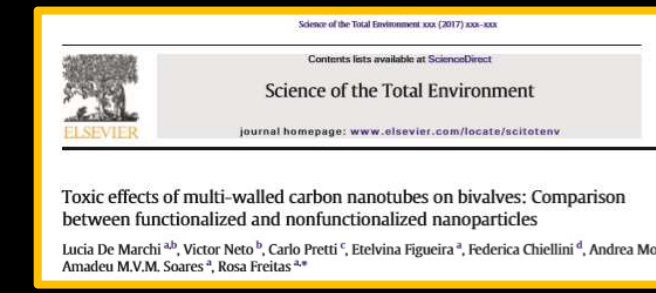
## BIOTECHNOLOGY, ECOLOGY AND ECOTOXICOLOGY

**CEPAM -** Centro de Extensão e de Pesquisa Ambiental e Marinha

## TOXICOLOGY AND ECOTOXICOLOGY

Impacts of emergent pollutants under actual and predicted climate change scenarios using invertebrates

- nanoparticles


Science of the Total Environment xxx (2017) xxx–xxx

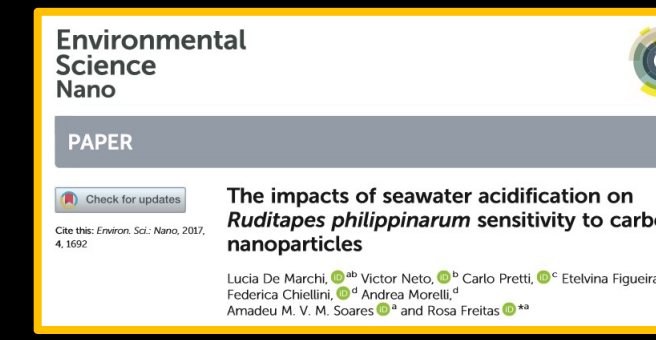
Contents lists available at ScienceDirect

Science of the Total Environment

journal homepage: www.elsevier.com/locate/scitotenv

Toxic effects of multi-walled carbon nanotubes on bivalves: Comparison between functionalized and nonfunctionalized nanoparticles

Lucia De Marchi [a,b], Victor Neto [b], Carlo Pretti [c], Etelvina Figueira [a], Federica Chiellini [d], Andrea Mo
Amadeu M.V.M. Soares [a], Rosa Freitas [a,*]


Environmental Science Nano

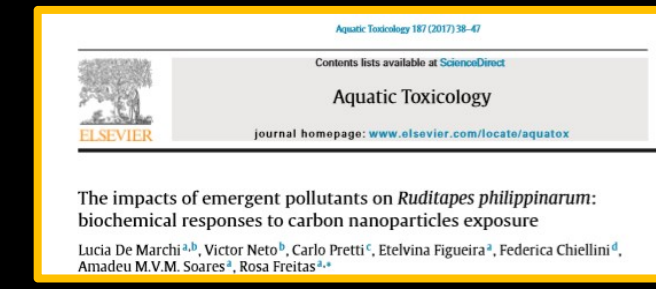
PAPER

Check for updates

Cite this: *Environ. Sci.: Nano*, 2017, 4, 1692

The impacts of seawater acidification on *Ruditapes philippinarum* sensitivity to carb nanoparticles

Lucia De Marchi, [ab] Victor Neto, [b] Carlo Pretti, [c] Etelvina Figueira
Federica Chiellini, [d] Andrea Morelli, [d]
Amadeu M. V. M. Soares [a] and Rosa Freitas [*a]


Aquatic Toxicology 187 (2017) 38–47

Contents lists available at ScienceDirect

Aquatic Toxicology

journal homepage: www.elsevier.com/locate/aquatox

The impacts of emergent pollutants on *Ruditapes philippinarum*: biochemical responses to carbon nanoparticles exposure

Lucia De Marchi [a,b], Victor Neto [b], Carlo Pretti [c], Etelvina Figueira [a], Federica Chiellini [d], Amadeu M.V.M. Soares [a], Rosa Freitas [a,*]


## Prof. Carlo Pretti

CIBM

Centro Interuniversitario di Biologia Marina ed ecologia applicata

**& UNIVERSITY OF PISA**

ponsible: **Rosa Freitas**

earcher (rosafreitas@ua.pt)

# CEPAM - Centro de Extensão e de Pesquisa Ambiental e Marinha

## TOXICOLOGY AND ECOTOXICOLOGY

Impacts of emergent pollutants under actual and predicted climate change scenarios using invertebrates

- pharmaceuticals

Contents lists available at ScienceDirect

Journal of Hazardous Materials

journal homepage: www.elsevier.com/locate/jhazmat

Comparison of the toxicological impacts of carbamazepine and a mixture of its photodegradation products in *Scrobicularia plana*

Ângela Almeida[a], Vânia Calisto[b], M. Rosário M. Domingues[c], Valdemar I. Esteves[b], Rudolf J. Schneider[d], Amadeu M.V.M. Soares[a], Etelvina Figueira[a], Rosa Freitas[a,*]

Water Research 85 (2015) 137–147

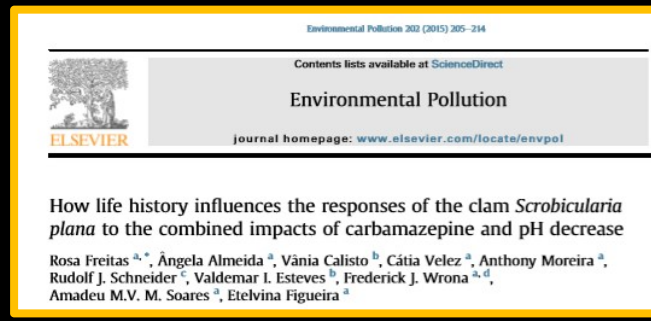
Contents lists available at ScienceDirect

Water Research

journal homepage: www.elsevier.com/locate/watres

The effects of carbamazepine on macroinvertebrate species: Comparing bivalves and polychaetes biochemical responses

Rosa Freitas[a,*], Ângela Almeida[a], Adília Pires[a], Cátia Velez[a], Vânia Calisto[b], Rudolf J. Schneider[c], Valdemar I. Esteves[b], Frederick J. Wrona[a,d], Etelvina Figueira[a], Amadeu M.V. M. Soares[a]



Environmental Pollution 202 (2015) 205–214

Contents lists available at ScienceDirect

Environmental Pollution

journal homepage: www.elsevier.com/locate/envpol

How life history influences the responses of the clam *Scrobicularia plana* to the combined impacts of carbamazepine and pH decrease

Rosa Freitas[a,*], Ângela Almeida[a], Vânia Calisto[b], Cátia Velez[a], Anthony Moreira[a], Rudolf J. Schneider[c], Valdemar I. Esteves[b], Frederick J. Wrona[a,d], Amadeu M.V. M. Soares[a], Etelvina Figueira[a]

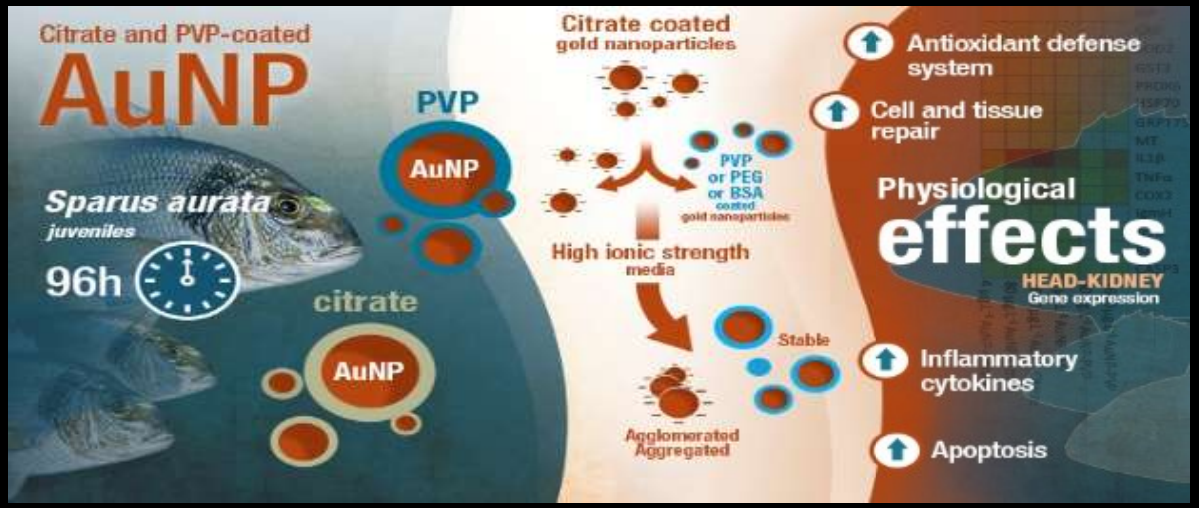
onsible: **Rosa Freitas**
archer (rosafreitas@ua.pt)

# CEPAM - Centro de Extensão e de Pesquisa Ambiental e Marinha

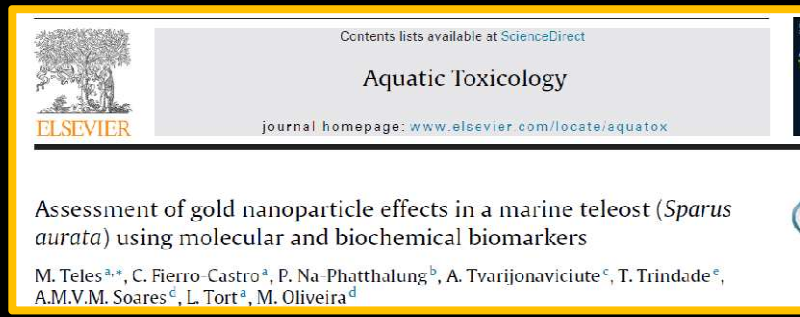
## TOXICOLOGY AND ECOTOXICOLOGY

**Effects of nanoparticles and pharmaceutical drugs in:**

- **fish molecular and biochemical parameters**









ponsible: **Miguel Oliveira**
earcher (migueloliveira@ua.pt)

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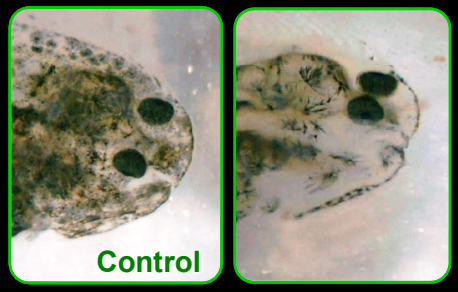
## TOXICOLOGY AND ECOTOXICOLOGY

*Solea senegalensis* early life stages as an alternative to vertebrate animal testing in marine environment

Effects of personal care products and pesticides in:

- sole embryo development and behavior
- sole metamorphosis
- sole biochemical and genomic endpoints




ponsible: **Marta Monteiro**
earcher (mmonteiro@ua.pt)

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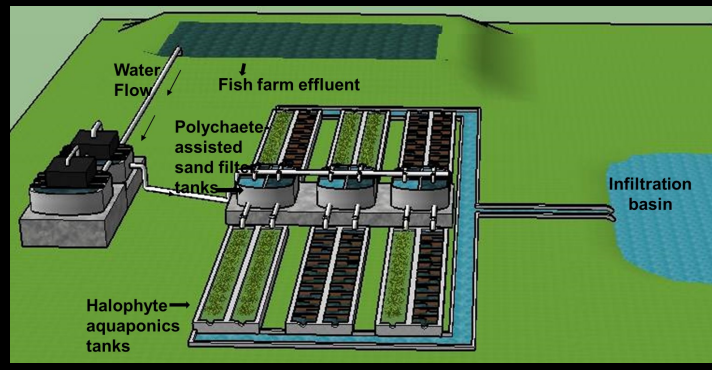
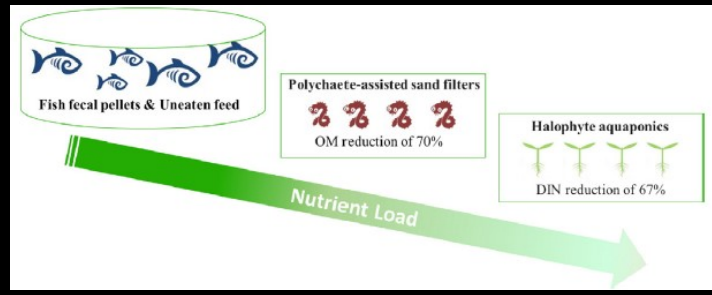
## BIOTECHNOLOGY & IMTA (INTEGRATED MULTI-TROPHIC AQUACULTURE)

IMTA is the combination of fed aquaculture species (e.g. super intensive shrimp or fish farms) with extractive cultured species (e.g. detritivorous fish or invertebrates) to create balanced systems and minimize environmental impacts.



ponsible: **Ana Lillebø**
earcher (lillebo@ua.pt)

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## PHYTOREMEDIATION OF SALINE SOILS USING *Salicornia ramossisima*

Potential of the autochthonous halophyte *Salicornia ramosissima* to remediate salt contaminated soils.

Ecological Engineering 87 (2016) 120–123

Contents lists available at ScienceDirect

Ecological Engineering

journal homepage: www.elsevier.com/locate/ecoleng

Short communication

Dimorphic seeds of *Salicornia ramosissima* display contrasting germination responses under different salinities

Olga M.C.C. Ameixa*, Bruna Marques, Valter S. Fernandes, Amadeu M.V.M. Soares, Ricardo Calado, Ana I. Lillebø*

Biology Department & CESAM, University of Aveiro, Campus de Santiago, 3810-193 Aveiro, Portugal

onsible: **Ana Lillebø**
earcher (lillebo@ua.pt)

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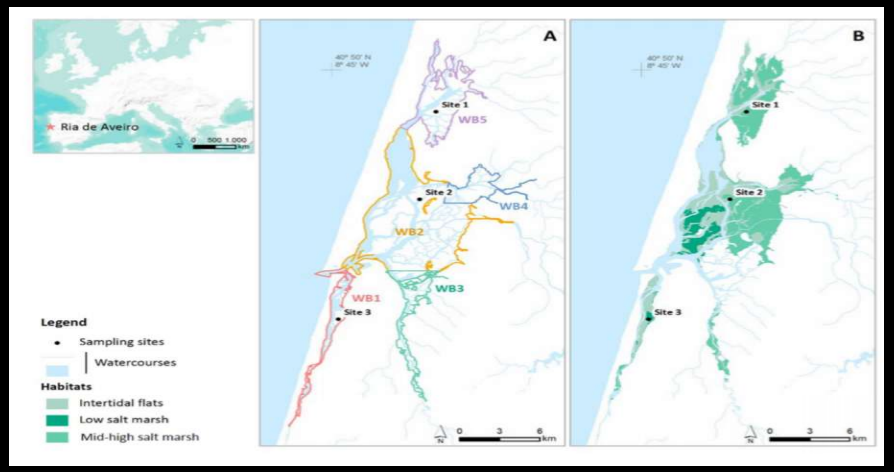
## ENVIRONMENTAL MONITORING

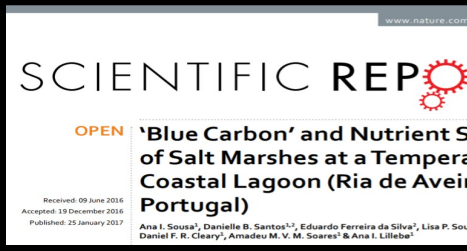




-Ria de Aveiro lagoon salt marsh importance on climate and nutrien regulation;

- Current condition concerning the 'bl carbon' and nutrient stocks

ponsible: **Ana Lillebø**
earcher (lillebo@ua.pt)


SCIENTIFIC REP

OPEN

'Blue Carbon' and Nutrient S of Salt Marshes at a Tempera Coastal Lagoon (Ria de Avei Portugal)

# CEPAM - Centro de Extensão e de Pesquisa Ambiental e Marinha

## AQUACULTURE BIOLOGY AND CONSERVATION

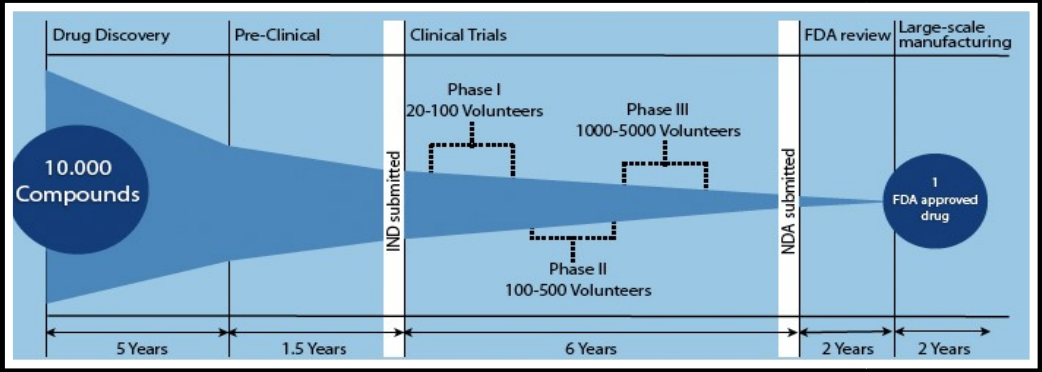
Ornamental Species
Biology and Ecology



ponsible: **Ricardo Calado**
earcher (rjcalado@ua.pt)

# CEPAM - Centro de Extensão e de Pesquisa Ambiental e Marinha

## MARINE NATURAL PRODUCTS




Bioactive compounds with diverse applications

Opinion

**Coral aquaculture to support drug discovery**

Miguel C. Leal[1,2], Ricardo Calado[1], Christopher Sheridan[3], Andrea Alimonti[4], Ronald Osinga[5,6]

OPEN ACCESS Freely available online

**Trends in the Discovery of New Marine Natural Prod from Invertebrates over the Last Two Decades – Wh and What Are We Bioprospecting?**

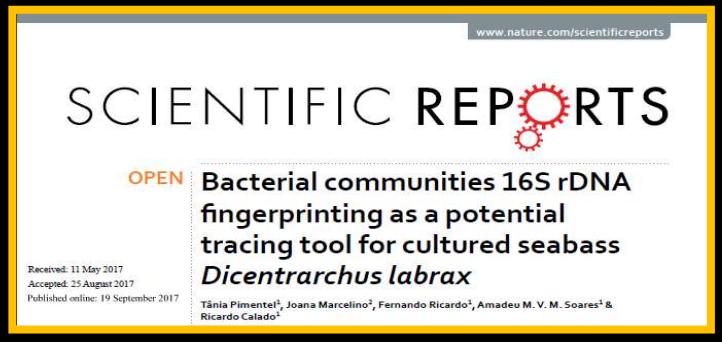
Miguel Costa Leal[1,2*], João Puga[3], João Serôdio[1], Newton C. M. Gomes[1], Ricardo Calado[1*]

ponsible: **Ricardo Calado**
earcher (rjcalado@ua.pt)

# CEPAM - Centro de Extensão e de Pesquisa Ambiental e Marinha

## TRACEABILITY IN AQUACULTURE USING MOLECULAR TOOLS


Tracing marine biological resources
to certify their origin





ponsible: **Ricardo Calado**
earcher (rjcalado@ua.pt)

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