

# Presentation of the BLUEHUMAN Project

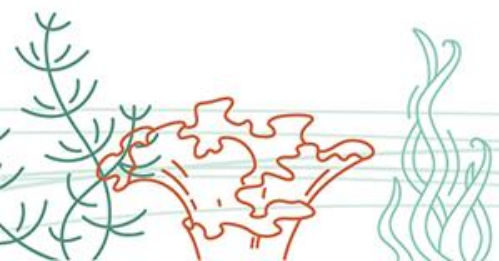
**Julio Maroto Leal**  
CETMAR

9<sup>th</sup> November, 2018





**BLUE biotechnology** as a road for innovation  
on **HUMAN's** health aiming Smart  
growth in **Atlantic Area**



# Consortium

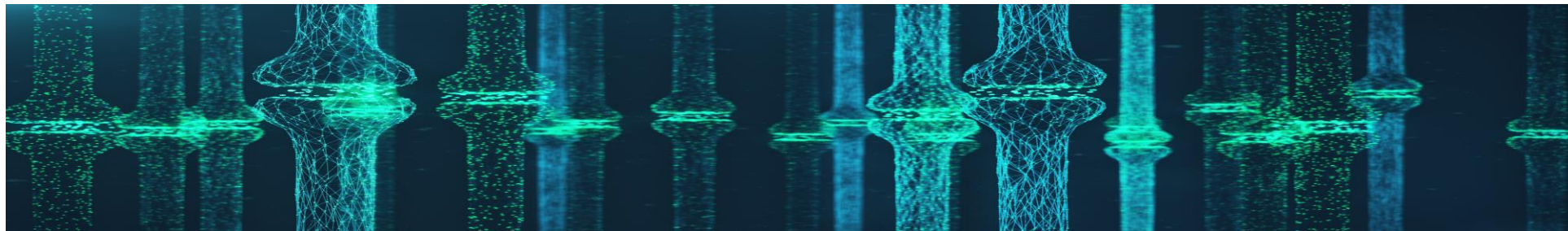
1. Universidade do Minho.
2. Centro Tecnológico del Mar – Fundación CETMAR.
3. Centro Interdisciplinar de Investigação Marinha e Ambiental CIIMAR
4. Instituto de Investigaciones Marinas, Consejo Superior de Investigaciones Científicas.
5. Université de Bretagne Occidentale UBO
6. YSLAB
7. Universidade do Algarve UAL
8. Universidad de Vigo UVIGO
9. Royal College of Surgeons in Ireland RCSI
10. Universidade da Madeira UMA
11. JELLAGEN
12. SURGACOLL Technologies Limited
13. Agrupación Europea de Cooperación Territorial Galicia Norte de Portugal GNP-AECT
14. Axencia Galega de Innovación GAIN
15. Agência Nacional de Inovação ANI
16. Agencia Estatal de Investigación (MINECO)



# Goals

The BlueHuman project is developed in the field of marine resources valorization (including fisheries by-products) and by using the tool of blue biotechnology aims at improving the current procedures and to obtain high added value products in biomedicine.

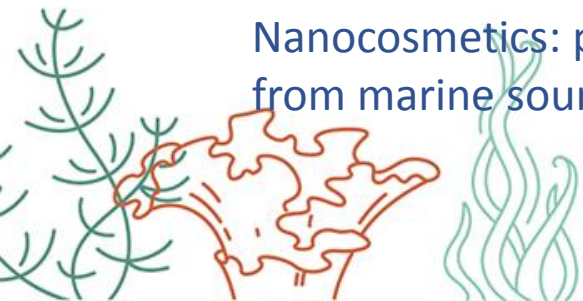
- To start structured and permanent collaborations between research centers and companies.
- To foster the use and exploitation of marine biological resources from the European Atlantic coast.
- To contribute to the development of a Sustainable Smart Growth as expressed in the EUROPE2020 Strategy.
- To develop a critical mass in the area, represented by a significant but disconnected number of research groups and companies.





# Research and Innovation Lines

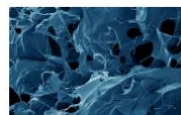
- ❑ Marine origin biomaterials for tissue engineering
  - Hydrogels based in jellyfish collagen for cartilage therapies
  - Functionalization of biomaterials with delivery devices for cartilage regeneration
  - Blends of marine origin collagen and chondroitin sulfate for encapsulation of chondrocytes and stem cells.
  - Blends of marine origin biopolymers as platforms for wound regeneration.
- ❑ Medical devices
  - Scaffolds of shark collagen and shark calcium phosphates for bone regeneration.
  - Functional scaffolds based in collagen-based composites.
  - Trilayered scaffold based in marine origin materials for regeneration of osteochondral defects.
  - Dressings for skincare application, as wound protection.
  - Marine ceramics for bone tissue therapies.
- ❑ Marine Ingredients for cosmetics, well-being and healthcare products
  - Extracts from marine resources with bone anabolic properties
  - Extracts from marine resources with anti-oxidant, antimicrobial and/or anti-biofilm activities.
  - Extracts from marine resources with anti-obesity activity.
  - Nanocosmetics: particles for delivering collagen (gelatin) and hyaluronic acid hydrolysates from marine sources.



## BLUEHUMAN

The BlueHuman project aims to widen the commercial potential of the Atlantic Ocean and on the European Economy.

### PROJECT



#### INTRODUCTION AND CONTEXT

Recently, the decline of natural resources along with the negative impact of industrial wastes on the environment have forced to review the traditional productive and economic model. It is unfeasible at a medium term and from many social areas including the business sector, there is a new emerging philosophy, based on a relatively recent but well-known term which is circular and sustainable economy. Basically it [...]



#### GOALS

To promote the valorization of marine resources from the Atlantic Area, as well as fisheries by-products, improving the industrial process and the development of certain stages of high added value products completely developed in the sectors of biomedicine and global well-being. All of that will be achieved using blue biotechnology as a tool and a partnership made up by companies and specialized research groups focused [...]



#### EXPECTED RESULTS

In 2012, in the Communication regarding Blue Growth, the European Commission identified marine biotechnology as one of the five value chains that can contribute to the sustainable growth and blue economy (European Commission, 2012) in the EU. The Commission recognized that: the growth of the sector will offer high-skilled employment, especially if ground-breaking drugs can be developed from marine organisms, and significant downstream

Blue-human will also seek to influence the actions of other actors in the region towards the much needed sustainable and smart growth, as identified in EUROPE2020 strategy.

### LINKS



INTRANET



YOUTUBE



TWITTER



NEWSLETTER

**Project Website**

<http://bluehuman.cetmar.org>



# Interreg Atlantic Area

European Regional Development Fund



EUROPEAN UNION



Blue  
Human

## Newsletter BLUEHUMAN PROJECT

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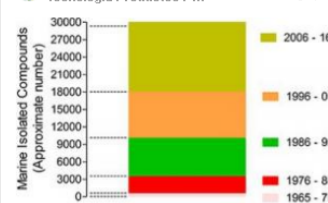
### Isolation and Chemical Characterization of Chondroitin Sulfate from Cartilage By-Products of Blackmouth Catshark (*Galeus melastomus*)

Compartido por Tecnología Productos P...

[www.mdpi.com](http://www.mdpi.com) - Abstract Chondroitin sulfate (CS) is a glycosaminoglycan actively researched for pharmaceutical, nutraceutical and tissue engineering applications. CS

### From Marine Origin to Therapeutics: The Antitumor Potential of Marine Algae-Derived Compounds

Compartido por Tecnología Productos P...



[www.frontiersin.org](http://www.frontiersin.org) - Natural products (NPs) have been used as therapeutic agents for the treatment of a wide

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*Thank you very  
much  
Muchas gracias*

