

Convocatoria de ayudas para la realización de proyectos coordinados en el marco de IBEROS. Anualidad 2018

Proyecto concedido

DATOS GENERALES:

Título proyecto: Interaction of chondroitin sulfate from marine sources with growth factors
Entidades participantes (mínimo 2 entidades): INEB, Instituto de Investigaciones Marinas (CSIC)
Grupos de investigación: Biocarrier REVAL-CSIC
Investigadores principales: Cristina Barrias, Xosé Antón Vázquez
Contacto: ccbarrias@ineb.up.pt

OBJETIVOS DEL PROYECTO (máximo 100 palabras):

In recent years, chondroitin sulfates (CSs) have attracted increasing attention due to their roles in cell adhesion and growth factor mediated-signalling, with implications in both regeneration and cancer-related processes. The aim of this project is to analyse the binding of CS from marine sources, of different molecular weights and sulfation degrees, with growth factors (GF) and cytokines, before and after enzymatic hydrolysis. Selected CS fragments retaining growth-factor binding properties will be characterized in detail, in free form and upon grafting to hydrogel matrices.

PLAN DE TRABAJO:

Task 1 (REVAL-CSIC) – Extraction and characterization of CS from different marine sources

Task 2 (REVAL-CSIC and INEB) – Preparation of CS fragments by enzymatic hydrolysis and their characterization

Task 2 (INEB) – Analysis of GF binding to CS and CS fragments by surface plasmon resonance

Task 3 (INEB) – Grafting of selected CS fragments to hydrogel matrices and analysis of GF-binding properties