

Under the Surface: how the cells and tissues from aquatic organisms respond to Polystyrene Nanoplastic Exposure

M. Garcia^{1,2}, I. Brandts², M. Teles², F. Chauvigné¹, J. Cerdà¹, P. De Oro-Carretero³, J. Sanz-Landaluce³, G. Pujol^{1,2}, A. Ruiz-Herrera¹, & N. Roher^{1,2*}

¹ *Institut de Biotecnologia i Biomedicina, Universitat Autònoma de Barcelona, UAB, Cerdanyola, Spain*

² *Dep. de Biologia Cel·lular, Fisiologia i Immunologia, Universitat Autònoma de Barcelona, UAB, Cerdanyola, Spain*

³ *Dep. de Química Analítica, Facultad de Ciencias Químicas Universidad Complutense de Madrid - UCM, Madrid, Spain*

* nerea.roher@uab.cat

The interaction between polystyrene nanoplastics (PS-NPs) and the cellular machinery remains poorly understood, particularly regarding the effects of PS-NPs on different tissue/cell types in aquatic organisms. Our studies focus on understanding how cells interact with nanoplastics, how they process or manage these particles, and which cellular mechanisms are affected. We have specifically targeted macrophages, liver cells, intestinal cells, and gonad cells of relevant teleost species to explore these interactions across various biological contexts, including co-exposure scenarios with other prevalent aquatic pollutants such as phenanthrene. Disruption of cell and tissue biology by pollutants may represent a tremendous threat for aquatic life and in consequence for human health.

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