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Targeted therapeutics and nanodevices group

Group leader: Silvia Muro (smuro@ibecbarcelona.eu)

Targeted Nanotherapeutics

The Targeted Therapeutics and Nanodevices group, led by Prof. Silvia Muro at the Institute for Bioengineering of Catalonia (IBEC), is looking for a pre-doctoral candidate to work on the design and implementation of strategies for controlled targeting of drug delivery systems to precise disease sites.

The lab research sits at the interface between molecular-cellular biology and nanotechnology-drug delivery. Our lab studies the biological mechanisms ruling how our cells and tissues transport cargoes to precise destinations within our bodies, and applies this knowledge toward the design of "biologically-controlled" nanodevices for improved delivery of therapeutic agents to specific disease sites. Focusing on genetic conditions causing metabolic, neurodegenerative and cardiovascular syndromes, the goal is to gain non-invasive, efficient, and specific access within the body and its cells, to enable effective treatment of these life-threatening disorders and other maladies characterized by similar pathological traits.

Job position description

To actively assist in and conduct research regarding the main thrust of the lab, namely nanocarrier- and targeting-based platforms for site-specific delivery of therapeutics, encompassing analytical, cell culture, and small animal models.

Special emphasis is given to strategies for transport of biotherapeutics across biological barriers in the body, including those that separate body compartments (e.g., the gastrointestinal epithelial barrier or the blood-brain barrier, which are involved in oral delivery or delivery to the central nervous system, respectively), uptake into selected tissue cells, and targeting of precise subcellular compartments.

To contribute to common lab supporting tasks, research collaborations, recording and reporting process, as well as publications and other scientific communications derived from this work.