

We are looking for a **PhD candidate in the area of Functional Molecular Materials to cover a fellowship inside the Severo Ochoa program**. The researcher will join the Department of NanoScience and Organic Materials (**NANOMOL**, www.icmab.es/nanomol) at the **Institut de Ciència de Materials de Barcelona (ICMAB-CSIC)** located at the UAB (Universitat Autònoma de Barcelona, Bellaterra, Spain) research park. Nanomol is a research group with wide expertise and recognized excellence in the **synthesis, processing and study of molecular and polymeric materials** with chemical, electronic, magnetic and **biomedical properties**.

The PhD project offered proposes a multidisciplinary research that merges organic and physical chemistry, materials science, and biomedicine to develop **stimuli-responsive supramolecular hydrogels**. These hydrogels will have tunable chemical and mechanical properties which we expect to enhance T cell proliferation rates while controlling the cellular phenotypes ex-vivo in order to **facilitate the translation of emerging adoptive T cell therapies to fight cancer into clinics**. This project will involve the 1) synthesis and characterization of functional polymeric materials; 2) physicochemical characterization (stiffness, porosity, etc.) of supramolecular 3D hydrogels under dynamic conditions; 3) study of human T cell adhesion, activation, proliferation and differentiation in dynamic supramolecular hydrogels. The applied character of this research has already raised the interest of **international pharmaceutical companies that are committed to follow the work**.

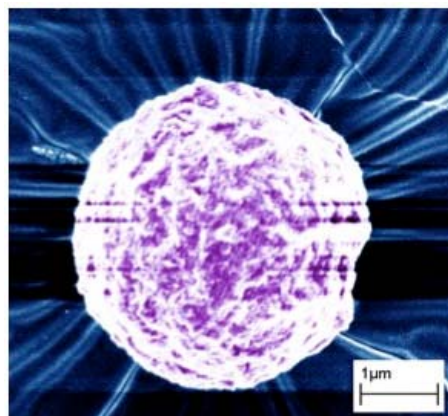


Figure 1. Human T cell on a hydrogel.

Candidates must hold a **BSc degree in Chemistry, Materials Science or Biotechnology and a Master degree** with high qualifications (>7,5 over 10). Experience in organic synthesis, physicochemical characterization and cell culture will be highly valued. The successful candidates will work in an **international environment and might travel to other European countries** to develop the project. Candidates should be ready to enter an official doctoral programme in September 2016.

Contact: Interested candidates should contact Dr. Imma Ratera (iratera@icmab.es) or Dr. Judith Guasch (guasch@is.mpg.de) and go to the following link <http://icmab.es/jobs/2468-phd2016#apply> to upload their application before the **20th of June 2016**.