

## Company Description

Polymers are found in such a large variety of products that have shaped modern life. In the future, polymers will continue substituting other materials in established applications and will play a major role in the development of the technologies needed to address some of the 21st Century challenges such as energy, health care and sustainability. POLYMAT is devoted to use-inspired fundamental research on synthesis, assembly and processing of polymers that in concert with theory and simulation enable addressing these challenges.

## Information

📅 Deadline: 2022-02-03  
🏢 Category: Academia  
📍 Province: Gipuzkoa

🌐 Country: Spain  
📍 City: DONOSTIA-SAN SEBASTIAN

## Company

Polymat

**POLYMAT**  
Basque Center for  
Macromolecular Design and Engineering

## Main functions, requisites & benefits

### Main functions

A PhD Fellowship is available in the group of Science and Engineering of Polymeric Biomaterials (ZIBIO Group) at the Basque Center for Macromolecular Design and Engineering, POLYMAT Fundazioa ([www.polymat.eu](http://www.polymat.eu)) under the co-supervision of Dr. Aitor Larrañaga and Dr. Jose Ramon Pineda (Achucarro Basque Center for Neuroscience Fundazioa). Promoting cell-biomaterial interactions to accelerate the neural differentiation of human dental-pulp stem cells We offer a highly multidisciplinary project that combines research involving polymer science & engineering, chemistry, cell & molecular biology and neuroscience. This project pursues the utilization of functional hydrogels based on natural polymers for their combination with human stem cells, as a prospective platform for the regeneration of the nervous tissue. Through the precise control over the properties of the hydrogel, the interaction between the biomaterial and the stem cells can be modulated, thus resulting in the activation/inhibition of several pathways that can eventually modulate the neural differentiation of the seeded cells. The project will be carried out at POLYMAT, a vibrant multidisciplinary and international research institute in Bilbao and San Sebastian, Spain. The Institute offers excellent working conditions and is well equipped with instrumentation and facilities.

### Requisites

Required qualifications and experience. Applicants must have a BSc and MSc in Biomedical Engineering, Materials Science and Engineering, Biochemistry, Biology, or a related discipline. Previous experience in hydrogel fabrication, mechanical characterization and cell culture will be highly valuable. The candidate is expected to work in Bilbao, within a multidisciplinary and an international environment. Good command of written and spoken English is a must.

### Benefits

Both POLYMAT and Achucarro are BERC institutions that have obtained the 'HR Excellence in Research award'. The award reflects our commitment to continuously improve our human resource policies in line with the European Charter for Researchers, the Code of Conduct for the Recruitment of Researchers and our commitment to achieve fair and transparent recruitment and appraisal procedures.