

OPEN POSITION

Early-Stage Researcher / PhD position (ESR 8) at Universitat Autònoma de Barcelona, Spain

This ESR position is part of the European Training Network “BIOREMIA” dealing with research on novel biofilm-resistant materials for hard tissue implant applications. BIOREMIA offers the possibility to pursue the PhD within the Network at different universities and industrial companies from 10 European countries (Germany, Austria, Italy, Sweden, Greece, UK, Spain, Ireland, France, and Switzerland).

Background information on all ESR positions and BIOREMIA Network is available on www.bioremia.eu
 BIOREMIA (“*BIOfilm-REsistant Materials for hard tissue Implant Applications*”) is funded by the European Union’s Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement no. 861046.

Job title	Early-Stage Researcher (PhD student position) / ESR 8
Project title	ESR 8: Aqueous electrodeposition of hydroxyapatite (HA) and Ag NPs-HA and ZnO-HA composite films with antifouling performance
Application deadline	April 15 th 2020
Expected starting date¹	June 2020 (approx.)
Recruiting institution	The Universitat Autònoma de Barcelona (UAB) Address: Sciences Faculty, Building Cc, UAB, 08193 Bellaterra (Spain) Website: www.uab.es
City, Country	Barcelona, Spain
Job/project description	The <i>objective</i> is the pulse electrodeposition of dense and porous HA films on Ti-based metallic surfaces. Characterization of their structure, residual stress, and adhesion. Electrodeposition of composite coatings consisting of HA matrix and Ag NPs or ZnO as fillers. Evaluation of the factors affecting Ag and ZnO incorporation and distribution within the matrix. Assessment of films’ wettability. Tuning of coatings roughness and porosity to enhance surface hydrophobic characteristics. Assessment of their cytotoxicity and antibacterial activity by in vitro testing. <i>Expected Results:</i> Production of adherent, hydrophobic, and antifouling HA composite coatings by electrodeposition. Determination of the key factors enabling a relevant incorporation of Ag and ZnO NPs in the coating. Correlation between surface wettability with corrosion and biofouling performance The ESR will travel abroad for research secondments at partner organisations of the BIOREMIA Network (e.g. at IFW Dresden- Germany, University of Gothenburg-Sweden, PX Services-Switzerland) and will participate in specialised training meetings and international conferences.
Appointment	The appointment will be on a temporary basis for a maximum period of 36 months (PhD student, regular full-time employment contract), with an attractive salary plus allowances package according to the Marie Skłodowska-Curie / Innovative Training Networks rules.
Eligibility conditions	Applicants must at the time of recruitment: 1) Be in the first four years (full-time equivalent) of their research careers 2) Have not resided in Spain for more than 12 months in the last 3 years 3) Have not been awarded a doctoral degree.

Candidate's profile	<ul style="list-style-type: none"> • Applicants must hold a Master's degree or equivalent in <i>Materials Science and Engineering, Chemistry or Physics</i> providing access to PhD programs and should have experience with experimental research. • Applicants must have excellent proficiency in written and spoken English. • Applicants must have strong motivation and ability to collaborate in an interdisciplinary and international team
How to apply²	<p>Interested candidates should send an application containing the following documents in English (and, when necessary, a certified translation of official documents):</p> <ul style="list-style-type: none"> • Motivation Letter (describing research career goals, skills, experience, and highlighting the consistency between the candidate's profile and the chosen ESR position) • A complete Curriculum Vitae with references to past research and training experiences • Copies of Bachelor and Master's certificates/diploma & transcripts • Two Reference Letters • Publications (if available). <p>Applications should be sent by e-mail <u>as a single PDF</u>, quoting the project name and the ESR position "BIOREMIA - ESR 8", to: Prof. Eva Pellicer eva.pellicer@uab.cat</p> <p>Applications can also be submitted via the online <i>Application Form</i> at www.bioremia.eu</p>
Further information	<ul style="list-style-type: none"> • For additional information about this ESR position please contact: Prof. Eva Pellicer eva.pellicer@uab.cat • Some background material about host institution can be found here: https://jsort-icrea.uab.cat/ and www.bioremia.eu

¹ Employment start date to be mutually agreed

² The recruiting organization may decide to interview only those applicants who appear from the information available, to be the most suitable, in terms of experience, qualifications and other requirements of the position.