

OPEN POSITION

Early-Stage Researcher / PhD position (ESR 15) *at Stryker Trauma GmbH, Germany*

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 15
Project title	ESR 15: Impact of implant coatings on osseointegration and biofilm prevention
Application deadline	31/03/2020
Expected starting date¹	April 2020 (approx.)
Recruiting institution	Stryker Trauma GmbH Prof.-Küntschers Str. 1-5, 24232 Schönkirchen Website: www.stryker.com
City, Country	Schönkirchen, Germany
Job/project description	<p><i>Objectives:</i> Optimisation of industrially standardized coating technologies for metallic materials in clinical use and for new beta-type TiNb alloys towards a) improved antibacterial efficiency, and b) suitable osseointegration for trauma implants. Tasks: 1) To produce test implants based on TiAlV, Stainless steel and TiNb, 2) Coat these implants using anodization Type II and III as well as biodegradable HA; 3) Biomechanical tests and surface analytics; 4) Differential adhesion of fibroblasts, osteoblasts and other osteo-related cells will be described in in vitro assays and inflammatory biomarkers will be screened (secondment); 5) The antimicrobial effect of the coating will be characterized in comparison to the raw (uncoated) material using microbiological tests (secondment); 6) Initiating of the regulatory assessment of antibacterial coatings, verification and validation protocols and feasibility studies on the transfer of antibacterial coating technologies into qualified manufacturing processes.</p> <p><i>Expected Results:</i> i) Understanding the impact of coating of bone implants for the complex mechanism of osseointegration at the surface to the tissue ii) Development of new standard antibacterial surfaces for metallic implants for traumatological applications; iii) Enable the ESR to develop entrepreneurial thinking and methods in industry-led R&D comprising prototype development and scale-up of coating technologies as well as managerial, leadership and team skills in an international and industrial environment</p> <p>The ESR will travel abroad for research secondments at different institutions of the BIOREMIA Network (e.g. at Goeteborgs Universitet - Sweden, IFW Dresden - Germany, University of Cambridge-UK, The University Clinics of Giessen & Marburg - Germany).</p> <p>The ESR will enroll in the doctoral student programme at Goeteborgs Universitet, Sweden.</p>
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 <i>Marie Skłodowska-Curie / Innovative Training Networks</i> rules.
Eligibility conditions	<p>Applicants must at the time of recruitment:</p> <ol style="list-style-type: none"> 1) Be in the first four years (full-time equivalent) of their research careers 2) Have not resided in Germany 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 or Biomedical engineering or other domains related to the core activities described above</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 • Good command of German language will be a plus • Competences in materials science and biomaterials will be a plus.
How to apply²	<p>Applications should be sent by e-mail <u>as a single PDF</u>, quoting the project name and the ESR position "BIOREMIA - ESR 15", to: Dr. Robin Büscher robin.buescher@STRYKER.com 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 the scientist-in charge/supervisor: Dr. Robin Büscher robin.buescher@STRYKER.com • Some background material about host institution can be found here: www.stryker.com 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.