

## OPEN POSITION

### Early-Stage Researcher / PhD position (ESR 14) *at Anthogyr SAS, France*

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](http://www.bioremia.eu)

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| <b>Job title</b>                          | <b>Early-Stage Researcher (PhD student position) / ESR 14</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Project title</b>                      | <b>ESR 14: Minimally-invasive dental implants with improved microbiological safety from Ti-based bulk metallic glasses</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Application deadline</b>               | 28/02/2020                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Expected starting date<sup>1</sup></b> | April 2020 (approx.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Recruiting institution</b>             | Anthogyr SAS (Anthogyr)<br>2237 Avenue André Lasquin, 74700 SALLANCHES, FRANCE<br>Website: <a href="http://www.anthogyr.com">www.anthogyr.com</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>City, Country</b>                      | Sallanches, France                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Job/project description</b>            | <p><b>Objectives:</b> This project will take forward the design of the Ti-based metallic glasses (BMGs) for the production of minimally invasive dental implants and to tailor their chemistry and topography for optimized biofilm resistance and hard-soft tissue integration. Tasks: a) Extensive structural (glass formation/by DSC-TEM), physical (thermal stability/ by DSC), chemical (corrosion) and mechanical (compression and fatigue tests) characterization of selected compositions; b) Micro/nano-scale surface modifications based on chemical/mechanical/thermal processes; c) Effect of process parameters on the surface characteristics will be studied; d) The mechanical integrity and physico-chemical properties of surfaces studied by SEM, surface roughness measurement, corrosion tests, contact angle measurement, XPS; e) Complementary tests to evaluate if the BMGs can withstand the processing chain required for the production of dental implants (e.g. machining, sterilization, standardized mechanical tests , etc.).</p> <p><b>Expected Results:</b> 1) Design and evaluation of antibacterial Ti-based BMGs taking into account the medical device specific requirements and standards. 2) Proof of concept in the shape of a Ti-based BMG representative implant prototype processed in good manufacturing practices environment, combining all desired features to facilitate industrial upscaling and accelerate future product development.</p> <p>The ESR will travel abroad for research secondments at different institutions of the BIOREMIA Network (e.g. at IFW Dresden-Germany, Università degli Studi di Torino- Italy, Goeteborgs Universitet-Sweden and INSA-Lyon, France) and will participate in specialised training meetings and international conferences.</p> <p>The ESR will enroll in the doctoral student programme at INSA Lyon, France and will get</p> |

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|                                 | access to the research facilities of laboratory INSA-MATEIS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Appointment</b>              | The appointment will be on a temporary basis for a maximum period of <b>36 months</b> (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.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Eligibility conditions</b>   | Applicants must at the time of recruitment:<br>1) Be in the first four years (full-time equivalent) of their research careers<br>2) Have not resided in France for more than 12 months in the last 3 years<br>3) Have not been awarded a doctoral degree.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Candidate's profile</b>      | <ul style="list-style-type: none"> <li>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.</li> <li>Applicants must have excellent proficiency in written and spoken English</li> <li>Applicants must have strong motivation and ability to collaborate in an interdisciplinary and international team</li> <li>Good command of French language will be a plus</li> <li>Competences in biology/bacteriology will be a plus.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                        |
| <b>How to apply<sup>2</sup></b> | <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"> <li>Motivation Letter (describing research career goals, skills, experience, and highlighting the consistency between the candidate's profile and the chosen ESR position)</li> <li>A complete Curriculum Vitae with references to past research and training experiences</li> <li>Copies of Bachelor and Master's certificates/diploma &amp; transcripts</li> <li>Two Reference Letters</li> <li>Publications (if available).</li> </ul> <p>Applications should be sent by e-mail <u>as a single PDF</u>, quoting the project name and the ESR position "<b>BIOREMIA - ESR 14</b>", to:</p> <p style="text-align: center;"><a href="mailto:rh@anthogyr.com">rh@anthogyr.com</a></p> <p>Applications can also be submitted via the online <i>Application Form</i> at <a href="http://www.bioremia.eu">www.bioremia.eu</a></p> |
| <b>Further information</b>      | <ul style="list-style-type: none"> <li>For additional information about this ESR position please contact :<br/>At Anthogyr<br/>Dr. Nicolas Courtois      <a href="mailto:n.courtois@anthogyr.com">n.courtois@anthogyr.com</a><br/>At INSA-LYON<br/>Pr Damien Fabrègue      <a href="mailto:damien.fabregue@insa-lyon.fr">damien.fabregue@insa-lyon.fr</a></li> <li>Some background material about host institution &amp; research groups can be found here:<br/><a href="http://www.anthogyr.com">www.anthogyr.com</a><br/><a href="http://mateis.insa-lyon.fr/en/">http://mateis.insa-lyon.fr/en/</a><br/>and <a href="http://www.bioremia.eu">www.bioremia.eu</a></li> </ul>                                                                                                                                                                                                                                                                                                                                                               |

<sup>1</sup> Employment start date to be mutually agreed

<sup>2</sup> 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.