

## DC2 – Job Vacancy

<b>Position Description</b>	
<b>Reference</b>	DC2
<b>Title of the project</b>	Human protein based nanogels for the biomimetic drug delivery of anticancer antibodies
<b>Recruiting Institutions</b>	(1°) University of Aveiro (Portugal, 24 months) and (2°) University of the Basque Country-POLYMAT (Spain, 12 months)
<b>Secondment</b>	MetaTissue
<b>Expected Start Date (estimated)</b>	Latest July, if possible, February/March

<b>Job Offer Description</b>	
<b>Keywords</b>	Human protein-based nanogels, Encapsulation of antibodies, delivery through BBB
<b>Project Description</b>	This project is focused on the development of therapeutic drugs that can be eventually used to cross the BBB (Blood Brain Barrier) and target glioblastoma cells. The offered PhD will be mainly focused on the encapsulation of antibodies, namely cetuximab, using human protein-based lysates as monomers to build up a protective shell that will ultimately guide the antibody to target tumoral cells.
<b>Objectives</b>	<ol style="list-style-type: none"> <li>1. Synthesis and characterization of a library of methacryloyl platelet lysates (PLMA)-based nanogels (UAVR)</li> <li>2. Production and characterization of antibody (cetuximab) loaded PLMA nanogels (UAVR)</li> <li>3. Decorate the surface of the nanogels with peptide-shuttles to improve the ability to cross the BBB (UPV/EHU)</li> <li>4. Cell compatibility, uptake, and anticancer efficacy in vitro (UAVR, UPV/EHU)</li> </ol>
<b>Expected Results</b>	PLMA-based biocompatible nanogels (50-200 nm) loaded with the therapeutic antibody will show high penetrability through BBB due to its beneficial structural and physiological characteristics. This strategy will give rise to the design of personalized drug delivery systems and will be extrapolated to different cancer models.
<b>Supervisors</b>	Dr. Catarina Custódio (University of Aveiro) and Dr. Ana Beloqui (University of the Basque Country-POLYMAT)
<b>Work in the secondment</b>	Metatissue

<b>Vacancy requirements</b>
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THERATOOLS



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<b>Qualifications</b>	Solid background in nano and biomaterials or nanoscience or bioengineering/biomedical engineering. Having a master degree or equivalent diploma, and not having a doctoral degree.
<b>Requirements</b>	MSCA-recruiting rules are applied. Not having resided in Portugal for more than 12 months in the 3 years immediately before the recruitment date, and not having carried out their main activity (work, studies, etc.) in Portugal during this period.
<b>Languages</b>	Excellent command of written and spoken English is a must
<b>Skills</b>	Ability for research management, dissemination, communication with colleagues and supervisors, strong teamwork spirit, creativity, problem solving and attention to safety
<b>Experience</b>	Research experience in the academic or industrial sector will be considered

<b>Job Details</b>	
<b>Salary</b>	Salary and benefits will follow the rules of the MSCA-DN, as foreseen in the Marie Skłodowska-Curie Actions Work Programme. Gross salary per month in Spain: 3104,20€ (3400€ per month*CCC Spain (91,3%)) + 600 € mobility allowance Gross salary per month in Portugal: 2.866,20€ (3400€ per month*CCC Spain (84,3%)) + 600 € mobility allowance  *CCC (Country Correction Coefficient)
<b>Other benefits</b>	Other benefits: Gross family allowance: 660€ per month - if applicable*  *The family allowance will also be made available to researchers whose parental status changes during their project.
<b>Duration</b>	36 months
<b>Type of contract</b>	Full time
<b>Place of work</b>	<i>University of Aveiro: Aveiro, Portugal (24 months). Within these 2 years, 3 months secondment at Metatissue (Aveiro, Portugal)</i> <i>University of Basque Country: Donostia-San Sebastián, Spain (12 months)</i>