

EXPRESSION OF INTEREST- ULPGC SUPERVISOR

FOR HOSTING MARIE SKŁODOWSKA-CURIE INDIVIDUAL FELLOWSHIPS (CALL MSCA-IF 2020)

Supervisor/Scientist in charge	Prof. Dr. José Juan Santana Rodríguez
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Department/Institute/Centre	Institute for Environmental Studies and Natural Resources (i-UNAT) ("Environmental Chemical Analysis" Research Group) (AQMA)
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Research Area	<input checked="" type="checkbox"/> Chemistry (CHE) <input type="checkbox"/> Economic Sciences (ECO) <input type="checkbox"/> Information Science and Engineering (ENG) <input checked="" type="checkbox"/> Environmental and Geosciences (ENV) <input type="checkbox"/> Life Sciences (LIF) <input type="checkbox"/> Mathematics (MAT) <input type="checkbox"/> Physics (PHY) <input type="checkbox"/> Social Sciences and Humanities (SOC)
URLs	www.ulpgc.es Web Research Institute / Group: www.iunat.ulpgc.es www.agma.ulpgc.es
Applications: documents to be submitted and deadlines <i>(Indicar qué documentación deberán remitir los interesados/as para establecer contacto: CV, letter of motivation, letter of references, etc.)</i>	<p>At the deadline for the submission of proposals (09/09/2020), researchers (*):</p> <ul style="list-style-type: none"> - shall be in possession of a doctoral degree or have at least four years of full-time equivalent research experience. - Comply with the mobility rule: you cannot apply for a fellowship in our institution if you do not meet the call mobility rule -> might change depending on the type of MSCA-IF. - Proficiency/fluency in English language (including writing). <p>If you are interested in submitting a proposal, please send us the next documents by e-mail before June 26th 2020:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> CV with the contact details of 2 referees <input checked="" type="checkbox"/> Letter of motivation <input checked="" type="checkbox"/> Other: Experience in the subjects or related subjects of the project
Contact (e-mails)	Supervisor: josejuan.santana@ulpgc.es European Projects Office: ope@fpct.ulpgc.es

(*). Further details on the Call and additional eligibility criteria can be found at the [Participants' Portal](#)

BRIEF DESCRIPTION OF THE CENTRE / RESEARCH GROUP / SUPERVISOR

The supervisor's proposal, Prof.Dr. José Juan Santana Rodríguez, is Director of Institute for Environmental Studies and Natural Resources (i-UNAT) (www.iunat.ulpgc.es) and Head of Environmental Chemical Analysis Research Group (AQMA) (www.aqma.ulpgc.es) at the University of Las Palmas de Gran Canaria (ULPGC). His research fields are focused mainly in: - optimization, development and application of new analytical methodologies for the determination of organic contaminants in the environment; - control of organic micropollutants in aquatic and terrestrial systems. The Group AQMA is constituted by 7 researchers (3 professors-researchers, 3 senior postdoc researchers and 1 PhD student) and has a wide experience in the determination of organic contaminants including emerging in different environmental compartments. To this purpose the Group counts several chromatographic equipment which include LC-MS/MS, UHPLC-DAD, UHPLC-FLD, UHPLC-MS/MS and UHPLC-QToF, as well as different extraction/preconcentration techniques like SPE, Ultrasounds, Microwave, etc. The Group has published more than 160 scientific articles in indexed journals), 1 book and 12 book chapter and has presented 240 communications in international and national Congresses. The carried out projects include European projects such as:

“DETERMINATION OF ORGANIC MICROCONTAMINANTS ADSORBED ON MICROPLASTICS FOUND IN COASTAL AREAS (*Impact assessment of emerging microplastics and contaminants on the coasts of the Macaronesia*) (IMPLAMAC)”.

European Union – INTERREG-MAC COOPERATION PROGRAM 2014 – 2020, “EVALUATION OF EMERGING POLLUTANTS IN TREATMENT TECHNOLOGIES (*Adaptation to climate change in the Macaronesia through efficient water use and reuse*) (ADAPTAREs),

European Union - INTERREG-MAC COOPERATION PROGRAM 2014 – 2020 and national projects such as “STRATEGIES FOR THE CONTROL AND NATURAL REMEDIATION OF EMERGING ORGANIC COMPOSITIONS IN WASTEWATER. IMPACT ON THE MARINE ENVIRONMENT”,

Spanish Ministry of Economy and Competitiveness, 2016-2018, “DEVELOPMENT OF NEW EXTRACTION STRATEGIES IN PHARMACEUTICAL RESIDUE ANALYSIS. IMPLEMENTATION IN REAL SAMPLES OF ENVIRONMENTAL INTEREST.

Spanish Ministry of Science and Innovation, 2011 – 2013, among other. Also, the Group participates currently in the submitted European proposals WATERCARE (*Aquatic pollutants* - JPI call 2020) and PLASTICSinUS (Horizon 2020).

PROJECT DESCRIPTION

- **TITLE: MONITORING, CONTROL AND ENVIRONMENTAL IMPACT OF MICROPOLLUTANTS IN AQUATIC AND TERRESTRIAL SYSTEMS.**
- **RESEARCH DESCRIPTION:**

The main objective of present proposal is, on one hand, the study of the presence of micropollutants in different environmental compartments, including aquatic and terrestrial systems. And

on the other hand, know the environmental impact of these micro-contaminants in natural ecosystems, mainly in aquatic life, including animal and vegetal organisms.

We may consider as micro-pollutants those contaminants present in the environment in concentration levels of $\mu\text{g.L}^{-1}$ or lower. Among these contaminants are included so called *emerging contaminants*, which cover likewise many of compounds such as pharmaceuticals, UV filters, hormones, micro and nano-plastics, etc. Also it is well demonstrated their extensive introduction and distribution in the environment and the adverse effects in wildlife.

In this context, this research proposal includes the following interrelated topics:

- Development of analytical methodologies and strategies for the determination of micro-pollutants in liquid, solid and biological environmental samples.
- Spatial and temporal monitoring of micro-pollutants in different environmental compartments including wastewaters, marine and surface waters, sludges, marine sediments, agricultural soils, marine and terrestrial vegetables, marine organisms, etc.
- Study, determination and monitoring of micro-pollutants present in plastics and micro-plastics.
- Environmental Risk Assessment of micro-pollutants in different natural ecosystems.

• **REQUIREMENTS OF CANDIDATES:**

Although not limited, the candidates should have some previous experience in some of following fields:

- Analytical Chemistry
- Environmental Analytical Chemistry or Environmental Chemistry
- Marine Sciences
- Handling of chromatographic techniques, mainly liquid chromatography
- Handling of extraction/pre-concentration techniques
- Development of new analytical methodologies and treatment of analytical data.
- Studies of environmental impact (environmental risk assessment, eco-toxicological effects, etc.)
- Any experience related with the proposal subjects will be considered and valuable.