Doctoral Vacancy Announcement form

Research Topic Title: Development of Sustainable Packaging Solutions Based on Microalgal Biomass & Side Streams

No. of Openings: 1

Description: Developing novel and efficient packaging solutions to improve product quality, shelf life and reduce waste, is a major challenge to improve sustainability of food and cosmetics supply chains. The objective of the thesis is the introduction of economically and environmentally sustainable packaging materials based on microalgal biomass and the evaluation of the effect of novel biodegradable packaging systems on the quality and safety of perishable food and cosmetics in the supply chain of EU. Major food-derived residues will be exploited for production of bioplastics (PHB) and bioactive compounds (polyunsaturated fatty acids - PUFAs) through co-cultivation of microalgae with bacteria, aiming to maximize the productivity of the specific biomolecules under extreme culture conditions. The formulation of sustainable packaging as well as assessment of its effect on the quality and safety of food and cosmetics will be conducted via fully funded placements in research groups and companies participating in AQUAPACK, which are located in Italy, Greece, Portugal, UK, Croatia, The Netherlands, Spain and France. Thus, the successful candidate will be offered the opportunity for cross-cutting interdisciplinary knowledge exchange, technology transfer and training to improve employability and career prospects.

Required Qualifications: Candidates should possess a Bachelor’s and postgraduate degree of Master’s level from accredited Universities in Chemical Engineering, Chemistry, Biotechnology, Bioengineering, Biology, Environmental Engineering or any other related field and to be fluent in English.

Funding: The project is supported via AQUAPACK (an MSCA Staff Exchanges EU funded programme), which includes fully-funded research secondments of the student in different European countries. The successful candidate will be offered up to a maximum of 12 months secondments (in one or several mobility periods, split stays are allowed), where the candidate will receive a net amount of €2300 per month of secondment.

Research Advisor:

Name/Surname: Michalis Koutinas

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