



University of Genova

Department of Earth, Environmental
and Life Sciences

Doctorate Course in Earth and
Environmental Science and
Technology

Università degli Studi di Genova



Dottorato in Scienze e Tecnologie
per l'Ambiente e il Territorio

Curriculum in biology applied to agriculture and the environment

Research Theme n 1

<p>Titolo: Valutazione dell'efficacia cosmetica di acidi grassi polinsaturi estratti da scarti di origine vegetale ed animale.</p> <p>Title: Evaluation of the cosmetic efficacy of polyunsaturated fatty acids extracted from plant and animal waste</p>
<p>Tutor Elena Grasselli elena.grasselli@unige.it co-tutor: Matteo Zanotti Russo info@angelconsulting.it</p>
<p>Program description, including the formation program in private company This program is aimed at the valorization of plant and animal waste extracted according to green methods to minimize impact of extraction. The production of olive oil and fishing are two important natural and commercial resources in Liguria and therefore the volumes of waste are not to be neglected. Both sources can be used for the extraction of polyunsaturated fatty acids (PUFA) with green methods (ie ultrasound, microwave, mechanochemistry, pulsed electric fields, extrusion, instant controlled pressure drop, sub or super-critical fluid, etc.) by Prof. Boggia of the Pharmacy Department of the University of Genoa. PUFAs will be evaluated for their effectiveness in the cosmetic field. In particular, the ability to protect the skin from aging triggered by exposure to ultraviolet rays (Photo-aging) will be evaluated. Cosmetic application leads to the noble recycling of biological matter that would otherwise be eliminated. This research will be performed in collaboration with Angel Consulting. The activities carried out by AngelConsulting in recent years and the results obtained include: support for innovative startups, scientific-regulatory assistance in identifying problems related to product safety, development of protocols advanced and specific for the identification of potential or current criticalities, contribution and joint participation in European projects of the Horizon 2020 program, demonstration of the maintenance of skin homeostasis, participation in conferences and seminars in the field of endocrine disruptors. AngelConsulting will be involved in this project for the experimental design and the quality controls of the procedure aimed at certifying safety of PUFA for cosmetic purpose. The Ph.D. candidate will be trained in assaying efficacy and safety by using reconstructed human epidermis and by following OECD guidelines.</p>
<p>PON research line: Green</p>
<p>Company hosting the PhD: Angel Consulting Srl</p>
<p>Financial support: project H2020 acronym EcoeFISHent will begin 1st October 2021</p>
<p>Tutor's publications (max 3)</p> <ol style="list-style-type: none">1. Peptides for skin protection and healing in amphibians. Demori I, Rashed ZE, Corradino V, Catalano A, Rovegno L, Queirolo L, Salvidio S, Biggi E, Zanotti-Russo M, Canesi L, Catenazzi A, Grasselli E, <i>Molecules</i>, 2019, 24(2), 3472. Synthesis, Photoisomerization, Antioxidant Activity, and Lipid-Lowering Effect of Ferulic Acid and Feruloyl Amides. Lambruschini C, Demori I, El Rashed Z, Rovegno L, Canessa E, Cortese K, Grasselli E*, Moni L*. <i>Molecules (Basel, Switzerland)</i>, 2020, 26(1) (*equal contribution)3. Direct effects of Bisphenol A on lipid homeostasis in rat hepatoma cells. Grasselli E, Cortese K, Voci A, Vergani L, Fabbri R, Barmo C, Gallo G, Canesi L. <i>Chemosphere</i>, 2013, 91(8), pp. 1123–1129