PhD Co-tutoring Université Paris Saclay, France - Universitá degli Studi dell´Insubria, Italy

Project : P-53 modulating peptide conjugates for targeted immunoncological therapy

An ESR position is opened at the University of Insubria – Como starting October 1st 2022 – December 1st 2022 for **16 months, funded by the MSCA-ETN MagicBullet Reloaded** (**https://www.uni-bielefeld.de/fakultaeten/chemie/projects/magicbulletreloaded**).

A co-funding of 20 months will be requested in the frame of the call ADI 2022 (Actions Doctorales Internationales-Cotutelle-) of the Université Paris Saclay, in order to establish a co-tutoring agreement.
For informations about the call ADI 2022, see the links below:
https://www.universite-paris-saclay.fr/actions-doctorales-internationales-cotutelle-de-luniversite-paris-saclay
https://www.universite-paris-saclay.fr/sites/default/files/2022-02/actions-doctorales-internationales-cotutelle-2022.pdf
The deadline for submitting the application at the Universite Paris Saclay is the 25th of May 2022. Thus, the candidates must contact and apply as soon as possible by sending a CV, transcript records, and a motivation letter to the two supervisors of the doctoral project:
Prof. Dr. Sandrine Ongeri (FluoPEPIT, BioCIS, Université Paris Saclay) : Sandrine.ongeri@universite-paris-saclay.fr
Prof. Dr. Umberto Piarulli (Université Insubria) : Umberto.piarulli@uninsubria.it

Objectives of the doctoral project
The ESR will be involved in the design and synthesis of antitumor conjugates consisting of small molecules or peptides modulating the tumor protein p53 activity and $\alpha_v\beta_3$ or $\alpha_5\beta_1$ integrin ligands, or prostate specific membrane antigen (PSMA) ligands. Linking and release strategies will be optimized and biological studies in cancer cell lines will be performed. More specifically, cell-penetrating peptides and peptidomimetic foldamers inhibiting protein-protein interactions involving p53 in cancers will be designed, synthesized and evaluated.
Further information can be found at https://www.uni-bielefeld.de/fakultaeten/chemie/projects/magicbulletreloaded or by contacting Prof S. Ongeri and Prof. U. Piarulli.

Candidate profile:

- University degree which allows to pursue doctoral studies in Chemistry (e.g. MSc in Chemistry, Organic Chemistry or Medicinal Chemistry).
- a strong knowledge and practical experience in synthetic organic chemistry, documented by MSc thesis or scientific publications.
- practical experience in analytical methods (NMR, MS, HPLC).
- excellent knowledge of the English language (comprehension, speaking and writing).
- good abilities in scientific writing (reports, manuscripts).
- team-oriented and cooperative working attitude.
- motivation and willingness to work in an international environment and in two research groups.
- motivation and willingness to present scientific results in conferences and to publish in scientific journals.

Preferable additional qualifications

- Background in medicinal chemistry and peptide chemistry.
- Basic knowledge in biological assays.
- Experience with working in a team.

Enquire for further information contacting:

Sandrine.ongeri@universite-paris-saclay.fr

Umberto.piarulli@uninsubria.it

References :

1- "*Kiss and Run: Promoting Effective and Targeted Cellular Uptake of a Drug Delivery Vehicle Composed of an Integrin-Targeting Diketopiperazine Peptidomimetic and a Cell-Penetrating Peptide*" L. Feni; S. Parente, C. Robert, S. Gazzola, D. Arosio, U. Piarulli, I. Neundorf, *Bioconj. Chem.*, **2019**, *30*, 2011-2022.
2- "*Synthesis and Biological Evaluation of an isoDGR-Paclitaxel Conjugate Containing a Cell-Penetrating Peptide to Promote Cellular Uptake*" L. Bodero, S. Parente, F. Arrigoni, A. Klimpel, I. Neundorf, S. Gazzola, U. Piarulli, *Eur. J. Org. Chem.* **2021**, 2383 - 2387
3- *"Helical γ-peptide foldamers as dual inhibitors of amyloid-β peptide and islet amyloid polypeptide oligomerization and fibrillization*", J. Kaffy, C. Berardet, L. Mathieu, B. Legrand, M. Taverna, F. Halgand, G. Van Der Rest, L. Maillard, S. Ongeri, *Chem. Eur. J.* **2020**, *26*, 14612-14622.
4- *"Introducing sequential aza-amino acids units induces repeated β-turns and helical conformations in peptides"* N. Tonali, I. Correia, J. Lesma, G. Bernadat, S. Ongeri, O. Lequin, *Org. Biomol. Chem.* **2020**, *18*, 3452-3458.
5- *« Fluorinated Triazole Foldamers: folded or extended conformational preferences »* J. Laxio Arenas, Y. Xu, T. Milcent, C. Van Heijenoort, F. Giraud, T. Ha-Duong, B. Crousse, S. Ongeri. *ChemPlusChem* Special issue: Synthesis, Properties, and Applications of Foldamers, **2021**, *86*, 241–251.
6-*« β-Hairpin Peptide Mimics Decrease Human Islet Amyloid Polypeptide (hIAPP) Aggregation »,* J. Lesma, F. Bizet, C. Berardet, N. Tonali, S. Pellegrino, M. Taverna, L. Khemtemourian, J.-L. Soulier, C. Van Heijenoort, F. Halgand, T. Ha-Duong, J. Kaffy, S. Ongeri, *Front. Cell Dev. Biol.*, **2021**, 9, 729001.