



Hosting offer for Marie Skłodowska-Curie Postdoctoral Fellowships (PF) 2022 at University of Cyprus/Synthetic Organic Chemistry & Chemical Biology Research Laboratory

[MSCA Postdoctoral Fellowships](#) are individual research grants offering excellent postdoctoral researchers the chance to develop their skills by means of international mobility. Through the implementation of an original and personalised research project, MSCA Postdoctoral Fellowships aim to foster excellence through training and mobility and to equip researchers with new skills and competences in order to identify solutions to current and future challenges.

University of Cyprus/Synthetic Organic Chemistry & Chemical Biology Research Laboratory invites motivated postdoctoral researchers to jointly prepare an application for the [MSCA-PF-2022 call Marie Skłodowska-Curie Postdoctoral Fellowships](#) call ([MSCA-PF-2022](#)) with them as host organisation.

Description of Hosting organisation/group

The Synthetic Organic Chemistry & Chemical Biology Laboratory was established in 2012 and is based in the Chemistry Department of University of Cyprus (UCY). It is led by Assist. Prof. Dr Savvas N. Georgiades and is today a vibrant team consisting of several talented PhD students. The interests of the laboratory span the areas of Organic Synthesis, Medicinal Chemistry, Bioorganic Chemistry and Chemical Biology. The members of the laboratory are well-trained in modern synthetic techniques as well as purification and characterization methods (1D and 2D NMR, LC-MS, UV-vis, FT-IR, CD, polarimetry, etc) for both natural product-like (terpenoids, alkaloids) and drug-like compounds. They also have expertise in the application of biophysical methods (fluorescence, FRET, ITC, etc), which they routinely employ for the characterization of compound-target interaction, with particular focus on ligand-G quadruplex DNA interactions. The laboratory has recently developed a light-induced, photoredox-mediated catalytic late-stage C-H activation/arylation synthetic methodology for the construction of drug-like compound libraries from biologically-relevant scaffolds, which are assembled via multi-component reactions (MCRs). It has also reported on innovative families of G-quadruplex ligands (oligo-heteroaryl or metal-based organometallic) with enhanced features relative to state-of-the-art, in terms of inhibiting high binding affinity and selectivity for specific G4s, as well as remarkable stabilization potential or selective optical response upon binding specific G4s. The research team is housed in its own laboratory space, which provides access to hoods for chemical synthesis, rotary evaporators with water cooling/recirculator system, Waters preparative HPLC system, Eppendorf speed-vac evaporation system, various combi-chem rotor and mixer systems, etc. It enjoys direct access to departmental NMR facility (equipped with 500 MHz and 300 MHz Bruker NMR instruments), MALDI-TOF-MS, API-LC-MS, UV-vis, CD, fluorescence and polarimetry instruments, while, through collaborators within the department of Chemistry, also has access to X-ray crystallography facility and Raman spectroscopy.

Link to the webpage of the host group:

<https://www.ucy.ac.cy/dir/el/component/comprofiler/userprofile/savvasg>

Topics

The Synthetic Organic Chemistry and Chemical Biology Laboratory (host laboratory) welcomes postdoctoral candidates for an MSCA-PF application in one of the following topics:

- Synthesis of novel G-quadruplex ligands and biophysical evaluation of their interaction with selected G4 DNA or RNA targets, aiming towards generating new pharmaceutical leads or target-specific bio-imaging probes.
- Development of novel bio-inspired materials based on guanine nucleobase self-assembly and investigation of their structure and properties (e.g., chirality) via different (spectroscopy and microscopy) techniques, as well as their potential for use in energy-transfer applications.

Supervisor profile

The postdoctoral candidate will be integrated in the Laboratory of Synthetic Organic Chemistry and Chemical Biology and will be supervised by **Assistant Professor Dr Savvas N. Georgiades**. Dr Georgiades has expertise in smart synthetic methodologies (e.g. catalytic CH activation, including photoredox-mediated) for efficient generation of small-molecule bioactives, especially ones of anticancer potential. He is interested in both drug-like and natural product-like compounds that serve as site-selective quadruplex DNA binders, kinase inhibitors, peptide mimetics, and signal transduction modulators. He is experienced in the construction of molecular libraries, using solution and solid-phase techniques. Dr Georgiades has developed: synthetic routes towards various cellular signaling pathway modulators (activators or suppressors); fluorescent Ru-based anticancer theranostic agents with mitochondrial localization; modular G-quadruplex ligands with molecular chaperon-like properties enabling folding of DNA G4s; organometallic G4 ligands with selectivity-controlling appendages and optical-probe features. Dr Georgiades is considered an international expert in G-quadruplexes.

Candidate profile

- Expected qualifications/expertise of the candidate: The candidate should hold a PhD degree in Chemistry, Chemical Biology, Biological Sciences or other relevant field, from a recognized University. Any prior experience in biophysical characterization of nucleic acids and their complexes, *in vitro* or *in cellulo*, will be considered an additional qualification.
- You must have a completed PhD at the time of the call deadline (14 September 2022).
- Candidates must have a maximum of 8 years full-time research experience from the PhD award date until September 14, 2022. Periods of inactivity in research (e.g. unemployment, periods of employment outside research, parental or sick leave) do not count towards the time of research experience.
- For European fellowships, candidates can be of any nationality and must not have resided or carried out their main activity (work, studies, etc.) in Cyprus for more than 12 months in the 36 months immediately before September 14, 2022.
- Highly motivated candidate with an excellent research track record appropriate to career stage, as evidenced by academic publications and other scientific output.

What we offer

- Support and guidance for the preparation of your MSCA PF proposal
- A stimulating, interdisciplinary environment for high-level research.

See for more details contact: rss@ucy.ac.cy

How to apply?

Indicate your interest by contacting the host institution as follows:

Please contact **Prof. Savvas N. Georgiades** by email (georgiades.savvas@ucy.ac.cy) with a short CV and motivation to indicate your interest to prepare a MSCA-PF application, with Dr Georgiades' laboratory as the host group.

After the supervisor agrees to support you as a MSCA-PF candidate, you can start preparation of MSCA PF project proposal and will be supported further by the Research Support Office of the host university.

For more information please contact the MSCA coordinator of the host institution: rss@ucy.ac.cy