



## Marie-Skłodowska Curie Postdoctoral Fellowship at the University of Ljubljana

University of Ljubljana, leading research institution in Slovenia, is looking for highly motivated candidates for the Marie Skłodowska-Curie actions (MSCA) Postdoctoral Fellowship Scheme applications with professor Stanislav Gobec, as a supervisor. More information on prof Gobec on following pages.

### What is a MSCA PF?

The Marie-Skłodowska Curie Postdoctoral Fellowship is a post-doc research and training programme in which the fellow gains new skills and competences working on a specific research project in a new environment, collaborating with the academic and non-academic sector. Open to all fields of research. More information about the MSCA PF call will be available when the call opens in the middle of April.

### WHO IS ELIGIBLE TO APPLY?

There are main requirements of eligibility:

1. Researcher must have a **PhD and maximum of 8 years full-time equivalent experience in research** (measured from the date that the researcher is in possession of a doctoral degree).
2. Mobility rule: Researcher can be of any nationality but must not have lived or worked in Slovenia for more than 12 months during the three years up to the closing date of the call (European Fellowships) or must not have lived or worked in the Third country (host in the outgoing phase) for more than 12 months during the three years up to the closing date of the call (Global Fellowships).
3. The applicants must choose University of Ljubljana, Slovenia, as their Host Institution.

If you decide to apply to the MSCA PF call in 2022 with University of Ljubljana, as your host institution, you will get a full support from University office for Research at UL and be guided throughout the whole process – from a two-day intensive workshop MSCA PF MASTERCLASS (workshop on proposal writing and info on experience of successful MSCA fellow, getting information on submission process and much more) and later on also a review of the project proposal from external experts.

## PROFILE OF THE SUPERVISOR

NAME OF THE SUPERVISOR: Prof. dr. Stanislav Gobec

MAIN RESEARCH FIELD: Drug discovery, medicinal chemistry

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LINK to SUPERVISOR's webpage: <https://www.ffa.uni-lj.si/en/faculty/organization/chairs/the-chair-of-pharmaceutical-chemistry>

### DESCRIPTION OF THE SUPERVISOR (max. 200 words)

Stanislav Gobec studied pharmacy at the Faculty of Pharmacy, University of Ljubljana, where he obtained a Ph.D. in 1999. He has been a full professor of pharmaceutical chemistry at the Faculty of Pharmacy, University of Ljubljana since 2010. His research interests are structure-based in-silico design, synthesis and evaluation of small-molecule enzyme inhibitors for different therapeutic areas, including infectious diseases, cancer and neurodegenerative diseases. He has authored more than 250 papers and book chapters, has over 4000 pure citations, five granted international patents, and has been involved in academic and industrial EU-funded (FP6 and FP7) drug discovery and development programs, attracting overall more than 2 million Euro of funding. Since 2011 he has been Head of Department of Pharmaceutical Chemistry, Faculty of Pharmacy, University of Ljubljana. From 2020 he is leader of the ARRS-funded Research Programme (research core funding): Medicinal chemistry - drug design, synthesis and evaluation.

He has received the "Zois award" (Slovene highest national award for scientific excellence) for scientific achievements in 2021, Rector's award for the best University of Ljubljana innovation in 2016, Golden award of Chamber of Commerce and Industry of Slovenia in 2016, Pregl award for outstanding scientific achievements in chemistry and related disciplines in 2017, and was elected as a Member of the European Academy of Sciences and Arts in 2018.

### RESEARCH FIELD OF THE SUPERVISOR

Main research field: Pharmacy, medicinal chemistry

Sub-fields: drug discovery

### RECENT TRACK-RECORD and other SIGNIFICANT ACHIEVEMENTS

Brus B, Košak U, Turk S, Pišlar A, Coquelle N, Kos J, et al. Discovery, biological evaluation, and crystal structure of a novel nanomolar selective butyrylcholinesterase inhibitor. *Journal of medicinal chemistry*, 2014;57(19):8167–79. Available from: doi:10.1021/jm501195e

Košak U, Brus B, Knez D, Šink R, Žakelj S, Trontelj J, et al. Development of an in-vivo active reversible butyrylcholinesterase inhibitor. *Scientific reports*, 2016;(6):1–16. Available from: doi:10.1038/srep39495

Košak U, Brus B, Knez D, Žakelj S, Trontelj J, Pišlar A, et al. The magic of crystal structure-based Inhibitor optimization: development of a butyrylcholinesterase inhibitor with picomolar affinity and In vivo activity. *Journal of medicinal chemistry*, 2018;61(1):119–39. Available from: doi:10.1021/acs.jmedchem.7b01086

Brus B, Košak U, Knez D, Coquelle N, Colletier J-P, Gobec S. Disubstituted piperidine derivatives as butyrylcholinesterase inhibitors for use in the treatment of Alzheimer: European patent specification EP 3256128 (B1), 2018-11-14 [Internet]. München: European Patent and Trademark Office; 2018. p. 47. Available from: <https://register.epo.org/application?number=EP16720556>

## RESEARCH ENVIRONMENT

### FACULTY/DEPARTMENT/LABORATORY

UL and UL-FFA provide all researchers with office/ laboratory space and a personal computer, with overall administrative and IT support. The Faculty has its own meeting rooms and access to a specialised library, as well as to 38 libraries of UL faculties/ academies and Departments and the National University Library plus Central Technological Library. All UL

researchers have the possibility of free access to about 20,000 of the world's best prescribed licensed e-journals and more than 170,000 licenced eBooks from the Digital Library of UL. Open access of research papers can be provided by the UL Repository. Foreign researchers also get support from the Research Support Unit and Human Resources Office regarding their working/ living arrangements, accommodation, and school/ kindergarten arrangements. UL owns several apartments, which are available to foreign researchers. UL offers excellent working conditions, and an innovative and multidisciplinary research environment, and promotes exchange of knowledge and ideas.

UL-FFA uses up-to-date, well-equipped modern synthetic chemistry laboratories and equipment for organic synthesis, purity determination and compound isolation, as well as for biological evaluation. Structure-based design: workstations and software: Autodock, FlexX, Gold, eHiTS, ROCS, etc. Synthesis: 300 MHz, 400 MHz, 600 MHz and 800 MHz NMR spectrometers (Bruker, Varian); Nicolet Nexus FTIR spectrometer; Varian 1200L triple quadrupole LC-MS/MS system; Perkin Elmer 241MC polarimeter; [Bohdan] MiniBlock, Mettler Toledo AutoChem equipment for parallel synthesis; HP1100 Liquid Chromatograph Agilent Technologies; TLC Scanner 3 CAMAG, CAMAG Reprostar 3 System for documentation and video densitometry; CHRIST BETA 18K freeze dryer; Parr 4560 mini bench-top reactor; Biotage Isolera flash chromatography system; Chromatotron 7924T Harrison Research circular chromatography system; Discover (CEM Corporation) microwave synthesis system. Pharmacological evaluation: Tecan Safire2™ microplate reader; Biotek Synergy H4 microplate reader; Biotek Precision XS robotic pipetor; TA Instruments Nano ITC system for microcalorimetry; Hewlett Packard HP CE 3D capillary electrophoresis; BD FACS Calibur Flow Cytometer; Olympus X80 fluorescence microscope for dynamic microscopy; a complete cell culture laboratory (with laminar hoods, microscopes, centrifuges, incubators).

## RESEARCH INFRASTRUCTURE

The Faculty of Pharmacy (FFA) is a top pharmaceutical research institution that is strongly involved in basic and applicative research, financed by the government (68%), the pharmaceutical industry (21%), and EU projects (11%). The FFA employs approx. 80 Researchers, among whom 50 have doctoral degrees. The FFA has excellent long-term research collaborations with the pharmaceutical industry, which has resulted in numerous international patents. The FFA has valuable experience in managing large research projects funded by the European Commission. The FFA is committed to interdisciplinary research in the field of pharmacy, with a special emphasis on drug discovery and development.

University of Ljubljana (UL) is the oldest and largest higher education and scientific research institution in Slovenia. It contributes almost half of the research data of Slovenia. In May 2015, UL founded the Slovenian Innovation Hub, which operates as a facilitator and promoter of development and research teams in the academic and business sphere. UL is also founder of the University incubator, the Institute for Research and Innovation, and recently the SMUL network - a global alumni and associates' network. UL is also a member of numerous international networks, like: UNICA, Utrecht Network, EUA, EU2S2, CEI. From 2008, UL has been committed to respect the principles of the European Charter for Researchers and the Code of Conduct for Recruitment of Researchers. UL Strategy of Researchers' Career Development has led to the EC giving UL the right to use the logo 'HR Excellence in Research' in 2013. UL is committed to provide its researchers with an excellent working environment, and offers them different trainings in generic skills for their career development.

## ACADEMIC AND NON-ACADEMIC COLLABORATION

Supervisor has very wide network of academic collaborations in Europe and USA and other parts of the World (more than ten active collaborations). For example, University of Ghent, Hungarian Academy of Sciences, University of Leuven, Oxford University, Universite de Paris Sud, Jagellonian University, IBS Grenoble, University of Warwick, etc. He has been involved in two finished collaborative EU projects and is constantly involved in different consortia that are seeking EU funding.

## SPECIFIC REQUIREMENTS/PREFERENCES

Required degree: Pharmacy, Chemistry or Biochemistry. Skills in organic chemistry, medicinal chemistry and basic biochemical evaluation, motivation to learn computational methods in medicinal chemistry.

Language: fluent English.