Call for PhD 13 fellowship (DC13)

MSCA – Doctoral Network

Lectin LIgands for Modulation of ImmuniTy = LLiMiT

LLIMIT is a European doctoral training network dedicated to advancing immunomodulatory glycoscience. Its aim is to empower a new generation of researchers with the skills to design and develop ligands/antagonists targeting immune-related lectins—an innovative but underexplored therapeutic strategy against immune disorders such as allergy, cancer and autoimmunity, one of today's major global health challenges. The consortium unites 7 academic institutions with accredited PhD programs in organic and medicinal chemistry, molecular biology, structural biology, immunology and pharmacology, each with strong expertise in glycoscience. They are joined by 7 non-academic partners and a graduate and research academy, ensuring comprehensive, cross-sector training that spans fundamental science, translational research, and entrepreneurship. Key objectives of LLIMIT include: a) recruiting and training 14 doctoral candidates in a joint, research-based program supported by expert supervision and specialized training events, b) advancing innovative research on immune lectins and carbohydrate ligands, covering the full early drug discovery pipeline: from target identification and validation, through advanced glycochemistry and drug design, to hit and lead discovery; c) establishing a sustainable foundation for European excellence in glycodrug and immunomodulatory research; d) developing a common glycodrug curriculum across participating institutions to standardize and strengthen education in this field; e) building and maintaining long-term partnerships that ensure continuity in training, research, and innovation well beyond the project's duration.

DC13 PROJECT TITLE. ***Design and synthesis of potent drug-like Siglec-8 ligands***.

Host Institution: Department of Pharmaceutical Sciences, University of Basel (UNIBAS DPhW), Switzerland. https://pharma.unibas.ch/en/

Duration: 36 months, April 2027 - March 2030.

Supervisor: Prof. Dr. Daniel Ricklin. profile

Co-supervisors: PD Dr. Oliver Schwardt (UNIBAS DPhW, CH), Prof. Dr. Roland Pieters (Utrecht University – UU, NL).
Progress Committee Members: PD Dr. Oliver Schwardt (UNIBAS), Prof. Dr. Roland Pieters (UU), Dr. Martin Stieler (Bimovis).

DC13 PROJECT. The research programme of DC13 aims to develop potent and drug-like glycomimetic ligands for Siglec-8, a promising target for the treatment of immune cell-associated diseases such as asthma. The research will focus on the following three objectives. First, DC13 will design and synthesize monovalent sialic acid-derived Siglec-8 ligands based on known X-ray and NMR structures and guided by affinity, selectivity and pharmacokinetic properties. Second, DC13 will investigate interactions between Siglec-8 and selected ligands by surface plasmon resonance, X-ray crystallography and/or cryo-EM in collaboration with Bimovis. Third, DC13 will develop promising monovalent Siglec-8-targeted glycomimetics into advanced multi- and polyvalent ligands in collaboration with Utrecht University with the goal to achieve nanomolar Siglec-8 antagonists.

PLANNED SECONDMENTS. 1. Utrecht University (Prof. Dr. Roland Pieters), DC13 will generate multi- and polyvalent Siglec-8 ligands; 2. Bimovis (Dr. Martin Stieler), DC13 will elucidate the binding mode of selected ligands by X-ray crystallography or cryo-EM.

PhD School enrolment: PhD Program for Pharmaceutical Sciences at the University of Basel. https://pharma.unibas.ch/en/education/phd/translate-to-english-phd-program-for-pharmaceutical-sciences/

APPLICATION PROCEDURE

The position is open to candidates of any nationality, provided they meet the eligibility requirements for Doctoral Candidates (DCs) funded under the Marie Skłodowska-Curie Actions (MSCA), as defined in Section 1.3.2, "Recruited researchers", of the Horizon Europe Work Programme 2026–2027.

Applicants must complete the **LLIMIT Application Form** (provided as a separate document, available at https://llimit.eu/) and submit it, together with all the required supporting documents listed in the form, to llimit@ffa.uni-lj.si by **15 January 2027**. The application for the first round of candidate assessment should consist of the following documents:

- Completed LLIMIT application form;
- Curriculum Vitae (CV) in the Europass format: https://europass.europa.eu/en/create-europass-cv including the details of education and qualifications, work experience, language skills and other relevant skills;
- Motivation Letter;
- Transcript of record (academic studies) and master's degree certificate (when available);
- Two letters of recommendation from academics or research professionals;
- A summary of the master's degree thesis or a brief description of the past scientific activity;
- A short critical summary of a selected paper: https://doi.org/10.1002/cmdc.202000417.
- Copy of the valid ID card or Passport.

Please use the subject line "*Application for DC13 position*". The five highest-ranked applicants following the first round of candidate assessment will be invited for an interview.

The salary of the DCs will be paid according to the MSCA rules. See: https://marie-sklodowska-curie-actions.ec.europa.eu/funding/msca-doctoral-networks-2026

CANDIDATE PROFILE

- Master's degree (from 5-year BSc/MSc programs) in Pharmaceutical Sciences, Chemistry, Medicinal Chemistry or a related field,
- Experience in organic chemistry, medicinal chemistry, analytical methods, and/or molecular modeling is an advantage,
- Good command of English, both spoken and written,
- Team player with proactive attitude.

Information also available at: https://euraxess.ec.europa.eu/ and https://llimit.eu/.