



Call for 1 PhD fellowship (DC4)

A training network on the design of precision therapeutics that target key glycan motifs implicated in cancer

GlyCanDrug is a glycoscience-oriented European Training Network funded in the framework of HORIZON Europe Marie Skłodowska-Curie Doctoral Networks (MSCA-DN). Within GlyCanDrug, Doctoral Candidates (DCs) will be equipped with a thorough multifaceted knowledge of the potential of glycoscience in the discovery of cancer precision therapeutics and the necessary transferable skills. GlyCanDrug will provide an international, intersectoral and interdisciplinary educational program, according with the EU Principles for Innovative Doctoral Training. This will put DCs in an advantageous position for job opportunities in both academia and industry.

DC4 PROJECT TITLE. Protein expression and purification of FTs and crystallization of FTs and STs complexed to inhibitors.

Host Institution: Institute of Biocomputation and Physics of Complex Systems (BIFI), University of Zaragoza, Spain. <https://www.bifi.es>

Duration: 36 months, starting between January 2024-November 2024.

Supervisor: Ramon Hurtado-Guerrero. <https://bifi.es/es/biofisica/>

Co-supervisor: Henrik Clausen (University of Copenhagen, DK); *Progress Committee Members:* Henrik Clausen and Mads Clausen (DTU, DK)

DC4 PROJECT. This PhD project will focus on the cloning, expression and purification of FUT7, FUT8, ST6Gal and ST6GalNAc. Additionally, the DC will also obtain the crystal structures of these enzymes complexed to the best inhibitors. Biophysical experiments to determine the Kds of the best inhibitors by ITC or thermophoresis will be also accomplished. The DC will also perform HTS experiments at DTU and work with mammalian cells to determine the changes in N-glycans in protein reporters by mass spectrometry in the presence of the inhibitors.

PLANNED SECONDMENTS. 1. DTU (Academia, DK), HTS experiments for drug discovery; 2. GlycoDisplay (Industry, DK), glycoproteomics.

PhD School enrolment: Department of Biochemistry and Molecular and Cellular Biology at the University of Zaragoza (<https://escueladoctorado.unizar.es/>)

APPLICATION PROCEDURE. The position is open to candidates of any nationality, as long as they fulfil the requirements set for the DCs funded by MSCA (**Annex A**). The applicant must send the documents in the **Annex A** to the email specified (glycandrug@chim.unifi.it) within **1st January 2024**, clearly indicating in the subject "*Application for DC4 position*".

The salary of the DCs will be paid according to the MSCA rules. See: <https://marie-skłodowska-curie-actions.ec.europa.eu/calls/msca-doctoral-networks-2022>

CANDIDATE PROFILE.

- 5-years degree (Master) in Chemistry, Biochemistry, Biotechnology or related fields.
- Practical experience in biochemistry and biophysical techniques.
- Good level of English proficiency (understood, spoken and written).
- Team spirit and proactive attitude.

Information also available at: <https://euraxess.ec.europa.eu/>