



Call for 1 PhD fellowship (DC8)

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.

DC8 PROJECT TITLE. Structural and dynamics characterization of the complexes of bioactive molecules with glycosyltransferases and scFv antibodies by NMR spectroscopy.

Host Institution: Instituto de Investigaciones Químicas (IIQ, Institute for Chemical Research). Agencia Estatal Consejo Superior de Investigaciones Científicas (CSIC). <https://www.iiq.us-csic.es/en>, <https://www.ciccartuja.es/en/home/>

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

Supervisor: Jesús Angulo. <https://www.researchgate.net/profile/Jesus-Angulo-2>

Co-supervisor: Wilfred Germeraad (CiMaas, NL). *Progress Committee Members:* Jesús Angulo, Anne Harduin-Lepers, Wilfred Germeraad (CiMaas, NL).

DC8 PROJECT. This PhD project will focus on the structural biology of the action of small molecules able to selectively interfere with the creation of key glycan motifs implicated in cancer. The DC8 will be trained in NMR spectroscopy (*multifreq/solv*-STD NMR experiments, relaxation analysis, new methods development) and computational techniques (docking, molecular dynamics), to elucidate the 3D structures of the complexes of glycomimetics with target glycosyltransferases (FTs and STs). The DC8 will also perform genetic characterization and expression of STs, and handling of engineered NK-cells with scFv monoclonal antibodies.

PLANNED SECONDMENTS. 1. CNRS (Academia, FR), GTs expression; 2. DTU Chem (Academia, DK), HTS for GTs inhibitors discovery; 3 CiMaas (Industry, NL), cancer immunotherapy.

PhD School enrolment: *Doctorate Programme in Chemistry* at the International Doctorate School of the University of Seville (<https://doctorado.us.es/en/studies/phd-programmes/chemistry>)

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 DC8 position*".

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

CANDIDATE PROFILE.

- 5-years degree (Master) in Chemistry, Medicinal Chemistry or related fields.
- Practical experience in organic chemistry and characterization techniques.
- Good level of English proficiency (understood, spoken and written).
- Team spirit and proactive attitude.

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