



## Call for 1 PhD fellowship (DC1)

*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.

**DC1 PROJECT TITLE.** Synthesis of fucose and sialic acid mimetics able to selectively disrupt the function of key glycosyltransferases implicated in cancer.

*Host Institution:* Department of Chemistry 'Ugo Schiff', University of Florence, Italy.  
<https://www.chim.unifi.it/>

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

*Supervisor:* Barbara Richichi. <https://www.researchgate.net/profile/Barbara-Richichi>

*Co-supervisor:* Tamas Sohajda (Carbohyde, HU), Marco Marradi (University of Florence, IT);  
*Progress Committee Members:* Barbara Richichi, Tamas Sohajda, Marco Marradi, Robert Sackstein (Florida International University, USA)

**DC1 PROJECT.** This PhD project will focus on the identification of small molecules able to selectively interfere with the creation of key glycan motifs implicated in cancer. With this in mind, the DC will be trained in the synthesis and characterization of new glycomimetics (fucose and sialic acid mimetics) using an original version of the [4+2] inverse electron demand hetero Diels Alder reaction (ihDA). The DC will also perform structural biology and cancer biology studies to unveil information on the interaction of the synthetic glycomimetics with the target glycosyltransferases (fucosyltransferases and sialyltransferases).

**PLANNED SECONDMENTS.** 1. CSIC (Academia, ES), structural biology; 2. i3S (Academia, PT), cancer biology; 3. Carbohyde (Industry, HU), translational drug discovery.

**PhD School enrolment:** Chemical Science at the University of Florence  
(<https://www.dottoratoscienzachimiche.unifi.it/index.html>)

**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](mailto:glycandrug@chim.unifi.it)) within **1<sup>st</sup> January 2024**, clearly indicating in the subject "*Application for DC1 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, 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/>