Call for 1 PhD fellowship (DC2)

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.

DC2 PROJECT TITLE. Synthetic approaches for targeting cancer glycosylation.

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: Marco Marradi. https://orcid.org/0000-0003-0831-6942

Co-supervisor: Henrik Clausen (Glycodisplay, DK), Barbara Richichi (University of Florence, IT); *Progress Committee Members*: Marco Marradi, Celso Reis, Henrik Clausen.

DC2 PROJECT. This PhD project will focus on precision delivery of therapeutics developed within GlyCanDrug to cancer cells. In particular, cell organelles-targeting molecules will be conjugated to selected synthetic glycosyltransferases inhibitors and validated on cancer models *in vitro*. Furthermore, nanoparticles decorated with Tn/STn-specific scFv antibodies will be prepared for selective targeting of cancer cells. The DC will also perform cancer biology studies (intracellular fate of the synthetic constructs) and cells glycoengineering (glycoprofile of engineered cells treated with the synthetic constructs).

PLANNED SECONDMENTS. 1. i3S (Academia, PT), screening of Golgi-targeted compounds in cancer cells; GlycoDisplay (Industry, DK), glycoprofile of engineered cells; 3. DTU (Academia, DK) cholesteryl-tagged scFv antibodies.

PhD School enrolment: Chemical Science at the University of Florence (https://www.dottoratoscienzechimiche.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) within **1st January 2024**, clearly indicating in the subject "*Application for DC2 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/