



## Call for 1 PhD fellowship (DC5)

*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.

**DC5 PROJECT TITLE.** Combotope-specific single chain fragments (scFv) antibodies by Phage Display Technologies.

*Host Institution:* Department of Bioengineering Technical University of Denmark

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

*Supervisor:* Dr. Ola Blixt. <https://www.bioengineering.dtu.dk/research/center-for-antibody-technologies>

*Co-supervisor:* Prof. Wilfred Germeraas (CiMaas, ND).

*Committee Members:* Prof. Celso Reis (I3S - Instituto De Investigacao E Inovacao Em Saude Da Universidade Do Porto), Wilfred Germeraas.

**DC5 PROJECT.** DC5 is responsible for several tasks related to the development of cutting-edge anti-combotope scFv antibodies as part of the GlyCanDrug program. The main objectives of DC5 includes preparation of synthetic combotope peptides, Implement and further develop the iDEAL phage display antibody discovery platform, molecular-level study of combotope/scFv interactions, specificity assessment and targeting validation using various engineered cancer cell models and human patient tissue samples including scFv-functionalized liposomes and scFv-engineered NK cells. This training will involve understanding the implications of scFv antibodies as potential chimeric antigen receptors (CAR) to enhance NK cells' ability to kill cancer cells. The work conducted by DC5 will contribute to the ambitious studies of the GlyCanDrug program and lay the groundwork for future implementation beyond the project's duration.

**PLANNED SECONDMENTS.** 1. i3S (Academia, PT), pre-clinical mAb validation; 2. CiMaas (Maastrich, NL, pre-clinical mAb validation, CAR-NK).

**PhD School enrolment:** DTU Bioengineering, (<https://www.bioengineering.dtu.dk/teaching/phd>)

**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 DC5 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, Bioengineering or related fields.
- Practical experience in protein expression, purification 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/>