

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

Newsletter 03

October, 2025

2nd Conference Meeting in Porto, Portugal

PhD Students and Supervisors Reconnect at the 2nd GlycanDrug Conference

Catching Up and Connecting - Showcasing Research - Learning from Experts - Beyond the Lab - Growing Together

Our network came together once again for a dynamic conference where our DCs and supervisors reunited to share progress and exchange ideas. PhD students from the GlyCanDrug network presented their work so far, sparking lively discussions and receiving valuable feedback for the progress of their research.



Specialized scientific sessions, led by network experts, gave students the chance to deepen their knowledge and broaden perspectives. Soft skills courses helped PhD students strengthen communication, collaboration, and career planning for the future.



The event blended science, skills, and community spirit—showing once more the value of learning and growing together.

Our DCs secondments

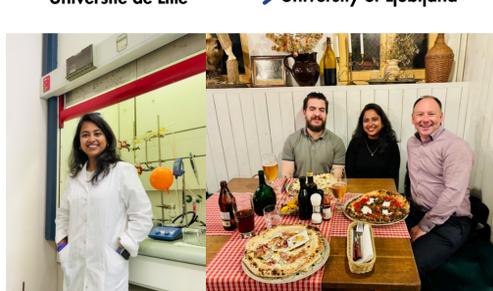
A secondment offers PhD students a unique chance to expand their research, build new collaborations and friendships, and gain valuable international experience

Overall, it's an opportunity for our DCs to grow both scientifically and personally

So we would like to share with everyone a part of their secondments!!

Université de Lille → University of Ljubljana

University of Florence → i3S



Sushmaa Danguubiyam went to Professor Marko Anderluh laboratory in the University of Ljubljana between March and April of 2025. There she was able to work on the synthesis of activated sugar donor to be used in the development of the microplate assay for fucosyltransferases.



Georgia-Myrto Prifi went to Professor Celso Reis laboratory in the i3S between May and June of 2025. There she was able to work on the evaluation of the compounds she synthesized at the University of Florence in cancer cells. These compounds were to assess their ability to target the Golgi apparatus.

Technical University of Denmark → University of Florence



George Lasisi went to the University of Florence (UNIFI) under Prof. Marco Marradi & Prof. Barbara Richichi between June and July of 2025. The main focus was to synthesize critical carbohydrate-based chemical tools to be used in fluorescence polarization

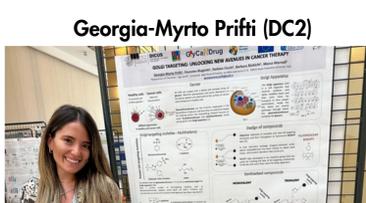
Dissemination activities

Sushmaa Danguubiyam (DC9)



Sushmaa Danguubiyam (DC9) has presented a poster entitled of: **A versatile and comprehensive microplate assay to screen inhibitors of human sialyltransferases**, which is about the development of a microplate assay at Société Française de Biochimie et Biologie Moléculaire in Paris, 2025. This method will allow us to discover and characterize new inhibitors of glycosyltransferases. Adding to this Sushmaa also did a video entitled: **Development of microplate glycosyltransferase assays for enzymatic characterization and inhibitor screening**; this video was made for the Journées André Verber, which is the PhD days in the graduate school of health and biology in the University of Lille, that took place in September 2025 at the University of Lille. [Click on the title and go check it out!](#)

Georgia-Myrto Prifi (DC2)



Georgia-Myrto Prifi (DC2) presented her Poster at EuroCarb22, 2025, entitled: **Golgi targeting: Unlocking new avenues in cancer therapy**, which is focused on precision delivery of cancer therapeutics to the Golgi apparatus, where target glycosyltransferases are located. Developing targeting compounds will lead to enhanced delivery of therapeutics.

Natan Koraj (DC7)



Natan Koraj (DC7) presented his Poster at EuroCarb22, 2025, focusing on non-carbohydrate inhibitors of α -2,6 sialyltransferases. Small molecules designed to block the enzyme's activity without mimicking its natural sugar substrates

Pedro Miguel Ascenso Vieira (DC1)



Pedro Miguel Ascenso Vieira (DC1) held a poster presentation on design strategy for selective inhibition of glycosyltransferases at EuroCarb22. Designing selective inhibitors allows us to target cancer cells at a specific molecular level.

George Lasisi (DC6)



George Lasisi (DC6) presented his work of developing high-throughput assay for GTs, EuroCarb22, 2025, entitled: **Assay Development and Activity Screening of Inhibitors of Sialyl- and Fucosyltransferases**. High throughput screening allows us to test a large number of compounds for inhibitory activity against GTs.

Jordan Gotti (DC3)

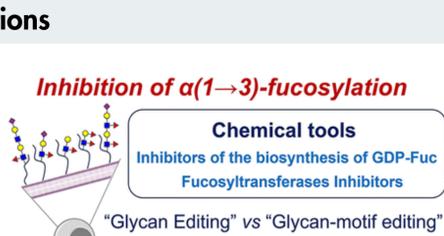


Jordan Gotti (DC3) participated in the European Research Night on September 26th that took place in i3S, in Porto. Helping expand science to the younger generation and everyone that is curious to know more!

Publications

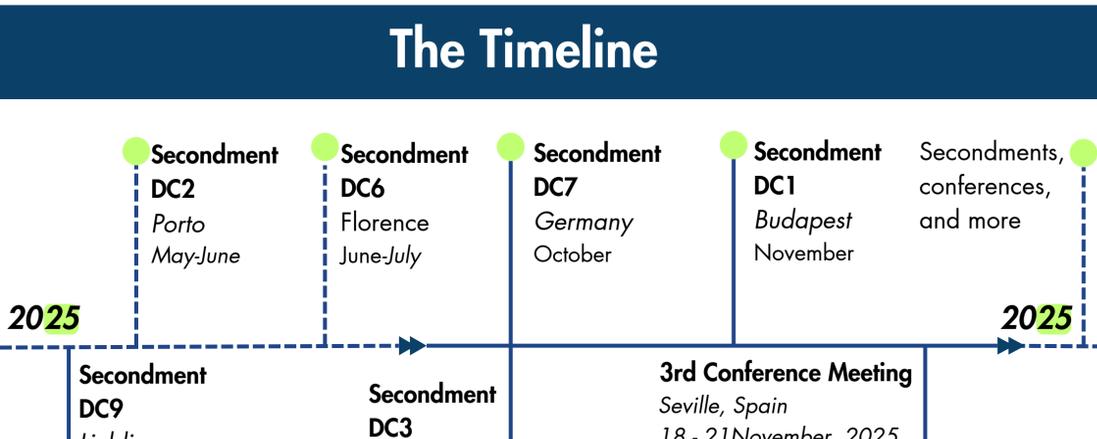
Pedro Miguel Ascenso Vieira (DC1) is the first author in a perspective article published in the *Journal of the American Chemical Society AU (JACS AU)* on 6 October 2025. This article reviews the pivotal role of $\alpha(1\rightarrow3)$ -fucosylation in cell biology and then comprehensively reviews the evolving chemical strategies to custom-modify $\alpha(1\rightarrow3)$ -fucosylation of the glycocalyx to achieve highly specific control of human cell surface fucosylated glycan motifs.

These efforts serve as a prime example of how the fine control of cell surface fucosylation can enable the generation of glycan-based precision therapeutics, driving forward the field of "translational glycobiology".



Press the image and go check it out!!!!

The Timeline



Stay tuned!

Stay tuned for project updates from our researches, their experiences from secondments and gripping interviews with experts in the field of glycosciences.

To learn more about GlyCanDrug visit <https://www.glycandrug.eu/>

