



GlycoNanoProbes: CA18132
**FUNCTIONAL GLYCONANOMATERIALS
FOR THE DEVELOPMENT OF DIAGNOSTICS
AND TARGETED THERAPEUTIC PROBES**

We are an international Research Network with members from 30 countries funded by the EU-COST Association to study how glycans can be used to develop new probes and materials for biomedical applications.

Carbohydrates, together with proteins, lipids and nucleic acids are the building blocks of life. Carbohydrates, also known as glycans, are key players in a many fundamental processes in living organisms, including protein folding, cell-cell communication in health and disease and bacterial and viral infections. Because of this, carbohydrate-based tools and materials are becoming increasingly relevant in biomedical research.

WHO WE ARE AND WHAT WE DO

Glycoscientists from 30 countries collaborate in COST Action GlycoNanoProbes to investigate the development of glycan-based diagnostic probes and therapeutics against diseases such as cancer and infection and design carbohydrate-derived smart materials for drug delivery and tissue engineering.

COST Action GlycoNanoProbes brings together analytical, synthetic and biological expertise in glycoscience and fosters the networking and interdisciplinary collaboration between material scientists, chemists, immunologists, microbiologists, medics and molecular biologists.

WORKING GROUP 1

Innovative glyconanomaterials for biomedical prognostic and diagnostic devices; Synthesis and application.

WORKING GROUP 2

Bioactive glycomaterials for personalized, regenerative and non-invasive therapies

WORKING GROUP 3

Antimicrobial and antiviral glycomaterials

OUR GOALS

- 1 Knowledge exchange:** establish a network of research in Glycoscience by bringing together experts from distinct subjects such as materials science, chemistry, structural biology, microbiology and nanotechnology.
- 2 Facilitate collaboration** between teams from different countries and disciplines in order to develop innovative and efficient methods for synthesis, characterization and evaluation of glyconanomaterials.
- 3 Knowledge transfer:** enable industrial and academic interaction and facilitate transfer of research outputs for glycomaterials commercialization.
- 4 Training and mentoring** graduated students and Early Career Investigators (ECI) working in Interdisciplinary glycomaterials research.
- 5 Advance and strengthen** glycoscience capacity in Europe and participating countries and integrate COST inclusiveness countries in multidisciplinary research.
- 6 Knowledge dissemination:** publication of collaborative research outputs and promotion of Action Activities through action website and social media.

OUR NETWORKING TOOLS



**Workshops, Training
Schools, Action Meetings
and International
conferences**



**Short Term
Scientific Missions
(STSM)**



**Action Website, forum
and social media**

More information:

www.glyconanoprobes.eu

www.cost.eu/actions/CA18132/#tabs|Name:overview



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