



# GlycoNet NEWS



GlycoNet

## CALL FOR PROPOSALS

**International Partnerships:** Accepted on a rolling basis (\$100K / project)

**Legacy Projects:** Register by June 25, 2021 (\$200K / project)

**Clinical Partnerships:** August 31, 2021 (\$50K / project)

**Translational Grants:** August 31, 2021 (\$150K / project)

**Strategic Initiatives:** August 31, 2021 (\$150K / project)

### [Calling for Proposals and Letters of Intent](#)

Funding is available for International Partnerships, Legacy Projects, Clinical Partnerships, Translational Grants, and Strategic Initiatives. Deadlines are approaching!

## Top Stories

From the Network



## [Scientific collaboration yields new hope for children affected by rare blood disorder \[in The Globe and Mail\]](#)

GlycoNet Investigators Chris Cairo and Alexey Pshezhetsky are leading the project to probe the connection between glycans and autoimmune disease.



## Carbohydrate 'cage' allows precise drug delivery to gastrointestinal tract

GlycoNet researchers are improving treatments for inflammatory bowel disease.



## GlycoNet project partnered with industries and technology receptors

New chemistry to facilitate drug development and manufacturing is underway.



## GlycoNet awards 15 projects as part of its training program

Trainees will receive support while advancing glycomics research in several health areas.



## Network Investigator meets Research Canada's Parliamentary Health Research Caucus

How can glycomics accelerate the development of cancer immunotherapies?



### Solving blood supply shortage with glycomics

Sugars on red blood cells hint a way to make universal donor blood.



### GlycoNet start-up listed as top 10 therapeutics companies in Edmonton

48Hour Discovery shows exceptional growth, management, and societal impact, according to BestStartup.

## Opportunities & Events

Career opportunities, event notices, and more



## **ANNUAL GENERAL MEETING**

SEPTEMBER 17-18, 2021  
EDMONTON

**THE WESTIN**  
EDMONTON

### **GlycoNet Annual General Meeting in Edmonton**

The AGM will take place in Edmonton from September 17-18, 2021. Please stay tuned for more information regarding schedules and presentations.

## **GlycoNet Trainee Association**

HQP trainees at GlycoNet



## Mini-Symposium Series

**West Coast**  
August 3<sup>rd</sup>  
10am-3pm PDT

**Central Canada**  
August 5<sup>th</sup>  
10am-3pm MDT

**East Coast**  
August 10<sup>th</sup>  
10am-3pm EDT

### Call for Abstract: GlycoNet Mini-Symposium Series

Three mini-symposiums from coast to coast, three professional development workshops, ample networking time, and multiple presentations. Submit your abstract by June 30!



### Trainee at GlycoNet: Ninoschka D'Souza

Take some time to get to know our trainee at York University!

SFU Women in Chemistry (WIC) present:

### The Prosody Pyramid: Tips for Speaking Effectively Workshop Series



### Tips for Speaking Effectively Series: sponsored by GlycoNet

Hosted by SFU's Women in Chemistry, the workshops teach attendees to apply the prosody pyramid into speech.

# Members in the News

Network members who recently published or made headlines



**GlycoNet's funder DOI:  
10.13039/501100009056**

Don't forget to put GlycoNet as a funder when you submit a manuscript! GlycoNet's funder identification is 10.13039/501100009056.

Publications by GlycoNet members:

- Alisdair Boraston. [Iminosugar-C-glycosides work as pharmacological chaperones of NAGLU, a glycosidase involved in MPS IIIB rare disease.](#) Chemistry.
- Charles Gauthier. [Total synthesis of the proposed structures of gladiosides I and II.](#) Carbohydrate Research.
- Charles Gauthier. [Total synthesis, isolation, surfactant properties, and biological evaluation of ananatosides and related macrolactone-containing rhamnolipids.](#) Chemical Science.
- Christopher Cairo, Stephanie Maier, Anne Halpin, Bruce Motyka, Lori West. [Characterization of ABH-subtype donor-specific antibodies in ABO-A-incompatible kidney transplantation.](#) American Journal of Transplantation.
- David Palmer, D. Wade Abbott. [Characterization of an  \$\alpha\$ -glucosidase enzyme conserved in Gardnerella spp. isolated from the human vaginal microbiome.](#) Journal of Bacteriology.
- Donald Vinh. [Harnessing Type I IFN Immunity Against SARS-CoV-2 with Early Administration of IFN- \$\beta\$ .](#) Journal of Clinical Immunology.

- Eric Brown. [A Staphylococcus aureus clpX Mutant Used as a Unique Screening Tool to Identify Cell Wall Synthesis Inhibitors that Reverse  \$\beta\$ -Lactam Resistance in MRSA](#). Frontiers in Molecular Biosciences.
- Geoff Horsman. [Biosynthetic access to the rare antiarose sugar via an unusual reductase-epimerase](#). Chemical Science.
- George Zhanel. [In vitro activity of imipenem-relebactam against various resistance phenotypes/genotypes of Enterobacterales and Pseudomonas aeruginosa isolated from patients across Canada as part of the CANWARD study, 2016-2019](#). Diagnostic Microbiology and Infectious Disease.
- Harry Brumer. [Orthogonal Active-Site Labels for Mixed-Linkage endo- \$\beta\$ -Glucanases](#). ACS Chemical Biology.
- Harry Brumer. [Two Fusarium copper radical oxidases with high activity on aryl alcohols](#). Biotechnology for Biofuels.
- Jakob Magolan, Eric Brown. [Chemical Screen for Vancomycin Antagonism Uncovers Probes of the Gram-Negative Outer Membrane](#). ACS Chemical Biology.
- James Dennis. [Association of a Marker of N-Acetylglucosamine With Progressive Multiple Sclerosis and Neurodegeneration](#). JAMA Neurology.
- Jamshid Tanha. [High-efficacy, high-manufacturability human VH domain antibody therapeutics from transgenic sources](#). Protein Engineering, Design & Selection.
- Jean-Philippe Julien. [Multivalency transforms SARS-CoV-2 antibodies into ultrapotent neutralizers](#). Nature Communications.
- Jeffrey Gildersleeve. [Carbohydrate antigen microarray analysis of serum IgG and IgM antibodies before and after adult porcine islet xenotransplantation in cynomolgus macaques](#). PLoS One.
- Joel Weadge, Michael Suits. [Analysis of Two SusE-Like Enzymes From Bacteroides thetaiotaomicron Reveals a Potential Degradative Capacity for This Protein Family](#). Frontiers in Microbiology.
- John Bell. [MicroRNA-sensitive oncolytic measles virus for chemovirotherapy of pancreatic cancer](#). Molecular Therapy Oncolytics.



- Lai-Xi Wang. [Site-Selective Chemoenzymatic Modification on the Core Fucose of an Antibody Enhances Its Fcγ Receptor Affinity and ADCC Activity](#). Journal of the American Chemical Society.
- Lai-Xi Wang. [Comparative studies on the substrate specificity and defucosylation activity of three alpha-L-fucosidases using synthetic fucosylated glycopeptides and glycoproteins as substrates](#). Bioorganic & Medicinal Chemistry.
- Maria Moreno. [Comparison of Various Approaches to Translate Non-Linear Pharmacokinetics of Monoclonal Antibodies from Cynomolgus Monkey to Human](#). European Journal of Drug Metabolism and Pharmacokinetics.
- Mark Taylor. [Site- and Stereoselective C-H Alkylations of Carbohydrates Enabled by Cooperative Photoredox, Hydrogen Atom Transfer, and Organotin Catalysis](#). Organic Letters.
- Martin Rossotti. [Induction of antigen-specific tolerance by nanobody-antigen adducts that target class-II major histocompatibility complexes](#). Nature Biomedical Engineering.
- Matthew Macauley. [Regulation of microglia population dynamics throughout development, health, and disease](#). Glia.
- M. Joanne Lemieux. [Improved SARS-CoV-2 Mpro inhibitors based on feline antiviral drug GC376: Structural enhancements, increased solubility, and micellar studies](#). European Journal of Medicinal Chemistry.
- Molly Shoichet. [Designing Hydrogels for 3D Cell Culture Using Dynamic Covalent Crosslinking](#). Advanced Healthcare Materials.
- Natalie Strynadka. [CryoEM structure of the antibacterial target PBP1b at 3.3 Å resolution](#) - Nature Communications.
- Natalie Strynadka. [PBP4-mediated β-lactam resistance among clinical strains of Staphylococcus aureus](#). Journal of Antimicrobial Chemotherapy.
- Richard Furneaux. [Chemical Synthesis of the Antiviral Nucleotide Analogue ddhCTP](#). Journal of Organic Chemistry.
- Takahiro Takazono. [Clinical and experimental phenotype of azole-resistant Aspergillus fumigatus with a HapE splice site mutation: a case report](#). BMC Infectious Diseases.

- Wesley Zandberg. [Analysis of the biosynthetic flux in bovine milk oligosaccharides reveals competition between sulfated and sialylated species and the existence of glucuronic acid-containing analogues](#). Food Chemistry.

Delivering your source of carbohydrates. - June 2021.



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