



Media Release

GlycoNet, partners fund \$3.5 million in health research

Grants awarded to 36 researchers across 18 institutions Canada-wide

EDMONTON (February 7, 2018) – The Canadian Glycomics Network (GlycoNet) along with partner institutions recently awarded more than \$3.5 million in grants to fund exploratory research in the area of glycomics to benefit human health.

The funds are distributed to more than 36 researchers at 18 institutions across Canada.

The grants will fund research to benefit human health, such as improved imaging of a key enzyme in Parkinson's disease, understanding why Alzheimer's-causing plaques form in the brain, developing an oral medication to fight drug-resistant fungi, and assessing a plant-based therapy to treat and prevent kidney stones.

"We are pleased to fund this latest round of research proposals and are confident our innovative and entrepreneurial culture will help this research impact the health and well-being of Canadians in years to come," says GlycoNet Scientific Director, Dr. Todd Lowary. "We continue to build critical mass in our research areas and count more than 114 researchers in our network who are the top in their field."

GlycoNet is a national research network based at the University of Alberta. GlycoNet focuses on the study of glycomics, the non-food roles of carbohydrates in biological systems, particularly in relation to five themes: antimicrobials, rare genetic diseases, diabetes and obesity, chronic disease and therapeutic proteins and vaccines. Catalyst and Translational grants are funded for one year while Collaborative Team grants, where research partners match Networks of Centres of Excellence funding, are funded for two years.

In addition to funding, GlycoNet will provide technical support for the projects, including access to core services required to undertake the work, resources related to business development and protection of intellectual property and assistance developing collaborations with industry.

GlycoNet invited applications for multidisciplinary research projects designed to fit within the network's five research themes. After an extensive review process, GlycoNet awarded the following 14 projects, listed below. More details, including project summaries, are available at <http://canadianglycomics.ca/projects/>

ANTIMICROBIALS

Inhibiting glycosylphosphatidylinositol (GPI) anchor biosynthesis to treat drug-resistant fungal infections

Dr. Leah Cowen (University of Toronto)

Total project value: \$200,000

CHRONIC DISEASES

Carbohydrate antigens-functionalized silver nanoparticles –Toward a fast and sensitive assay for clinical diagnostic of prostate cancer.

Dr. Denis Giguère (University of Laval)

Total project value: \$75,000

Development of antibodies targeting 9-O-acetyl-GD2 for cancer treatment and diagnosis.

Dr. Kenneth Ng (University of Calgary); Dr. Chang-Chun Ling (University of Calgary); Dr. Jamshid Tanha (National Research Council)

Total project value: \$72,000

A mass spectrometry-based approach to elucidate the glycan ligands of CD33 implicated in Alzheimer's disease.

Dr. Matthew Macauley (University of Alberta); Dr. John Klassen (University of Alberta)

Total project value: \$75,000

Atypical glycan based liquid biopsy for risk stratification in early breast cancer

Dr. Karla Williams (University of British Columbia); Dr. Peter Watson (University of British Columbia)

Total project value: \$701,056

Evaluation of PET radiotracers for imaging glucocerebrosidase in Parkinson's disease.

Dr. Christopher Phenix (University of Saskatchewan); Dr. Rebecca Davis (University of Manitoba); Dr. Justin Hicks (Lawson Health Research Institute); Dr. Darrell Mousseau (University of Saskatchewan); Dr. David Palmer (University of Saskatchewan)

Total project value: \$554,456

Development and validation of a quantitative clinical flow cytometry assay for selective measurement of GCaSe activity in peripheral blood mononuclear cells

Dr. David Voadlo (Simon Fraser University); Dr. Jon Stoessl (University of British Columbia); Dr. Vesna Sossi (University of British Columbia); Dr. Ziv Gan-Or (McGill University); Dr. Edward Fon (McGill University); Dr. Thomas Duncan (McGill University)

Total project value: \$488,693

Cardioprotective nucleoside analogues for chemotherapy

Dr. Yvan Guindon (Institut de recherches cliniques de Montréal); Dr. Mona Nemer (University of Ottawa)

Total project value: \$131,711

DIABETES & OBESITY

Towards gut microbiota modulation using dietary glycans

Dr. Bastien Castagner (McGill University); Dr. Corrine Maurice (McGill University)

Total project value: \$75,000

RARE GENETIC DISEASES

Preparatory studies for phase I/II clinical trial to correct GM2 gangliosidosis using AAV9 based gene therapy

Dr. Jagdeep Walia (Queens University); Dr. Brian Lichty (McMaster University)

Total project value: \$196,780

Engineering human hexosaminidase for gene and enzyme replacement therapies.

Dr. Brian Mark (University of Manitoba); Dr. Helene Perreault (University of Manitoba); Dr. Barbara Triggs-Raine (University of Manitoba)

Total project value: \$74,950

THERAPEUTIC PROTEINS AND VACCINES

Attenuating antibody fucosylation with carbafucose analogues.

Dr. Robert Britton (Simon Fraser University); Dr. David Vocadlo (Simon Fraser University)

Total project value: \$75,000

Investigation of glycosylated pilins as a new TB vaccine for respiratory mucosal immunization

Dr. Lori Burrows (McMaster University)

Total project value: \$246,330

Glycan remodelling of plant derived therapeutic proteins

Dr. Warren Wakarchuk (Ryerson University); Dr. Alasdair Boraston (University of Victoria)

Total project value: \$449,200

Clinical assessment of arbutin for the treatment and prevention of calcium oxalate kidney stones

Dr. Nicholas Power (Western University); Dr. Paul Spagnuolo (University of Guelph); Dr. Blayne Welk (Western University)

Total project value: \$90,200