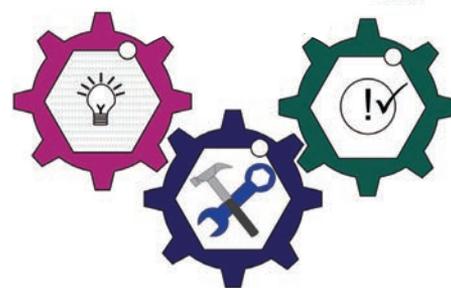


## Carbs got you down?

Come get friendly with glycans

By Catherine Grimes & Natasha Zachara



Glycans are everywhere.

Development, the immune system, the definition of self, protection of surfaces, adhesion of cells, signal transduction and metabolism. What do they have in common?

All are regulated by glycans and their conjugates (glycoproteins, glycosaminoglycans and glycolipids). Perhaps you've encountered glycans in your research: milk oligosacchar-

to create, test and disseminate new tools, reagents and methods to help all scientists do research under the glycoscience umbrella. Four years in, the program's investigators have progressed toward the NAS goal of a glycoscience tool kit and now seek collaborating partners from the broader scientific community — researchers with an interest in glycans and their binding partners — to use these tools.

your field? If so, we're here to help.

A workshop to highlight recent advances from the glycoscience community and assist you in tackling your glyco needs will be held Sunday, April 7, at the American Society for Biochemistry and Molecular Biology annual meeting in Orlando. This low-key networking event is designed to facilitate discussions tailored to all levels of your research needs. The designers of new tools, standards, methods and syntheses will be waiting to talk with you at tables labeled "Ask a Glycoscientist." Academic investigators Catherine Grimes, Will York, Lance Wells, and Natasha Zachara and industry representatives from Lectenz Bio and Glycan Therapeutics LLC will be available to answer such questions as:

- How do I determine if my protein is glycosylated?
- How do you approach a glycomics project?
- What bioinformatics tools are there?
- What reagents are available to help me label my glycans?

We hope this interactive night of programming will lower any barriers between you and working on sugars in your research.

Indulge your sweet tooth in Orlando.

### Emerging Technologies in the Glycosciences

SUNDAY, APRIL 7 ■ 5:30 – 7 p.m.

Room W307CD, Orange County Convention Center

Presented by **Catherine Grimes**, University of Delaware, and **Natasha Zachara**, Johns Hopkins University

rides that play a critical role in innate immunity, the ABO blood group antigens, hyaluronic acid (in our knees and in cosmetics), and the carbohydrates that often form the ligands critical to vaccines.

Discovering a glycan associated with your favorite research question can be daunting. What do you do? Call a friend who knows about glycans? Stop working on the problem? Dealing with anything glyco traditionally has been reserved for specialists. Yet, given their prevalence in biology, everyone should get to know these molecules.

In response to the National Academy of Sciences' 2012 report "Transforming glycoscience: A roadmap for the future," the National Institutes of Health is investing about \$120 million in the Common Fund Glycoscience Program. An NIH working group designed a seven-year program

Funded projects must cross-validate their efforts, highlighting the utility of tools and reagents while promoting fruitful collaborations. For example, Catherine Grimes' laboratory at the University of Delaware has developed a method to label the bacterial cell wall metabolically with modifiable sugar building blocks. These reagents have been shared with numerous laboratories. Nina Salama's laboratory at the Fred Hutchinson Cancer Research Center in Seattle used Grimes' tools to study the role of the glycan coat in the pathogenesis of *Helicobacter pylori*, the bacteria that causes stomach cancer. This non-glycobiologist has streamlined the methodology into her microbiology-based research program. This is just one example of how the common fund is working across disciplines to assure that new approaches to studying glyco are inclusive.

Do you have glycans questions in



Catherine Grimes (cgrimes@udel.edu) is an assistant professor of chemistry and biochemistry at the University of Delaware.



Natasha Zachara (nzachara@jhmi.edu) is an associate professor in the biological chemistry and oncology departments at the Johns Hopkins University School of Medicine.