

### Conference Organizers

Parastoo Azadi, University of Georgia  
Michael Pierce, University of Georgia  
Michael Tiemeyer, University of Georgia  
Richard Steet, University of Georgia  
Rene Ranzinger, University of Georgia

### Theme

Carbohydrates are important mediators of many types of cell-cell and cell-environment interactions. Among other essential cellular activities, they influence differentiation and proliferation, modulate apoptosis, establish neural pathways, mediate responses to pathogens and regulate signaling events. The goal of this symposium is to assess the state of knowledge in several emerging paradigms related to the role of carbohydrates in normal development, cellular physiology, and disease progression. This year marks the 7th time that the Complex Carbohydrate Research Center of the University of Georgia has sponsored the Georgia Glycoscience Symposium. These symposia have highlighted a broad range of carbohydrate research and this year's theme provides a platform for investigators from many different fields. The organizers have made a special effort this year to invite investigators in the early stages of their careers along with a smaller number of more experienced speakers. This way, we hope to highlight the work of emerging scientists as they push the frontiers of glycoscience. The symposium is intended to promote interaction among all scientists interested in carbohydrate function, and all attendees are encouraged to contribute to our lively discussions.



### Venue

The Complex Carbohydrate Research Center (CCRC) is housed in a 140,000 sq. ft. building at the edge of the University of Georgia campus. It houses 17 faculty groups with research devoted to various aspects of carbohydrate science. The CCRC is home to the UGA Cancer Center and four federally designated centers for carbohydrate research. The CCRC also provides analytical services and laboratory training courses to scientists in academia and industry. The Center has a modern auditorium that seats 250. The campus itself is 70 miles from the Atlanta Airport. Flights to Atlanta from all parts of the world are readily available. For more information on registration, hotels and transportation, visit the symposium website at:

<http://glycomics.ccrcc.uga.edu/symposium/>

# 7th Annual Glycoscience Symposium

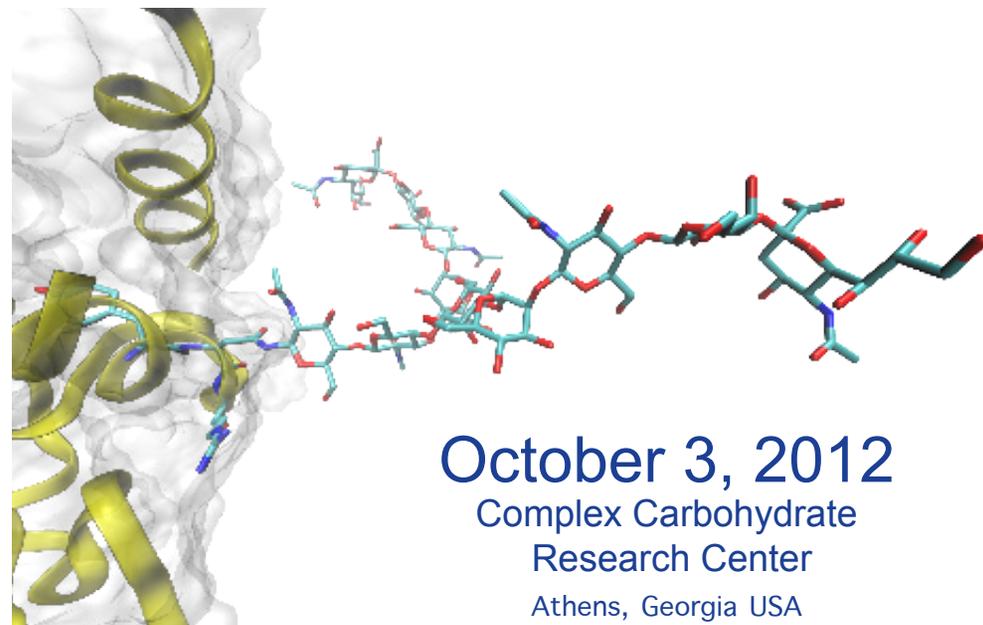
*"Emerging Paradigms in Glycobiology"*



UNIVERSITY OF  
**LOUISVILLE**



VANDERBILT  
UNIVERSITY



**October 3, 2012**

Complex Carbohydrate  
Research Center

Athens, Georgia USA

<http://glycomics.ccrcc.uga.edu/symposium/>

# 7th Annual Glycscience Symposium “Emerging Paradigms in Glycobiology”

October 3, 2012

Continental Breakfast & Registration 8:15 – 9:00 am  
Welcome & Introduction 9:00 – 9:10 am

## **Session 1: Glycosylation in Cardio Pathophysiology**

**Session Chair: Lance Wells, University of Georgia**

Plenary Talk: Muredach Reilly, University of Pennsylvania 9:10 - 9:40 am  
“The ABO Locus and Glycomics in Cardiovascular Disease”

Dongqi Xing, University of Alabama at Birmingham 9:40 – 10:00 am  
“O-GlcNAc Protects Against Inflammation-induced Vascular Dysfunction”

Xiang Fan, University of Georgia 10:00 – 10:20 am  
“Endothelial Heparan Sulfate Promotes Fibrinolysis to Modulate Hemostasis”

Ryan Readnow, University of Louisville 10:20 – 10:40 am  
“O-GlcNAc in Heart Failure and Cardiac Development”

**Refreshment Break 10:40 – 10:55 am**

## **Session 2: Developmental Glycobiology**

**Session Chair: Michael Tiemeyer, University of Georgia**

Plenary talk: Vlad Panin, Texas A&M University 10:55 – 11:25 am  
“The Control of Neural Transmission by Glycosylation: A Perspective from the *Drosophila* Model”

Plenary talk: Ellen Lemosy, Georgia Health Sciences University 11:25 – 11:55 am  
“What does Pipe do? Finding a Function and Glycan Target for a Modifying Enzyme Important for *Drosophila* Embryo Patterning”

Ryan Berger, University of Georgia 11:55 – 12:15 pm  
“PST-dependent Polysialylation is Required for Efficient Differentiation of Human Pluripotent Stem Cells”

Neil Dani, Vanderbilt University 12:15 – 12:35 pm  
“The Sweet Side of Synaptic Development: Heparan Sulfate Proteoglycan Regulation of WNT and BMP Trans-synaptic Signaling”

**Lunch and Poster Presentations 12:35 – 2:05 pm**

## **Session 3: Model Systems**

**Session Chair: Richard Steet, University of Georgia**

Plenary Talk: Judith Fridovich-Keil, Emory University 2:05 – 2:35 pm  
“Impaired Galactose Metabolism in Yeast, Flies, and People”

Abigail Cline, University of Georgia 2:35 – 2:55 pm  
“Too Much of a Good Thing: A Zebrafish Model of PMM2-CDG Reveals a Substrate-Accumulation Mechanism for N-Linked Glycosylation Deficiency”

Kazuhiro Aoki, University of Georgia 2:55 – 3:15 pm  
“Glycomic Analysis of Lineages Derived from Salt-and-Pepper Syndrome iPS Cells”

Aaron Beedle, University of Georgia 3:15 – 3:35 pm  
“Modeling Dystroglycan Glycosylation Defects in the Mouse”

Stephanie Stalknaker, University of Georgia 3:35 – 3:55 pm  
“Analysis of Mouse Models of Congenital Muscular Dystrophy”

**Refreshment Break 3:55 – 4:10 pm**

## **Session 4: Glycans in Cancer Progression and Diagnosis**

**Session Chair: Binghe Wang, Georgia State University**

Plenary Talk: Richard Cummings, Emory University 4:10 – 4:40 pm  
“O-Glycans in Cancer: A Cosmic Experience”

Amanda F. Swindall, University of Alabama at Birmingham 4:40 – 5:00 pm  
“Role of the ST6Gal-1 Sialyltransferase in the Tumor Cell Phenotype”

Karen Abbott, University of Georgia 5:00 – 5:20 pm  
“Glycomic Strategies for the Discovery of Cancer Biomarkers”

Jingjing Duan, Georgia Tech 5:20 – 5:40 pm  
“Studies of the Anti-cancer Effects of Dietary Glycosphingolipids”

Chaofeng Dai, Georgia State University 5:40 – 6:00 pm  
“Synthetic Lectin Mimics for the Recognition of Cancer Biomarkers”

Sam Dolezal, University of Georgia 6:00 – 6:20 pm  
“Investigation of the Structure and Protein-specific Addition of a Unique, N-linked Glycoepitope found in Pancreatic Cancer”

**Wine and Cheese Reception 6:30 – 7:15 pm**