

## COMPLEX CARBOHYDRATE RESEARCH CENTER AT UGA

**Research Mission.** Since its founding in 1985, scientists at the Complex Carbohydrate Research Center (CCRC) have studied the structures and functions of the complex carbohydrates of plants, microbes and animals to determine the role of carbohydrates in growth and development, host-pathogen interactions and disease processes. The fifteen research groups at the CCRC use and develop diverse analytical techniques, including mass spectrometry, nuclear magnetic resonance (NMR) spectroscopy, computer modeling and software, tissue culture, immunocytochemistry, molecular biology, and chemical and enzymatic synthesis techniques.

**Federal Centers.** The CCRC is the home of five federally designated centers for carbohydrate research: the Department of Energy-funded *Plant and Microbial Complex Carbohydrate Center*, the National Science Foundation-funded *Genomics Center: A Monoclonal Antibody Toolkit for Functional Genomics*, and the National Institutes of Health/National Center for Research Resources-funded *Research Resource for Integrated Glycotechnology*, *Integrated Technology Resource for Biomedical Glycomics* and *Southeast Collaboratory for Biomolecular NMR*.

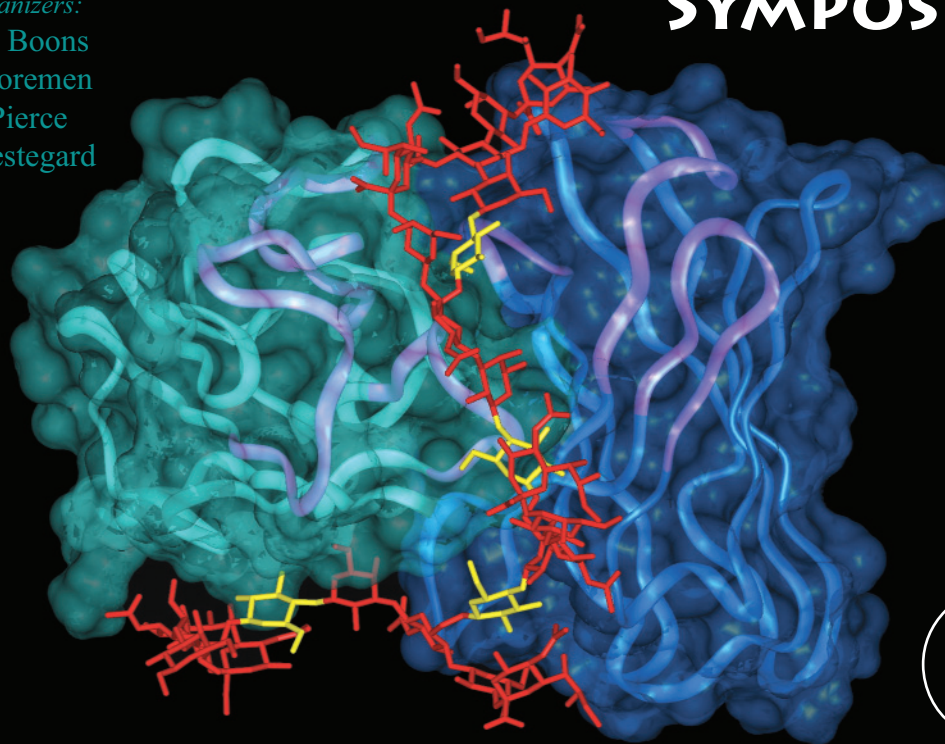
**Facilities.** The CCRC occupies an approximately 140,000 sq.-ft. building specifically designed for the interdisciplinary and equipment-intensive nature of carbohydrate science. The center is an analytical service facility that processes samples from researchers in both academia and industry. It is organized to optimize cooperation and collaboration among disciplines, both within the CCRC and with scientists around the world. Completed in October 2003, this state-of-the-art facility contains 32 research laboratories; a 260-seat auditorium; a teaching laboratory; specialized rooms with NMR spectrometers (800-MHz and 900-MHz instruments); plant and animal cell culture facilities; an animal holding facility; a computer center and specialized computer graphics facilities; a library; and rooms to house other widely used shared equipment.

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# FIRST ANNUAL GEORGIA GLYCOSCIENCE SYMPOSIUM

*Symposium Organizers:*

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The above illustration is a model of the interaction between an antibody, mAb 1B1 (blue), and the surface polysaccharide from the highly virulent type III form of group B Streptococcus (red). The structure was generated by Dr. Robert Woods using homology modeling followed by molecular dynamics simulation, and is consistent with all available NMR and immunological data.

## MAY 12, 2005

Complex Carbohydrate Research Center  
The University of Georgia  
Athens, Georgia

[www.ccrc.uga.edu](http://www.ccrc.uga.edu)

# THE GEORGIA GLYCOSCIENCE SYMPOSIUM

**Invitation.** The faculty of the Complex Carbohydrate Research Center invite you to attend the First Annual Georgia Glycoscience Symposium to be held at our new facility on the banks of the Oconee River. The symposium will be held in conjunction with two National Institutes of Health (NIH) advisory committee meetings also taking place at the CCRC, one for the NIH/National Center for Research Resources-funded *Research Resource for Integrated Glycotechnology* grant and the other for the NIH/NCRR-funded *Integrated Technology Resource for Biomedical Glycomics* grant.

**Registration.** The cost of registration will be covered for the first 150 participants. To register, visit <http://cell.ccr.c.uga.edu/world/symposium/glyco.htm>.

**Posters.** Posters highlighting the research of students and faculty of the CCRC and their collaborators will be available for viewing throughout the day.

**Directions and Parking.** Directions to the CCRC can be viewed or downloaded at <http://www.ccr.c.uga.edu/web/location/locationframe.html>. Free parking will be available on site. Non-university attendees should see the receptionist for a parking permit.

**Accommodations.** For those planning to stay a night or two, we suggest making reservations at the following locations as soon as possible:

Holiday Inn and Holiday Inn Express- Athens

[www.hi-athens.com](http://www.hi-athens.com)

1-800-HOLIDAY (mention symposium before April 20, 2005 and receive special university rate)

Hampton Inn - Athens

[www.hamptoninn.com](http://www.hamptoninn.com)

(706)548-9600 or 1-800-HAMPTON

The Foundry Park Inn

[www.foundryparkinn.com](http://www.foundryparkinn.com)

(706) 549-7020 or 1-866-9ATHENS

Please contact these establishments for room rates and reservations or visit [www.visitathensga.com](http://www.visitathensga.com) for additional options.

## AGENDA

- 9:30 a.m. **Introduction**  
**Dr. J. Michael Pierce**, Professor of Biochemistry and Molecular Biology, University of Georgia, "*Frontiers of Glycoscience*"
- 9:45 a.m. **Dr. Markus Aebi**, Professor, Swiss Federal Institute of Technology, Zurich, Switzerland, "*N-linked Protein Glycosylation: Genetic Approaches in Yeast and Escherichia coli*"
- 10:30 a.m. **Break / Posters**
- 10:50 a.m. **Dr. Jin-ichi Inokuchi**, Associate Professor of Biomembrane and Biofunctional Chemistry, Hokkaido University, Sapporo, Japan, "*Involvement of Membrane Microdomains in Insulin Resistance and Type-2 Diabetes*"
- 11:35 a.m. **Dr. Stephen Dalton**, GRA Eminent Scholar, Georgia Cancer Coalition Distinguished Scholar and Associate Professor of Animal and Dairy Science, University of Georgia, "*Embryonic Stem Cells: Biology and Therapeutics*"
- 11:55 a.m. **Dr. Michael Tiemeyer**, Associate Professor of Biochemistry and Molecular Biology, University of Georgia, "*Taking the Toll Road to Tissue-Specific Glycosylation*"
- 12:15 p.m. **Lunch**
- 1:45 p.m. **Introduction**  
**Dr. James Prestegard**, Professor of Biochemistry and Molecular Biology, and Chemistry, and Varian/GRA Eminent Scholar of NMR Spectroscopy, University of Georgia, "*Technology for Glycoscience*"
- 2:00 p.m. **Dr. Jeffrey D. Esko**, Professor of Cellular and Molecular Medicine, University of California at San Diego, "*Glycans: Targets for Chemotherapeutics*"
- 2:45 p.m. **Break / Posters**
- 3:05 p.m. **Dr. Barbara Imperiali**, Professor of Chemistry and Professor of Biology, Massachusetts Institute of Technology, Boston, Massachusetts, "*Asparagine-Linked Protein Glycosylation: Mechanism and Conformational Consequences*"
- 3:50 p.m. **Dr. Robert J. Woods**, Associate Professor of Biochemistry and Molecular Biology, and Chemistry, University of Georgia, "*Glycam Web and Glycoprotein Force Field Development*"
- 4:10 p.m. **Dr. Jon Amster**, Professor of Chemistry, University of Georgia, "*FTMS Analysis of Glycosaminoglycans*"
- 4:30 p.m. **Tours / Posters**
- 5:00 p.m. **Wine and Cheese Reception**