About the Society for Glycobiology (SFG)

www.glycobiology.org

The Society for Glycobiology is a nonprofit scholarly society devoted to the pursuit of knowledge of glycan structures and functions, and to the sharing of that knowledge among scientists worldwide.

The society’s mission is to research and stimulate personal communication in an inter-disciplinary sense, using as the common meeting ground an interest in the complex carbohydrates of glycoproteins, glycolipids, and glycosaminoglycans and the biological systems in which they are found.
Dear Glycan Lovers, Wannabe Hipsters and Enthusiastic Sightseers – Welcome to the 2017 Society for Glycobiology Meeting in Portland, Oregon! I hope that during these next few days you will learn about cutting edge research, meet new investigators and potential collaborators, and take a little time to experience the lovely city of Portland and indulge in its inventive farm-to-table dining, renowned coffee culture, its craft beers, and Willamette Valley and Mt. Hood region wines.

Glycobiology research has expanded to touch most, if not all, biological fields, so it’s a great time to be a glycobiologist or an aspiring glycobiologist! The Society for Glycobiology (SFG) has been in existence for 44 years and currently has 280 members from all around the world. In addition, the society is part of the Federation of American Societies for Experimental Biology, an organization that represents over 120,000 researchers. As a member of the SFG since the mid-1980’s, as I planned this meeting my intention was to stay true to our long-standing tradition of collaboration and openness, and so….

The theme for this year’s meeting is Glycobiology – Inside and Outside of the Box: Collaborations Across Disciplines. Our program is designed to highlight ground-breaking collaborations between glycobiologists and scientists in other fields, and to engage scientists using glycobiology in their research who have not previously attended or spoken at a SFG meeting. We have seven collaborative talks where two scientists share the stage to talk about their joint research, and several new faces in our speaker line-up.

This year we have two returning satellite meetings – Glyco-Bioinformatics organized by René Ranzinger and Glycoprotein Technologies organized by Parastoo Azadi. Our third satellite meeting is a Trainees Mentoring Session organized by myself and Lance Wells that will focus on next steps for all trainees. For undergraduates – what’s needed to be competitive for graduate school, for graduate students – how to get that optimal postdoc position, and for all trainees – what glycobiology-friendly careers are available. The mentoring will continue to go on throughout the meeting with postdocs and more senior graduate students helping those newer to the field navigate the meeting and poster sessions. And, you established guys, don’t be surprised if you are asked to meet with a junior scientist who admires your work!
I want to congratulate the accomplished individuals who have won awards this year and who will be presenting award lectures during the meeting. In the opening session on Monday evening we will honor two truly outstanding awardees: Jamey Marth, the winner of the Karl Meyer Lectureship Award, and Gillian Air, the winner of the Rosalind Kornfeld Lifetime Achievement Award. On Monday evening, we will hear from Kevin Campbell, the winner of the 2017 President’s Innovator Award, who has brought significant recognition to the field of glycobiology through his work on α-dystroglycan O-mannosylation and its connections to muscular dystrophy. Finally, on Tuesday evening we will honor the Molecular and Cellular Proteomics (MCP) Award winner, Stuart Haslam, and the Glycobiology Significant Achievement Award winner, H. Jafar Nejad. We are grateful to the American Society for Biochemistry and Molecular Biology (ASBMB) for sponsoring the MCP Award, and to Oxford University Press for sponsoring the Glycobiology Significant Achievement Award.

The Society also congratulates the 35 graduate student and postdoctoral trainees selected to receive travel awards and the 21 speakers selected from the abstract submissions. Finally, we would also like to thank Dr. Lawrence Tabak, Principal Deputy Director of the NIH, for agreeing to fill us in on the news from the NIH in one of our Wednesday morning sessions.

The support we receive from our sponsors is essential for the success of this meeting and all our meetings. Please visit their booths and tables, learn about their products and services, and let them know that the Society very much appreciates their sponsorships.

I also want to extend my heartfelt thanks to the Program Committee/Session Chairs for helping with the development of the program, the society officers and the Board of Directors who have provided important advice during the planning of the meeting, and Silvy Song and her staff at FASEB for their organizational support.

I look forward to sharing a memorable Society for Glycobiology Annual Meeting in Portland with you!

Sincerely,

Karen Colley

President of the Society for Glycobiology
Meeting Venue
Hilton Portland Downtown
921 SW 6th Ave, Portland, OR 97204 USA

Awards
Those who have been notified that they are Student Travel Award recipients may pick-up their checks at the registration desk (signature required).

Badges
In an effort to enhance security, we ask all attendees to please wear your badge for the duration of the conference. Badges will be required for admission to sessions and refreshment functions. Your badge not only indicates that you are fully registered for conference, but is also a courtesy to other registrants.

Catering
Included in registration fees are the following catered events:
- Sunday night reception light hors d’oeuvres
- Monday, Tuesday, Wednesday light breakfast fare and coffee
- Daily coffee breaks

Dress
Dress during the conference is business casual. Be sure to dress in layers and carry a sweater as temperature in the meeting rooms is difficult to regulate, and meeting rooms may be cold or warm.

Exhibition
Please take time to visit the exhibit displays in the Plaza Foyer during the opening reception, breaks and poster sessions. See the exhibitor listing for detailed information regarding our sponsoring companies.

Exhibit Hours
Sunday, November 5, 2017 | 7:30PM – 9:30PM
Monday, November 6, 2017 | 1:30PM - 4PM
Tuesday, November 7, 2017 | 1:30PM - 4PM

Internet Access
Internet access is complimentary in the guest rooms for those staying on site at the hotel within the meeting block common areas of the hotel. Complimentary access is also provided by the conference for attendees in meeting spaces.
Use password: glyco2017

Liability
Neither the host venue nor the organizers can be held responsible for any personal injury, loss, damage to private property or additional expense incurred as a result of delays or changes in air, rail, sea, road or other services. All participants are encouraged to make their own arrangements for health and travel insurance.
Poster Sessions
Poster boards will be set-up in Atrium Ballroom. Organizers are not responsible for any materials posted. Posters will be presented in two separate sessions with an accompanying coffee break and will be up for the duration of the conference.

**Poster session 1:** Monday, November 6, 2017 @ 1:30 – 4:00PM  
**Poster session 2:** Tuesday, November 7, 2017 @ 1:30 – 4:00PM

**Set-up:** Begin mounting posters starting Sunday, November 5, 2017 starting 1PM until any time before poster session 1.

**Break-down:** Tuesday, November 7, 2017 after poster session 2 (approx. 4PM)

Registration
Registration fees exclude travel, accommodations, abstract submission, pre-conference satellites, and banquet tickets. These are separate from the main conference registration and must be purchased separately. On-site registration will be accepted with payment via checks and credit cards.

Speakers
Presenters are asked to upload their presentations as soon as possible to: [https://goo.gl/PsQ9Fg](https://goo.gl/PsQ9Fg) then visit the on-site technician in the general session room (Pavilion Ballroom) at least 2 hours prior to their sessions for final tech check. Please arrive in your session room at least 30 minutes prior to your start time.

Special Needs
Registrants with special needs are invited to contact the Registration Desk or hotel concierge for assistance.
Social Events

Sunday, November 5, 2017
7:30PM – 9:30PM
Opening Reception & Exhibits @ Atrium Ballroom of the Hilton Portland Downtown

This event will mark the opening of the conference. Exhibits will be open, light hors d’oeuvres will be served, along with a cash bar. Please come and join your fellow attendees to celebrate the official opening of the program.

Tuesday, November 7, 2017
7:00PM – 10:00PM
Banquet @ Atrium Ballroom of the Hilton Portland Downtown

Enjoy this banquet reception with full buffet dinner, cash bar, live band entertainment, and conversation with fellow professionals.

***ADVANCE TICKET PURCHASE REQUIRED. Limited availability, first come first served

Other Meetings

Sunday, November 5, 2017
Satellite I: Glyco-BioInformatics (10-5PM; Broadway Room 1)

Glycomics research has gained significant impact over the past decade due, in part, to technical advances that allow data to be generated with greater accuracy and throughput. However, computational methods for the analysis and interpretation of glycomics data have not kept pace with these advances in data generation. As a consequence, manual processing and interpretation of glycoanalytic data is still common practice, in spite of the recent development of many software programs and databases that provide tools and information that can significantly reduce data processing and interpretation time. The satellite meeting on Glyco-Bioinformatics brings software developers and database providers together with biological and biomedical scientists who can benefit from these informatics resources. The aim of the meeting is to provide these scientists with an overview of currently available tools and illustrate how these tools can benefit their research. The meeting consists of two sessions: (1) Databases, Tools and Standards – providing an overview of new databases, 3D structure tools and representation standards; and (2) Mass spectrometry software tools – providing an overview of software programs for the interpretation of glycomics and glycoproteomics data generated by mass spectrometry. Each tool is introduced by a short presentation followed by a brief discussion. A live software demonstration session is scheduled near the end of the meeting. Our hope is that this meeting will engender collaborations that will lead to improved technologies for both glycoanalysis and glycoinformatics.

Satellite II: Glycoprotein Technologies (9AM-1PM; Broadway Room 2)

This session strives to highlight recent advances in glycosciences that impact biopharmaceutical development; this is the junction at which glycobiology research meets the development of biotherapeutics. The scope of this session ranges from advances in bioprocess control and glyco-engineering to downstream analytical/characterization techniques to product commercialization and life cycle management. Presentation topics often include new analytical techniques or systems for glycan...
analysis, functional studies, pharmacokinetics/pharmacodynamics, glyco-optimization, the production of biosimilars, as well as glycosylation as a point of interest for regulatory agencies. The evolution of new methodologies in glycoprotein and glycoproteomics research will be highlighted with particular emphasis on importance and significance of glycosylation and tools to study glycoproteins from cells and tissue.

**Satellite III: Trainee Mentoring Program (9AM-3PM; Broadway Rooms 3/4)**

Undergraduate, graduate, and postdoctoral trainees are encouraged to register for and attend the Trainee Mentoring Program that is intended to assist them in reaching the next stages in their training/careers, expose them to the wide array of career opportunities in glycobiology, and introduce them to senior scientists who could become their future research mentors. For those new to the field of glycobiology, one-on-one near peer mentoring and guidance will continue throughout the meeting via “big sibling” relationships with more experienced junior scientists. Participants will also be encouraged to attend sessions by leaders from the NIH on grant funding opportunities. This mentoring session is open to all student and postdoctoral meeting attendees, however we particularly encourage those individuals from groups underrepresented in the STEM disciplines to participate and to apply for the FASEB Mentored Poster/Platform Presenter Award being offered in conjunction with this meeting.

**Board of Directors Meeting (3:30 – 5PM; Broadway Rooms 3/4)**

Annual in-person meeting of the SFG leadership. For invitees only.

**Monday, November 6, 2017**

**Glycobiology Editorial Board Meeting (12:25-1:30PM; Broadway Rooms 3/4)**

Annual in-person meeting for the Glycobiology publications team. For invitees only.

**Tuesday, November 7, 2017**

**SFG Business Meeting (3:30PM – 4:15PM; Pavilion Ballroom)**

Open to all attendees. The SFG leadership will report on the organization's current overall status and announce any important updates relevant to the membership. The advice and guidance of the membership on current society issues are welcome in this “open forum” meeting. If you are not currently a member, applications are online and available at the Registration Desk.
President
Dr. Karen Colley
University of Illinois at Chicago

Past-President
Dr. Christine Szymanski
CCRC, University of Georgia

President-Elect
Kelley Moremen
CCRC, University of Georgia

Treasurer
Dr. Richard Steet
CCRC, University of Georgia

Secretary
Dr. Don Jarvis
University of Wyoming

Board of Director
Dr. Brian Cobb
Case Western Reserve University

Board of Director
Dr. Rita Gerardy-Schahn
Hannover Medical School

Board of Director
Dr. J. Michael Pierce
CCRC, University of Georgia

Board of Director
Dr. Nancy Dahms
Medical College of Wisconsin

Board of Director
Dr. Hans Wandall
University of Copenhagen

Board of Director
Dr. Kurt Drickamer
Imperial College London

Business & Meetings Manager
Silvy Song
Federation of American Societies for Experimental Biology (FASEB)
Invited Speakers

Pablo Argüeso (Schepens Eye Research Institute/Massachusetts Eye and Ear, Harvard)

Alisdair Boraston (University of Victoria)

Joy Burchell (Kings College London)

Joe Contessa (Yale University)

Richard Cummings (Beth Israel Deaconess Medical Center, Harvard Medical School)

Matthew DeLisa (Cornell University)

Jeff Esko (UCSD)

Tom Gerken (Case Western Reserve University)

Reid Gilmore (University of Massachusetts Medical School)

Robert Haltiwanger (CCRC, University of Georgia)

Jerry Hart (Johns Hopkins)

Stuart Haslam (Imperial College London)

Jennifer Kohler (UT Southwestern Medical Center)

Olof Lagerlöf (Karolinska Institute)

Clifford Lingwood (The Hospital for Sick Children, University of Toronto)

Adam Linsteadt (Carnegie Mellon University)

Vincent Luca (Moffitt Cancer Center)

Chiara Manzini (George Washington University)

Pamela Marino (NIH)

Anant Menon (Weill Medical College, Cornell University)

Michelle Ozbun (University of New Mexico)

Colin Parrish (Cornell University College of Veterinary Medicine)

Maura Poli (University of Brescia, Brescia, Italy)

Natividad Ruiz (The Ohio State University)

Charles Schwartz (Greenwood Genetic Center)

Matthew Shoulders (MIT)

Herta Steinkellner (Universität für Bodenkultur Wien)

Christine Szymanski (CCRC, University of Georgia)

Lawrence Tabak (NIH)

Michael Tiemeyer (CCRC, University of Georgia)

Louis Weiss (Albert Einstein College of Medicine)

Lance Wells (CCRC, University of Georgia)

Christopher West (University of Georgia)

LIjun Xia (Oklahoma Medical Research Foundation)

Ulf Yrlid (University of Gothenburg, Sweden)

Session Chairs

Parastoo Azadi (CCRC, University of Georgia)

Susan Bellis (University of Alabama at Birmingham School of Medicine)

Karen Colley (University of Illinois at Chicago)

Nancy Dahms (Medical College of Wisconsin)

Don Jarvis (University of Wyoming)

Anant Menon (Weill Medical College/Cornell University)

Kelley Moremen (CCRC, University of Georgia)

Rene Ranzinger (CCRC, University of Georgia)

Christine Szymanski (CCRC, University of Georgia)

Lance Wells (CCRC, University of Georgia)

Christopher West (University of Georgia)
President’s Innovator Award
Established in 2015, this award is given by the President of the Society for Glycobiology to a scientist who is responsible for an outstanding scientific innovation in the field of Glycoscience.
2017 winner: Dr. Kevin Campbell (Howard Hughes Medical Institute, University of Iowa)

Karl Meyer Lectureship Award
In 1990 the Society established the Karl Meyer Lectureship Award was established “to honor the distinguished career of Karl Meyer and his outstanding contributions to the field of Glycobiology”. This international award is now presented at the Annual Meeting of the Society to “well-established scientist with a currently active research program who has made widely recognized major contributions to the field of Glycobiology.”
2017 winner: Dr. Jamey Marth (Carbon Professor of Biochemistry & Molecular Biology, Mellichamp Professor of Systems Biology, and Director of the Center for Nanomedicine and the SBP Medical Discovery Institute, University of California Santa Barbara)

Rosalind Kornfeld Award for Lifetime Achievement in Glycobiology
The Rosalind Kornfeld Award for Lifetime Achievement in Glycobiology was established in 2008 to honor the distinguished scientific career and service to the Society by Dr Rosalind Kornfeld. The award is given by the Society to scientists who have, over their professional lifetimes, made significant contributions with important impact on the field.
2017 winner: Dr. Gillian Air (George Lynn Cross Professor and Interim Chair of Biochemistry & Molecular Biology, Associate Dean of the Graduate College, University of Oklahoma Health Sciences Center, Oklahoma City, OK)

Glycobiology Significant Achievement Award
Oxford University Press (publisher of Glycobiology) and the Society for Glycobiology established this award for new and mid-career scientists that have made a key discovery during their early careers with the potential to have a substantial impact on the glycoscience community.
2017 winner: Dr. Hamed Jafar-Nejad (Department of Molecular and Human Genetics at Baylor College of Medicine)

The Molecular and Cellular Proteomics (MCP) / American Society for Biochemistry and Molecular Biology (ASBMB) Lectureship Award
Molecular & Cellular Proteomics, an official publication of the American Society for Biochemistry and Molecular Biology, introduced its sponsored lectureship series as part of its 10th anniversary celebration in 2011. Each lecturer is a leader in the field of proteomics who presents his or her particular research and interests, with the intent to expand on proteomics’ potential to ask (and answer) increasingly complex questions associated with health, energy, food supply and the environment. The lectureships are given at germane meetings and symposia throughout the year, and the lecturers are chosen by the organizers of those meetings. Each lecturer is presented with a crystal plaque to commemorate the occasion.
2017 winner: Dr. Stuart Haslam (Imperial College London)

Society for Glycobiology Student/ Post-Doctoral Fellow Travel Award
Student travel awards are given to help students and post-docs gain the experience and exposure that comes from attending and presenting at SFG conferences. The travel awards are intended to help students defray some of the costs of their attendance.
### 2017 Travel Award Winners

<table>
<thead>
<tr>
<th>Name</th>
<th>Institution</th>
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<tbody>
<tr>
<td>Kavita Agarwal</td>
<td>Washington University in St. Louis</td>
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<td>Yukie Akune</td>
<td>Imperial College London</td>
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<td>Gaurang Bhide</td>
<td>University of Illinois at Chicago</td>
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<td>Katarzyna Brzezicka</td>
<td>Open University</td>
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<td>Thais Canassa De Leo</td>
<td>University of Sao Paulo</td>
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<td>Daniela Janevskka Carroll</td>
<td>Northwestern University Feinberg School of Medicine</td>
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<tr>
<td>Ishita Chandel</td>
<td>Texas A&amp;M University</td>
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<tr>
<td>Kai Cheng</td>
<td>University at Buffalo</td>
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<tr>
<td>Charles Fermaintt</td>
<td>UT-Southwestern Medical Center</td>
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<td>Matthew Foley</td>
<td>University of Michigan</td>
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<tr>
<td>Chao Gao</td>
<td>Beth Israel Deaconess Medical Center</td>
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<td>Huilin Hao</td>
<td>University of Georgia</td>
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<tr>
<td>Audra Hargett</td>
<td>University of Alabama at Birmingham</td>
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<tr>
<td>Masae Hosoda</td>
<td>Soka University</td>
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<tr>
<td>Brooke Howell</td>
<td>Texas A&amp;M University</td>
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<tr>
<td>Peter Hsueh</td>
<td>Michigan State University</td>
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<td>Simone Kurz</td>
<td>University of Georgia</td>
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<tr>
<td>Masaaki Matsubara</td>
<td>University of Georgia</td>
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<td>Kenjiroo Matsumoto</td>
<td>University of Georgia</td>
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### SOCIETY AWARDS

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<th>Name</th>
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<tr>
<td>Nicole Nischan</td>
<td>University of Texas Southwestern Medical Center</td>
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<tr>
<td>Douglas Oswald</td>
<td>Case Western Reserve University</td>
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<tr>
<td>Earnest James Paul Daniel</td>
<td>Case Western Reserve University</td>
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<tr>
<td>Yeni Perez-Gelvez</td>
<td>University of Georgia – CCRC</td>
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<tr>
<td>Nicholas Riley</td>
<td>University of Wisconsin-Madison</td>
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<tr>
<td>Lilian Cataldi Rodrigues</td>
<td>University Of Sao Paulo</td>
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<tr>
<td>Asif Shajahan</td>
<td>University of Georgia</td>
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<tr>
<td>M. Osman Sheikh</td>
<td>University of Georgia</td>
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<tr>
<td>Adrianne Stefanski</td>
<td>University of Colorado</td>
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<tr>
<td>Tyler Stewart</td>
<td>University of Alabama at Birmingham</td>
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<tr>
<td>Mitali Tambe</td>
<td>Sanford Burnham Prebys Medical Discovery Institute (SBP)</td>
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<td>Jonathan Viola</td>
<td>University of Georgia</td>
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<tr>
<td>Mohui Wei</td>
<td>Harvard Medical School</td>
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<tr>
<td>Ryan Weiss</td>
<td>University of California, San Diego</td>
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<tr>
<td>Han Wu</td>
<td>University of Texas Southwestern Medical Center</td>
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<td>Kun Yang</td>
<td>UT Southwestern Medical Center</td>
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President’s Innovator Award Winner

The purpose of the Society for Glycobiology President’s Innovator Award is to acknowledge the contributions of one scientist each year that has made a significant impact on society. This year, the award will be presented to Dr. Kevin Campbell, National Academy of Science Member and Investigator of the Howard Hughes Medical Institute, from the University of Iowa where he is currently the Department Head and Roy J. Carver Chair of Molecular Physiology and Biophysics and the Director of the Paul D. Wellstone Muscular Dystrophy Cooperative Research Center. Dr. Campbell did his undergraduate studies in the Bronx of New York at Manhattan College receiving his B.S. in Physics. He then did both his M.S. and Ph.D. in Biophysics at the University of Rochester. His studies continued as a post-doctoral fellow at the University of Toronto with Dr. David MacLennan. He joined the faculty at the University of Iowa where he has spent his entire career to date. Dr. Campbell has been the mentor of ~70 trainees including post-doctoral fellows as well as Ph.D. and M.D./Ph.D. students. Together, they have pioneered our understanding of the mechanisms underlying congenital muscular dystrophy. His team's early work defined and established the role of the Dystrophin-Glycoprotein (alpha-dystroglycan) Complex in muscle integrity. They went on to establish the essential role of O-glycosylation on dystroglycan for the protein to function as an extracellular matrix receptor and established how defects in glycosyltransferases involved in the O-mannosylation pathway are causal for muscular dystrophy. They have led the field in delineating the essential O-mannose glycan structure that is responsible for binding LG domain-containing proteins of the extracellular matrix and the properties of the enzymes that facilitate synthesis of this crucial, complex O-glycan. By identifying and defining disease mechanisms that cause muscular dystrophy, they are currently working to develop therapeutic strategies for these diseases. The quality and impact of Dr. Campbell’s research is of the highest caliber and the respect for his work is perhaps best reflected by the fact that his publications have been cited by others over 60,000 times (generating a mind-boggling h-index of 135 and an i10-index of 423). In addition to his appointment as an HHMI investigator and a member of the National Academy of Sciences, Dr. Campbell is a fellow of the American Academies of Arts and Sciences and Microbiology and a fellow of the Biophysical Society and Institute of Medicine of the National Academy of Sciences. Just a few of his awards include the American Academy of Neurology Decade of the Brain Award, G. Conte Prize for Basic Research, S. Mouchly Small MDA Scientific Achievement Award, the March of Dimes Prize in Developmental Biology, and the A. Ross McIntyre Award.

The 2017 Karl Meyer Lectureship Award and the Rosalind Kornfeld Award for Lifetime Achievement in Glycobiology

The Society for Glycobiology is pleased to announce Dr. Jamey Marth as the recipient of the 2017 Karl Meyer Lectureship Award and Dr. Gillian Air as the recipient of the 2017 Rosalind Kornfeld Award for Lifetime Achievement in Glycobiology². The Karl Meyer Award was established in 1990 to honor the distinguished career of Karl Meyer and his outstanding contributions to the field of Glycobiology. The Rosalind Kornfeld Award was established in 2008 to honor the distinguished scientific career and service to the Society by Dr. Rosalind Kornfeld. The award is given by the Society to scientists who have made significant contributions with an important impact on the field of Glycobiology and have made major contributions to the field of Glycobiology. This international award is given to well-established scientists with currently active research programs who have made widely recognized major contributions to the field of Glycobiology. The Rosalind Kornfeld Award was established in 2008 to honor the distinguished scientific career and service to the Society by Dr. Rosalind Kornfeld. The award is given by the Society to scientists who have made significant contributions with an important impact on the field of Glycobiology over their professional career.
Dr. Jamey Marth (Carbon Professor of Biochemistry & Molecular Biology, Mellichamp Professor of Systems Biology, and Director of the Center for Nanomedicine and the SBP Medical Discovery Institute, University of California Santa Barbara) was a student in the mid-sixties in St. Petersburg, Florida, where each year he attended one of the nation’s first science immersion summer camps, which still exist today. During the Vietnam war era, as a young American serviceman stationed at Clark Airbase in the Philippines, Jamey reflected on the need to be better educated after returning to the USA and civilian life. He chose to focus on the then new science of molecular biology at the University of Oregon. After earning his Bachelor’s degree, Jamey earned his PhD at the University of Washington under the supervision of then future Nobel laureate Edwin G. Krebs and current Merck VP Roger M. Perlmutter. His thesis project dealt with cloning and characterization of the proto-oncogene lck, which was found to encode a T-cell specific tyrosine kinase. Protein kinases were a hot topic in the eighties and Jamey managed to eclipse other teams who started earlier in making this discovery. At the time, p56lck was only the second src-like tyrosine kinase to be identified from normal mammals, thus allowing the first comparisons of what became the src family of tyrosine kinases. Jamey later showed p56lck is regulated by translational mechanisms that are usurped by viral mutagenesis, which earned the then young graduate student multiple high impact publications and the recognition of the kinase and signal transduction research communities.

After completing his PhD, Jamey continued working on hemopoietic tyrosine kinases with Roger Perlmutter in Seattle and acquired expertise in mouse transgenesis at the Cold Spring Harbor Laboratory. After a brief stint in the biopharmaceutical industry at Oncogen Corp., in 1989 Jamey was recruited to a position at the Biomedical Research Centre and became as an Assistant Professor at the University of British Columbia. He continued to study the mechanisms of T-lymphocyte maturation and activation, and produced the first transgenic and gene-targeted mouse models in British Columbia. Jamey’s laboratory laid the groundwork for conditional gene targeting by applying the Cre-loxP recombination system to mouse transgenesis for the first time. This technique was further validated as a way to control gene mutagenesis among specific tissues and cells of intact animals and continues to be an essential experimental approach enabling groundbreaking discoveries by many laboratories in disparate fields.

In Canada, John Schrader introduced Jamey to Harry Schachter, who sparked Jamey’s interest in glycobiology. This led to a close collaboration on the study of complex N-glycans, which was tackled by investigating multiple mouse models harboring dysfunctional Mgat1, Mgat2, Mgat3, Mgat4a, and Man2a1 genes. This demonstrated the essential contributions of complex N-glycans not just in embryogenesis, but also in unexpected physiological processes including disease mechanisms. For example, a consensus had prevailed in diabetic physiology that glucose uptake and retention in pancreatic beta cells is controlled by glucokinase, not glucose transport. However, characterization of Mgat4a-null mice and their overlap with the mechanism of obesity-induced diabetes in multiple publications elegantly demonstrated the single complex N-glycan decorating the glucose transporter GLUT2 regulates its stability at the cell surface, thereby regulating glucose uptake. Thus, it was found glucose uptake determines the appropriate rate and timing of glucose-6-phosphate formation in regulating insulin secretion. This seminal contribution from Jamey and his team established the importance of N-glycosylation and its regulation in a disease for which gene variation is not the primary cause. In other studies, Jamey’s laboratory discovered a novel mechanism of autoimmune disease that is induced by immune recognition...
of aberrant protein glycosylation, thereby identifying the unexpected origin of another common disease.

In 1995, Jamey returned to the United States with the support of Nobel laureate Dr. George Palade, as well as Marilyn Farquhar, Ajit Varki, and other colleagues, and was appointed as a Howard Hughes Investigator and Professor of Cellular and Molecular Medicine at UCSD. By then, his research group was entirely dedicated to the biology of protein glycosylation. During the next decade, his investigations of additional glycosylation defects in mouse models, such as the disruptions of various sialyltransferase genes, further demonstrated the significance of glycosylation in hemostasis and sepsis. Those studies enabled his laboratory’s subsequent remarkable finding that the Ashwell-Morell receptor operates in a recognition mechanism involving endogenous protein aging and turnover by desialylation, as was first suggested by Gilbert Ashwell and Anatol Morell almost five decades earlier. The large collection of mouse strains generated by Jamey’s laboratory, which he has deposited with JAX, is now a valuable resource for the scientific community, and should lead to other important discoveries of the biological roles of specific glycans and their receptors.

Since 2009, Jamey has been at the University of California Santa Barbara, where he took leadership of the newly founded Center for Nanomedicine. In addition to his ongoing research, he developed and implemented a new curriculum in Cell Biology and Bioengineering at UCSB that introduced the fascinating world of glycobiology to undergraduate students and future life scientists of high school age, as Jamey himself experienced during his early immersion into science. The 2017 Karl Meyer Lectureship Award recognizes Jamey’s enduring dedication to glycobiology and seminal contributions, which have highlighted the functional roles of glycans across the broad biomedical community.

Dr. Gillian Air (George Lynn Cross Professor and Interim Chair of Biochemistry & Molecular Biology, Associate Dean of the Graduate College, University of Oklahoma Health Sciences Center, Oklahoma City, OK) trained as a protein biochemist during graduate school in Australia before moving to Cambridge to sequence phage proteins with Fred Sanger and colleagues at a time when women were infrequently found working as biochemists. She returned to Australia to transition to the study of influenza viruses, eventually focusing on the major surface glycoproteins, which are the hemagglutinin and the neuraminidase. The significance of their interactions with terminal sialic acids for viral virulence was known at the time and continues to be of profound interest to this day. Upon moving to the University of Alabama, Gillian implemented new methods in cDNA and protein sequencing to pioneer studies on the evolution of influenza antigenic drift and selection, in collaboration with Robert Webster and Graeme Laver. Both topics were and are highly relevant to vaccine development. Gillian also brought expertise in molecular biology to a highly fruitful collaboration with X-ray crystallographer Ming Luo and chemist Wayne Brouillette to develop a structure-based approach for discovering new neuraminidase inhibitors. Their best inhibitor had sub-nanomolar affinity and, after further medicinal chemistry at BioCryst Pharmaceuticals Inc., it was approved by the FDA and commercialized as injectable RapiVab (Peramivir). Gillian also used the inhibitors to investigate the role of the neuraminidase in infection, and found a role in depleting sialic acid from virus might be more pertinent than a role in host cell surface remodeling to inhibit reinfection.

Gillian’s move to the University of Oklahoma Health Sciences Center and the Oklahoma Center for Medical Glycobiology in 1996 enabled a new focus on the influenza viral hemagglutinin. She applied her vast knowledge of flu virus lineages to correlate evolutionary changes in serology and sialic acid specificity with pathophysiology. Expanded through the use of the Consortium for Functional Glycomics (CFG) Core H glycan microarray, her research revealed many glycan features beyond the linkage of terminal sialic acids contribute to recognition. She also found specificity changes can be better explained as a loss of promiscuity than a gain of novel recognition. She established herself as a thoughtful and respected authority...
on the multifactorial basis of host cell glyc can involvement in virulence, viewed through the lens of evolutionary variation. She also expanded her studies to include parainfluenza viruses, which have a combined neuraminidase/hemagglutinin, and characterized the balance between the two activities of the single active site.

Gillian has contributed foundational and penetrating ‘basic science’ thinking and objectivity that will be essential for the future development of advanced inhibitors and vaccines that might someday control influenza pandemics. Her 187 publications document a remarkably productive >50 year career. Her work in viral glycobiology was supported by an NIH R01 grant entitled “Glycoconjugates in viral pathogenesis” from 1982 to 2008 and she held an R37 Merit Award and additional NIH grants during most of that period and beyond. Though she recently closed her lab, Gillian continues to serve as a consultant and mentor on NIH grants. In addition, she was and is a community builder. While at Alabama, she directed two training grants and directed a protein core laboratory. She has been a perennial grant reviewer for NIH, where she tirelessly defended the importance of discovery in addition to translational research at NIAID. She was Subgroup 1 (Microorganism recognition of host glycans) leader in the CFG and helped organize three NIH and CFG workshops/symposia on glycan arrays. She was on the editorial boards of Virology and the Journal of Virology for many years and continues to serve for Glycobiology and BMC Virology. She was elected a Fellow of the AAAS and now serves as Secretary of the AAAS Medical Sciences Section. She has been highly sought for advice on various national and international advisory boards and committees for NIH, FDA, hospitals, and companies. She has had no less positive impact at home, where she was appointed as George Lynn Cross Research Professor – the highest research honor that can be bestowed on OUHSC faculty.

Gillian has been a tenacious yet superlatively fair-minded investigator, courageously forging her way as a woman scientist across three continents to leave an enviable record, which has moved the field forward in many ways. The 2017 Rosalind Kornfeld Award for Lifetime Achievement in Glycobiology recognizes Gillian’s monumental accomplishments and tireless advocacy for glycobiology, which are excellent reflections of the spirit of Rosalind Kornfeld.

**Glycobiology Significant Achievement Award**

The Glycobiology Significant Achievement Award is given annually by Oxford University Press (publisher of Glycobiology) to honor a new or mid-career scientist that has made a key discovery during their early careers with the potential to have a substantial impact on the glycoscience community. This year, Oxford is delighted to present the Glycobiology Significant Achievement Award to Dr. Hamed Jafar-Nejad, Associate Professor in the Department of Molecular and Human Genetics at Baylor College of Medicine. The award will be given to Dr. Jafar-Nejad at the Society for Glycobiology Annual meeting this November in Portland, Oregon. Dr. Jafar-Nejad has made significant contributions in multiple areas, including our understanding of O-glucosylation of the Notch receptor and of molecular mechanisms affected in patients with NGLY1 deficiency. Regarding O-glucosylation of Notch, Dr. Jafar-Nejad demonstrated that the enzyme which adds O-glucose to EGF repeats in the extracellular domain of the Notch receptor (Rumi in flies, POGLUT1 in mice) is essential for development in both flies and mice, and that addition of O-glucose is not only essential for Notch activity, but for proper function of other proteins as well (e.g. a fly protein called Eyes shut, mutations in whose human homolog cause autosomal recessive retinitis pigmentosa). His lab has generated a mouse model of the human disease Alagille syndrome, an autosomal dominant disorder caused by mutations in the Notch ligand Jagged1,
and shown that reducing the gene dosage of Poglut1 can rescue some phenotypes, suggesting a role for O-glucosylation in this disease. His lab has gone on to demonstrate that elongation of O-glucose residues with xylose on Notch is inhibitory, raising the possibility that Notch activity can be increased or decreased by alterations in the O-glucose glycan structures. Regarding NGLY1, Dr. Jafar-Nejad’s group has studied Ngly1-mutant flies and has recently reported that Ngly1 is required in the fly mesoderm to regulate BMP signaling. They are using these mutants to identify relevant targets of NGLY1 that could lead to therapies for this disease. Thus, Dr. Jafar-Nejad has made several notable contributions that have significantly impacted the glycoscience community, and have the potential to benefit families suffering from Alagille Syndrome and NGLY1 deficiency. For these reasons, Oxford is proud to honor him with this year’s Glycobiology Significant Achievement Award.

Molecular and Cellular Proteomics / American Society for Biochemistry and Molecular Biology Lectureship Award

The Molecular and Cellular Proteomics (MCP) / American Society for Biochemistry and Molecular Biology (ASBMB) Lectureship Award will be presented to Stuart Haslam at the Society for Glycobiology Annual meeting in Portland, Oregon. The MCP Journal was created in 2001 to address the growing needs of the proteomics community. Subsequently the MCP/ASBMB award was established in 2013 to honor scientists that have been at the forefront of the emerging field of glycomics and glycoproteomics. This year’s recipient, who is currently a Reader in Structural Glycobiology at Imperial College London, has made seminal contributions in the glycosciences. Dr. Haslam’s research is focused on the development and application of high sensitivity mass spectrometry techniques to determine the structures of glycoconjugates from diverse biological origins ranging from bacteria to humans. His methodological developments in this area have been fundamental to the establishment of the scientific field of glycomics. A particular focus area is the structural characterization of glycoconjugates involved in host pathogen interactions. His contributions and knowledge of the field are highly regarded not only by his peers, but also by MCP who has renewed Stuart for another 3-year term on the Editorial Board of the journal.
Annual Meeting of the Society For Glycobiology (SFG)

Sunday, November 5, 2017

8:00 a.m. – 6:00 p.m.
Registration
Plaza Foyer

9:00 a.m. – 10:00 a.m.
Satellite 3: Trainee Mentoring Program
Chairs: Lance Wells (CCRC, University of Georgia) and Karen Colley (University of Illinois at Chicago)
Broadway 3/4

10:00 a.m. – 5:00 p.m.
Satellite 2: Glycoprotein Technologies
Chair: Parastoo Azadi (CCRC, University of Georgia)
Broadway 2

3:30 p.m. – 5:00 p.m.
Board of Directors Meeting
Broadway 3/4

5:30 p.m. – 7:15 p.m.
Session 1: Meyer and Kornfeld Awards
Lectures
Chair: Karen Colley (University of Illinois at Chicago)
Pavilion Ballroom

5:30 p.m. – 5:45 p.m.
Conference Opening Remarks

5:45 p.m. – 6:30 p.m.
Karl Meyer Award Lecture
Jamey Marth (University of California, Santa Barbara)
Introduced by Jeff Esko (University of California, San Diego)

6:30 p.m. – 7:15 p.m.
Rosalind Kornfeld Award Lecture
Gillian Air (University of Oklahoma)
Introduced by Christopher West (University of Georgia)

7:30 p.m. – 9:30 p.m.
Welcome Reception & Exhibits
Plaza Foyer and Atrium Ballroom

Monday, November 6, 2017

7:30 a.m. – 8:30 a.m.
Continental Breakfast
Plaza Foyer

8:30 a.m. – 10:00 a.m.
Session 2: Glycans in metabolic regulation and development
Chair: Kelley Moremen (CCRC, University of Georgia)
Pavilion Ballroom

Abstract 

8:30 a.m. – 9:00 a.m.
1 “Heparan sulfate in lipid and iron homeostasis”; Jeff Esko (UCSD), Maura Poli (University of Washington University)

9:00 a.m. – 9:20 a.m.
2 “Studying atypical dystroglycanopathies using zebrafish models”; Chiara Manzini (George Washington University)

9:20 a.m. – 9:50 a.m.
3 “Cell-specific regulation and roles of O-GlcNAc: key to understanding brain function”; Jerry Hart (Johns Hopkins), Olof Lagerlöf (Karolinska Institute)

9:50 a.m. – 9:55 a.m.

9:55 a.m. – 10:00 a.m.

10:00 a.m. – 10:30 a.m.
Coffee Break
Plaza Foyer

10:30 a.m. – 12:30 p.m.
Session 3: Glycan biosynthesis and function
Chair: Nancy Dahms (Medical College of Wisconsin)
Pavilion Ballroom

Abstract 

10:30 a.m. – 11:00 a.m.
6 “Stress, glycomics, and disease-A combined perspective”; Stuart Haslam (Imperial College London), Matthew Shoulders (MIT)

11:00 a.m. – 11:05 a.m.
Poster talk (#B22)(PS2): “Siglec-8 is an activating receptor on human eosinophils mediating integrin-dependent adhesion, ROS generation and apoptosis”; Daniela J. Carroll (Northwestern University Feinberg School of Medicine)

11:05 a.m. – 11:25 a.m.
8 “Orchestration of mucin type O-glycosylation by the multiple activities of the ppGalNAc-T family of transferases”; Tom Gerken (Case Western Reserve University)
11:25 a.m. – 11:45 a.m.
“Targeting site-specific O-glycosylation for novel therapeutics”; Adam Linstedt (Carnegie Mellon University)

11:45 a.m. – 11:50 p.m.
Poster talk (#B23)(PS1): “Bone marrow macrophage galectin-3 regulates platelet production through recognition of O-glycans on megakaryocytes”; Melissa M. Lee-Sundlov (Blood Research Institute, BloodCenter Wisconsin and Brigham & Women’s Hospital & Harvard Medical School)

11:50 p.m. – 12:20 p.m.
“Structural and functional perspectives on the glycan-mediated tuning of Notch activity”; Robert Haltiwanger (CCRC, University of Georgia), Vincent Luca (Moffitt Cancer Center)

12:20 p.m. – 12:25 p.m.
Poster talk (#B24)(PS2): “C-mannosylation of thrombospondin repeats”; Hans Bakker (Hannover Medical School)

12:25 p.m. – 12:30 p.m.
Poster talk (#B63)(PS1): “Mapping sites and molecular functions of O-glycosylation” Katrine T. Schjoldager (University of Copenhagen)

12:30 p.m. – 1:30 p.m.
Lunch on your own

12:30 p.m. – 1:30 p.m.
Glycobiology Editorial Board Meeting (Invites only)
Broadway 3/4

1:30 p.m. – 4:00 p.m.
Poster Session I and Exhibits
Coffee break provided
Plaza Foyer and Atrium Ballroom

1:30 p.m. – 1:35 p.m.
“NIH Listens, Discussion with NIH Program Staff” Pamela Marino (NIH)
Broadway 3/4

4:00 p.m. – 5:30 p.m.
Session 4: Glycan related diseases and disorders I
Chair: Susan Bellis (University of Alabama at Birmingham School of Medicine)
Pavilion Ballroom

4:00 p.m. – 4:30 p.m.
“Genetic and pharmacologic regulation of the oligosaccharyltransferase”; Reid Gilmore (University of Massachusetts Medical School), Joe Contessa (Yale University)

4:30 p.m. – 4:35 p.m.
Poster talk (#B63)(PS1): “Anti-inflammatory functions of Siglec-E and Siglec-9 and alteration of their ligands in mouse airway inflammation and lung emphysema”; Zhou Zhu (Yale University School of Medicine)

5:20 p.m. – 5:25 p.m.
Poster talk (#B65)(PS1): “IgA Nephropathy: An autoimmune kidney disease involving the clustered O-glycans of IgA1 as autoantigens”; Matthew B. Rentrow (University of Alabama at Birmingham)

5:25 p.m. – 5:30 p.m.
Poster talk (#B66)(PS2): “A semantic approach to Molecular Glycophenotype classification for disease diagnostics”; Jean-Philippe F. Gourdine (Oregon Health and Science University and Undiagnosed Diseases Network)

5:30 p.m. – 6:30 p.m.
Session 5: Innovator Award Lecture
Kevin Campbell (Howard Hughes Medical Institute, University of Iowa)
Introduced by Lance Wells (CCRC, University of Georgia)
Pavilion Ballroom

Tuesday, November 7, 2017

7:30 a.m. – 8:30 a.m.
Continental Breakfast
Plaza Foyer

8:00 a.m. – 4:00 p.m.
Registration
Plaza Foyer

8:30 a.m. – 10:00 a.m.
Session 6: Glycolipids in health and disease
Chair: Anant Menon (Weill Medical College, Cornell University)
Pavilion Ballroom

8:30 a.m. – 8:55 a.m.
“ABC transporters as glucosyl ceramide flippases in glycosphingolipid biosynthesis”; Clifford Lingwood (The Hospital for Sick Children, University of Toronto)

8:55 a.m. – 9:20 a.m.
“Transport of lipopolysaccharides across the bacterial cell envelope”; Natividad Ruiz (The Ohio State University)
22

9:20 a.m. – 9:45 a.m.
“Glycolipid scramblases for protein glycosylation in the endoplasmic reticulum”; Anant Menon (Weill Medical College, Cornell University)

9:45 a.m. – 9:55 a.m.
Poster talk (#B100)(PS2): “A new hypothesis for Lec5”; Mark Lehrman (UT Southwestern Medical Center)

9:55 a.m. – 10:00 a.m.
Poster talk (#B101)(PS1): “LmeA, a periplasmic membrane-bound protein, is critical for lipomannan biosynthesis and cell envelope integrity in mycobacteria”; Yusu S. Morita (University of Massachusetts, Amherst)

10:00 a.m. – 10:30 a.m.
Coffee Break
Plaza Foyer

10:30 a.m. – 12:15 p.m.
Session 7: Glycans in pathogenesis and infection
Chair: Christopher West (University of Georgia)
Pavilion Ballroom

Abstract #

25
10:30 a.m. – 10:55 a.m.
“Making home sweet and sturdy: Investigations into the roles of glycosylation in the cyst wall of Toxoplasma gondii”; Louis Weiss (Albert Einstein College of Medicine)

26
10:55 a.m. – 11:10 a.m.
“Elucidating glycomic contributions to Toxoplasma biology and virulence”
Christopher West (University of Georgia)

27
11:10 a.m. – 11:15 a.m.
Poster talk (#B106)(PS2): “Neoglycoproteins as biomarkers for cutaneous leishmaniasis”
Katja Michael (University of Texas at El Paso)

28
11:15 a.m. – 11:20 a.m.
Poster talk (#B107)(PS1): “Identifying the in vitro Arginine-GlcNAcylation targets of the NleB/SseK family of effectors”
Nicholas E. Scott (University of Melbourne)

29
11:20 a.m. – 11:40 a.m.
“Active roles for heparan sulfonated proteoglycans and growth factors in human papillomavirus infectious entry: A Trojan horse mechanism”
Michelle Ozbun (University of New Mexico)

30
11:40 a.m. – 11:45 a.m.
Poster talk (#B108)(PS2): “Changes in cell surface glycans in women with bacterial vaginosis and impact on Fusobacterium vaginal colonization”
Kavita Agarwal (Washington University in St. Louis)

31
11:45 a.m. – 11:50 a.m.
Poster talk (#B109)(PS1): “Antibody fucosylation restricts Fc gamma receptor IIIA (CD16A)N-glycan motion to reduce affinity”
Don Falconer (Iowa State University)

12:15 p.m. – 1:30 p.m.
Lunch on your own

1:30 p.m. – 4:00 p.m.
Poster Session II and Exhibits
Coffee break provided
Plaza Foyer and Atrium Ballroom

4:00 p.m. – 4:45 p.m.
SFG Business Meeting (open to all attendees)
Pavilion Ballroom

4:45 p.m. – 6:15 p.m.
Session 8: MCP and Glycobiology Significant Achievement Award Lectures
Chair: Kelley Moremen (CCRC, University of Georgia)
Pavilion Ballroom

Abstract #

32
4:45 p.m. – 5:30 p.m.
Molecular and Cellular Proteomics Award Lecture
Stuart Haslam (Imperial College London)
Introduced by Richard Cummings (Beth Israel Deaconess Medical Center, Harvard Medical School)

5:30 p.m. – 6:15 p.m.
Glycobiology Significant Achievement Award Lecture
Hamed Jafar-Nejad (Baylor College of Medicine)
Introduced by Robert Haltiwanger (CCRC, University of Georgia)

6:15 p.m. – 7:00 p.m.
Break

7:00 p.m. – 11:00 p.m.
Banquet
Atrium Ballroom
Ticket purchase required. Extra tickets for guests may be ordered.

Wednesday, November 8, 2017

8:00 a.m. – 8:30 a.m.
Continental Breakfast
Plaza Foyer

8:30 a.m. – 1:00 p.m.
Registration
Plaza Foyer

8:30 a.m. – 9:50 a.m.
Session 9: Expect the unexpected from microbes
Chair: Christine Szymanski (CCRC, University of Georgia)
Pavilion Ballroom

Abstract #

33
11:00 a.m. – 12:10 a.m.
“Sialic acid structures and linkages - variation within animals and effects on virus interactions”
Colin Parrish (Cornell University College of Veterinary Medicine)

12:10 p.m. – 12:15 p.m.
Poster talk (#B110)(PS2): “Inhibition of O-glycan biosynthesis using hexosamine analogs”
Sriram Neelamegham (State University of New York Buffalo)
8:30 a.m. - 9:00 a.m.
“New insights into glycoconjugate receptors for cholera toxin”
Jennifer Kohler (UT Southwestern Medical Center) and Ulf Yrlid (University of Gothenburg)

9:00 a.m. – 9:05 a.m.
Robert J. Woods (CCRC, University of Georgia)

9:05 a.m. – 9:25 a.m.
“Unique features of the machinery that pathogenic and commensal microbes use to attack host glycans”
Alisdair Boraston (University of Victoria)

9:25 a.m. – 9:30 a.m.
Poster talk (#B146)(PS2): “Nascent microbiome and early metabolism are perturbed by pre-and post-natal exposure to artificial sweeteners”
Stephanie Olivier-Van Stichelen (NIH/NIDDK)

9:30 a.m. – 9:50 a.m.
“Who will win? The endless battle between campylobacters and bacteriophages in the gut”
Christine Szymanski (CCRC, University of Georgia)

9:50 a.m.  – 10:15 a.m.
Coffee Break
Plaza Foyer

10:15 a.m.  – 11:45 a.m.
Session 10: Glycoengineering and glycan related therapeutics
Chair: Don Jarvis (University of Wyoming)
Pavilion Ballroom

10:15 a.m. – 10:35 a.m.
“Plant based glycan engineering for the production of therapeutic proteins”
Herta Steinkellner (Universität für Bodenkultur Wien)

10:35 a.m. – 10:55 a.m.
“Rapid mapping of glycoprotein structure-activity relationships by shotgun scanning glycomutagenesis”
Matthew DeLisa (Cornell University)

10:55 a.m. – 11:15 a.m.
“Developing anti-inflammatory drugs targeting selectins”
Richard Cummings (Beth Israel Deaconess Medical Center, Harvard Medical School)

11:15 a.m. – 11:45 a.m.
News from the NIH: Information and Q&A
Lawrence Tabak, Principal Deputy Director (NIH)

11:45 a.m. - 1:00 p.m.
Lunch on your own

2:25 p.m. – 2:40 p.m.
Closing Remarks
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Glycans in metabolic regulation and development

Poster #: B1 (presented @ PS1) || Abstract #: 4
“Structures of human O-GlcNACase and its complexes reveal a new substrate recognition mode”; Jiaoyang Jiang
School of Pharmacy, University of Wisconsin-Madison

Poster #: B2 (presented @ PS2) || Abstract #: 5
“Dynamic splicing of a glycosyltransferase modulates enzyme activity and secretory granule morphology”; Suena Ji1,2, Leslie Revoredo1,2, Adina L. Milac1, Duy T. Tran1,2 and Kelly G. Ten Hagen1,2
1NIH/NIDCR; 2Developmental Glycobiology Section; 3Institute of Biochemistry of the Romanian Academy

Poster #: B3 (presented @ PS1) || Abstract #: 48
“Essential roles of O-GlcNAcylation in B cell activation”; Kuo-I Lin1, Jung-Lin Wu1, Pan-Hung Hsu2, Yu-Ju Chen3 and Takashi Angata4
1Genomics Research Center, Academia Sinica, Taipei 115, Taiwan; 2Department of Life Science and Institute of Bioscience and Biotechnology, National Taiwan Ocean University, Keelung 202, Taiwan; 3Institute of Chemistry, Academia Sinica, Taipei 115, Taiwan; 4Institute of Biological Chemistry, Academia Sinica, Taipei 115, Taiwan

Poster #: B4 (presented @ PS2) || Abstract #: 49
“Drosophila N-glycanase 1 (Png1) regulates BMP autoregulation in the Drosophila intestine”; Antonio Galeone1, Seung-Yeop Han1, Chengcheng Huang2, Akira Hosomi3, Tadashi Suzuki4 and Hamed Jafar-Nejad1
1Department of Molecular and Human Genetics, Baylor College of Medicine, Houston, United States; 2Glycometabolome Team, RIKEN Global Research Cluster, Saitama, Japan

Poster #: B5 (presented @ PS1) || Abstract #: 50
“Identification of Siglec-15 ligands using proximity labeling method”; Yi-Hsiu Chen1, Penk-Yeir Lo1, Yi-Ju Chen2, Yu-Ju Chen2 and Takashi Angata1,3
1Institute of Biological Chemistry, Academia Sinica, Taipei, Taiwan; 2Institute of Chemistry, Academia Sinica, Taipei, Taiwan; 3Institute of Biochemical Sciences, National Taiwan University, Taipei, Taiwan

Poster #: B6 (presented @ PS2) || Abstract #: 51
“LNFPIII-Dex conjugates function in vivo to normalize metabolic function in High-Fat Diet Obese mice”; Donald Harn1, Jessica Ramadhin1, Richard Meagher2, Suresh Ambati1, Nikolay Filipov1, Lisa Shollenberger1 and Thomas Norberg2
1Department of Infectious Diseases, University of Georgia; 2Dept. of Physiology and Pharmacy, University of Georgia; 3College of Family and Consumer Sciences, University of Georgia; 4Dept. of Chemistry, Uppsala University, Uppsala Sweden; 5Dept. of Genetics, University of Georgia

Poster #: B7 (presented @ PS1) || Abstract #: 52
“Siglec-9 Recognizes Sialylated Keratan Sulfate Glycoproteins on Human Airways”; Steve M. Fernandes1, Ryan N. Porell1, Anabel Gonzalez Gil1, Simone Kurz2, Kazu Aoki2, Michael Tiemeyer2 and Ronald L. Schnaar3
1Department of Pharmacology and Molecular Sciences, Johns Hopkins University School of Medicine, Baltimore, MD; 2Complex Carbohydrate Research Center, University of Georgia, Athens, GA

Poster #: B8 (presented @ PS2) || Abstract #: 53
“An actin-related trafficking protein modulates neural-specific glycosylation in the Drosophila embryo”; Simone Kurz, Kazuhiro Aoki, Sarah Baas Robinson and Michael Tiemeyer
CCRC, University of Georgia

Poster #: B9 (presented @ PS1) || Abstract #: 54
“Development of a Rapid 2-AB Sample Preparation Workflow for N-Glycan Release and Labeling “; Andres Guerrero, Vaishali Sharma, John Yan, Aled Jones, Michael Kimzey, Emily Dale, Ted Haxo and Sergey Vlasenko
ProZyme, Hayward CA

Poster #: B10 (presented @ PS2) || Abstract #: 55
“Effects of sialic acid biosynthesis on N-linked glycan structure, cell surface interactions, and muscle diseases of aging.”; Nam D. Pham1, Poh-Choo Chang2, Soumya Krishnamurthy1, Amberlyn M. Wands1, Paolo Grassi2, Anne Dell2, Stuart M. Haslam2 and Jennifer J. Kohler1
1University of Texas Southwestern Medical Center; 2Imperial College London

Poster #: B11 (presented @ PS1) || Abstract #: 56
“Dissecting the function of the O-GlcNAcase HAT-like domain using genetic, biochemical and structural biology approaches”; Andrii Gorelik, Andrew Ferenbach, Olawale Raimi and Daan van Aalten
Centre for Gene Regulation and Expression, School of Life Sciences, University of Dundee, UK

All posters will be on display for the duration of the conference.
**Glycan biosynthesis and function**

**Poster #: B22 (presented @ PS2) || Abstract #: 7**

"SIGLEC-8 IS AN ACTIVATING RECEPTOR ON HUMAN EOSINOPHILS MEDIATING INTEGRIN-DEPENDENT ADHESION, ROS GENERATION AND APOPTOSIS";

Daniel J. Carroll1, Jeremy A. O’Sullivan1, David B. Nix2, Yun Cao1, Michael Tiemeyer2 and Bruce S. Bochner1

1Department of Medicine, Division of Allergy and Immunology, Northwestern University Feinberg School of Medicine, Chicago, IL; 2Complex Carbohydrate Research Center, University of Georgia, Athens, GA

**Poster #: B23 (presented @ PS1) || Abstract #: 10**

"Bone marrow macrophage galectin-3 regulates platelet production through recognition of O-glycans on megakaryocytes";

Melissa M. Lee-Sundin1, Renata Grozovsky2, Silvia Giannini2, Haley E. Ramsey3, Ulla Mandel4, Martha Sola-Visner1 and Karin M. Hoffmeister1,2

1Department of Molecular Biosciences, University of Texas, Austin, TX; 2Department of Biochemistry and Molecular Biology, National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health, Bethesda, MD; 3Department of Medicine, Division of Allergy and Immunology, Northwestern University Feinberg School of Medicine, Chicago, IL; 4Complex Carbohydrate Research Center, University of Georgia, Athens, GA; 5Department of Biochemistry and Molecular Biology, University of Wisconsin, Madison, WI
Poster #: B24 (presented @ PS2) || Abstract #: 12
“C-mannosylation of thrombospondin repeats”;
Aleksandra Shcherbakova, Birgit Tiemann, Falk FR Buettner and Hans Bakker
Institute of Clinical Biochemistry, Hannover Medical School, Germany

Poster #: B25 (presented @ PS2) || Abstract #: 67
“Fucosylated chondroitin sulfate oligosaccharides exert anticoagulant activity by targeting at intrinsic tenase complex with low FXII activation: Importance of sulfation pattern and molecular size”; Junhui Li1, Shan Li1, Shiguo Chen1, Xingqian Ye1, Donghong Liu1, Robert J. Linhardt2 and Tiani Ding1
1Zhejiang University; 2Rensselaer Polytechnic Institute

Poster #: B26 (presented @ PS2) || Abstract #: 68
“Extraction of Novel RG-I enriched pectin from mandarin citrus peel”; Hua Zhang1, Jian le Chen2, Jun hui Li1, Xing qian Ye1 and Shi guo Chen1
Zhejiang University

Poster #: B27 (presented @ PS1) || Abstract #: 69
“Suppressive effects of bisecting GlcNAc on terminal modifications of N-glycans”; Yasuhiko Kizuka1, Miyako Nakano2 and Naoyuki Taniguchi1
1Disease Glycomics Team, RIKEN; 2Graduate School of Advanced Sciences of Matter, Hiroshima University

Poster #: B28 (presented @ PS2) || Abstract #: 70
“Time-resolved N-glycan processing allows a functional resolution of the Golgi in CHO cells”; Ilaria Affolter1, Chia-Wei Lin2, Ernesto Scibona1, David Brühlmann2, Jonathan Souquet2, Hervé Brolly2 and Markus Aebi1
1ETH Zürich, Switzerland; 2Merck, Switzerland

Poster #: B29 (presented @ PS1) || Abstract #: 71
“Bio-orthogonal fluorescent tags for carbohydrate analysis and neoglycolipids-based functional assays development.”; Katarzyna Brzezicka, Matthew Allen and Sarah Allman
Chemical Glycomics Laboratory, School of Life, Health and Chemical Sciences, The Open University, Milton Keynes, UK

Poster #: B30 (presented @ PS2) || Abstract #: 72
“Early steps in the initiation of clustered O-glycosylation impact final glycan heterogeneity: Implications for autoantigen formation in a chronic kidney disease”; Tyler J. Stewart1, Kazuo Takahashi1,2, Milan Raska1,2, Robert H. Whitaker2, William J. Placzek2, Matthew B. Renfrow1 and Jan Novak1
1Department of Microbiology, University of Alabama at Birmingham; 2Department of Biochemistry and Molecular Genetics, University of Alabama at Birmingham; 3School of Medicine, Fujita Health University, Toyoake, Japan; 4Department of Immunology, Palacky University, Olomouc, Czech Republic

Poster #: B31 (presented @ PS1) || Abstract #: 73
“Polysaccharide similarities: extractable glycan oligomers and glycosylated protein cores of glycogen, starch and cellulose”; Allen K. Murray1,2
1HIBM Research Group, Inc.; 2Glycan Technologies, Inc.

Poster #: B33 (presented @ PS1) || Abstract #: 75
“Exploring the specificity of chemical tools for O-GlcNAc labeling”; Michelle R. Bond1, Pamela D. Cook2, Carolyn C. Woodroofe1, Rolf E. Swenson1 and John A. Hanover1
National Institutes of Health

Poster #: B34 (presented @ PS2) || Abstract #: 76
“Glycoproteomics for high-throughput characterization of mammalian proteoglycans”; Alejandro Gomez Toledo1, Waqs Nasir1, Jonas Nilsson2, Fredrik Noborn2, Jeffrey D. Eskin2 and Goran Larson2
1Department of Cellular and Molecular Medicine, Glycobiology Research and Training Center, University of California, San Diego, La Jolla, CA, USA; 2Department of Clinical Chemistry and Transfusion Medicine, Sahlgrenska Academy at the University of Gothenburg, Gothenburg, Sweden

Poster #: B35 (presented @ PS1) || Abstract #: 77
“Generation of a complex-type multi-antennary N-glycan microarray to define recognition patterns of N-glycan binding partners”; Chao Gao1, Lauren A. Byrd-Leotis1,2, Melinda S. Hanes1, Richard H. Banes1, Tanya McKitrick1, Nan Jia1, David A. Steinhauser1 and Richard D. Cummings1
1Department of Surgery, Beth Israel Deaconess Medical Centre, Harvard Medical School; 2Department of Microbiology, Emory University School of Medicine

Poster #: B36 (presented @ PS2) || Abstract #: 78
“The expanding glycouniverse: diverse glycan modifications in lower eukaryotes”; Iain B. Wilson1, Katharina Paschinger1, Alba Hykóllari1, Jorick Vanbeselaere1, Shi Yan and Barbara Eckmair
Universität für Bodenkultur

Poster #: B37 (presented @ PS1) || Abstract #: 79
“A novel fluorescent bifunctional linker for glycan derivatization”; Mohui Wei1, Tanya McKitrick1, Robert Kardish1, Jamie Heimburg-Molinaro1, Lijun Sun1 and Richard D. Cummings
Harvard Medical School, Beth Israel Deaconess Medical Center, Boston,
Poster #: B38 (presented @ PS2) || Abstract #: 80
“Recognition of glycosaminoglycans by human galectin-3: Mechanism of binding and possible functional complexities due to dual specificities”;
Tarun Dam, Christina Welch, Melanie Talaga, Ni Fan and Purnima Bandyopadhyay
Mechanistic Glycobiology, Department of Chemistry, Michigan Technological University

Poster #: B39 (presented @ PS1) || Abstract #: 81
“Glycosyltransferases that assemble the repeating unit of the intestinal pathogen Escherichia coli O104:H4.”
Inka Brockhausen1, Diana Czuqhy1 and Walter A. Szarek2
1Department of Biomedical and Molecular Sciences and; 2Department of Chemistry, Queen’s University, Kingston ON, Canada

Poster #: B40 (presented @ PS2) || Abstract #: 82
“A new UDP-hexose/UDP-HexNAc 4-epimerase from the archaeon Methanococcus maripaludis”;
Sulav Sharma, Yan Ding, Ken Jarrell and Inka Brockhausen
Department of Biomedical and Molecular Sciences, Queen’s University, Kingston, Ontario, Canada

Poster #: B41 (presented @ PS1) || Abstract #: 83
“New software for glycan array for data processing, storage and presentation”;
Yukie Akune1, Sena Arpinar2, Mark Stoll1, Lisete M. Silva1, Angelina S. Palma1, Yan Liu1, René Ranzinger1 and Ten Feizi1
1Glycosciences Laboratory, Department of medicine, Imperial College, London, UK; 2Complex Carbohydrate Research Center, University of Georgia, Athens, GA, USA; 3UCIBIO-Faculty of Science and Technology, NOVA University of Lisbon, Portugal

Poster #: B42 (presented @ PS2) || Abstract #: 84
“Fine-tuning limited proteolysis – A novel role for regulated site-specific O-glycosylation in B1-Adrenergic Receptor cleavage and function”;
Christopher K Goth1, Hanna E. Tuukanen2, Hamayun Khan1, Shengjun Wang1, Yoshiki Narimatsu1, Lasse H. Hansen1, Christopher Overell3, Henrik Clausen1, Katrine T. Schjoldager1 and Ulla Petäjä-Repo2
1Copenhagen Center for Glycomics, Department of Cellular and Molecular Medicine, Faculty of Health Sciences, University of Copenhagen, Blegdamsvej 3, DK-2200 Copenhagen N, Denmark.; 2The Medical Research Center Oulu, Research Unit of Biomedicine, University of Oulu, P.O. Box 5000, FI-90014 Oulu, Finland.; 3Department of Clinical Biochemistry, Rigshospitalet, Copenhagen University Hospital, DK-2100 Copenhagen Ø, Denmark; 4Centre for Blood Research, Department of Oral Biological and Medical Sciences, and Department of Biochemistry and Molecular Biology, University of British Columbia, Vancouver, British Columbia V6T 1Z3, Canada.

Poster #: B43 (presented @ PS1) || Abstract #: 85
“Onco-Golgi: the role for Golgi disorganization in MGAT5-mediated progression of prostate cancer “;
Armen Petrosyan1,4 and Chad A. LaGrange1
1Department of Biochemistry and Molecular Biology, University of Nebraska Medical Center; 2Division of Urologic Surgery, Department of Surgery, University of Nebraska Medical Center; 3The Nebraska Center for Integrated Biomolecular Communication; 4The Fred and Pamela Buffett Cancer Center

Poster #: B44 (presented @ PS2) || Abstract #: 86
“Analysis of the interaction between GBP5 and glycans using the MCAW web tool.”;
Masae Hosoda, Yushi Takahashi and Kiyoko F. Aoki-Kinoshita
Department of Bioinformatics, Graduate School of Engineering, SOKA University

Poster #: B45 (presented @ PS1) || Abstract #: 87
“Analysis of Highly Sialylated and Low-Input Glycoprotein Samples on the GlycanAssure System”;
Wenjun Zhou, Shaheer Khan, Raymond Lee, Nataliee Gautam, Jenkuei Liu, Bhattu Kunnimittal, Peter Bell and Kyle R. Gee
ThermoFisher Scientific

Poster #: B46 (presented @ PS2) || Abstract #: 88
“Integration of Glycoscience Data in GlyCosmos Using Semantic Web Technologies”;
Issaku Yamada1 and Kiyoko F. Aoki-Kinoshita2
1The Noguchi Institute; 2Soka University

Poster #: B47 (presented @ PS1) || Abstract #: 89
“LLO Hydrolysis Is Selectively Catalyzed By the Stt3B-OST Complex”;
Hua Lu1, Charles S. Ferrainiti2, Nan Yan1 and Mark A. Lehman1
1Department of Pharmacology; 2Departments of Immunology and Microbiology, University of Texas Southwestern Medical Center, Dallas, TX 75390, USA

Poster #: B48 (presented @ PS2) || Abstract #: 90
Ernest James Paul Daniel1, Matilde de las Rivas1, Erandi Lira-Navarrete2,3, Ramon Hurtado-Guerrero1 and Thomas A. Gerken1
1Deptlsof Biochemistry and Pediatrics Case Wsnter Reserve University, Cleveland OH; 2BIFI, University of Zaragoza, Zaragosa, Spain; 3Presently: Copenhagen Center for Glycomics, Univ. Copenhagen, Denmark

Poster #: B49 (presented @ PS1) || Abstract #: 91
“Analytical Services and Trainings at the Complex Carbohydrate Research Center”;
Roberto N. Sonon, Asif Shajahan, Ian Black, Justyna Dobruchowska, Stephanie Archer-Hartmann, Bernhard Jaehrig, Artur Muszynski, Radnaa Naran, Sara Porfirio, Nitin

November 5 - 8, 2017 • Portland, OR • Hilton Portland Downtown
<table>
<thead>
<tr>
<th>Poster #:</th>
<th>B50 (presented @ PS2)</th>
<th></th>
<th>Abstract #:</th>
<th>92</th>
</tr>
</thead>
</table>
| **“Mechanism of Neuropilin-2 polysialylation: Does the autopoly-sialylation have a cameo?”**; Gaurang P. Bhide, Ninoshka R.J. Fernandes, Joseph L. Zapater and Karen J. Colley | Department of Biochemistry and Molecular Genetics, University of Illinois at Chicago, Chicago, IL 60607 | "CRISPR-Cas9 Dissection of Heparan Sulfate"; Maureen E. Taylor, Tom Snelling and Kurt Drickamer | Imperial College London | "Small Molecule Inhibition of the Oligosaccharyltransferase”; Natalie Rinis, Reid Gilmore and Joseph N. Contessa | Department of Therapeutic Radiology, Yale University School of Medicine | "Oligosaccharyltransferase Inhibition Enhances Glioma Radiosensitivity”; Marta Baro and Joseph N. Contessa | Department of Therapeutic Radiology, Yale University School of Medicine | "Fluorescent imaging of N-linked Glycosylation and Oligosaccharyltransferase Activity”; Wei Cui and Joseph N. Contessa | Department of Therapeutic Radiology, Yale University School of Medicine | "CRISPR-Cas9 Dissection of Heparan Sulfate”; Ryan J. Weiss, Philipp N. Spahn, Nathan E. Lewis and Jeffrey D. Esko | Department of Cellular and Molecular Medicine, University of California, San Diego, San Diego, CA; Department of Pediatrics, School of Medicine, University of California, San Diego, San Diego, CA; "Glycobiology Research and Training Center, University of California, San Diego, San Diego, CA | "A Yeast Model to Define the Molecular Interactions between Core 1 b3GalT and its Molecular Chaperone Cosmc”; Tatiana A. Chernova, Qian Wang, Yuliang Jiang, David F. Smith and Tongzhong Ju | Department of Biochemistry, Emory University School of Medicine, Atlanta, GA; "Office of Biotechnology Products, Center for Drug Evaluation and Research, Food & Drug Administration, Silver Spring, MD; "Department of Oncology, the Capital Medical University, Beijing Chaoyang Hospital, Beijing, China | "Novel glyco-regulation of SCF Ubiquitin ligases is a potential drug target for control of Toxoplasma”; Christopher M. West, Msano Mandalasi, Osman Sheikh, David Thielen, John Glushka, Tongri Liu, Agnieszka Lis, Christopher J. Schofield and Ira J. Blader | Dept. of Biochemistry & Molecular Biology, University of Georgia, Athens, GA USA 30602; "Center for Tropical and Emerging Global Diseases, University of Georgia; "Complex Carbohydrate Research Center, University of Georgia; "Dept. of Chemistry, Oxford University, Oxford, UK; "Dept. of Microbiology & Immunology, University at Buffalo, Buffalo, NY | "Making Glycoproteomics via Mass Spectrometry More Accessible to the greater Scientific Community” | Marc D. Driessen, Catherine C. Going, Christina M. Woo, Sharon J. Pitteri and Carolyn R. Beretti | Department of Chemistry, Stanford University; Department of Radiology, Stanford School of Medicine; Howard Hughes Medical Institute; Department of Chemistry, Harvard University | "gID: A new strategy for identification of glycan branching patterns using multistage mass spectrometry”; Shiwei Sun, Chuncui Huang, Jingwei Zhang, Yaojun Wang, Dongbo Bu, Yan Li and Wengang Chai | Institute of Computing Technology Chinese Academy of Sciences; Institute of Biophysics, Chinese Academy of Sciences; Imperial College London, London, United Kingdom; "University of Chinese Academy of Sciences, Beijing, China; "Amplification and Preparation of Cellular O-glycans using Cellular O-glycome Reporter/Amplification (CORA)”; Zhonghua Li, Qing Zhang, Tatiana Chernova, George Wang, Xuezheng Song, David F. Smith, Cummings D. Richard and Tongzhong Ju | Department of Biochemistry, Emory University School of Medicine, Atlanta, GA; "Department of Chemistry, Georgia State University, Atlanta, GA; "Department of Surgery, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA; "Office of Biotechnology Products, Center for Drug Evaluation and Research, Food & Drug Administration, Silver Spring, MD; "Department of Oncology, the Capital Medical University, Beijing Chaoyang Hospital, Beijing, China | "Quantitative O-Glycomics: metabolic Stable Isotopic Labeling of O-glycomes of cultured Cells (SILOC)”; Tatiana A. Chernova, Zhonghua Li, Yuliang Jiang, Qian Wang, David F. Smith and Tongzhong Ju | Department of Biochemistry, Emory University School of Medicine, Atlanta, GA; "Office of Biotechnology Products, Center for Drug Evaluation and Research, Food & Drug Administration, Silver Spring,
Glycan related diseases and disorders

Poster #: B62 (presented @ PS2) || Abstract #: 104
"Homogeneous Bioluminescent Nucleotide Detection Assays for Glycosyltransferases and Other PTM Enzymes"; Hicham Zegzouti, Laurie Engle, Gedinana Vidugiriis, Juliano Alves, Kevin Hsiao and Said Goueli
Promega Corporation, 2800 Woods Hollow Road, Madison, WI 53711 USA

Poster #: B67 (presented @ PS1) || Abstract #: 45
"A Family of Carbohydrate Tumor Antigens with a Proposed Common Mechanism of Action"; Marit Sietmoe, Thomas A. Gerken, Bjorn T. Stokke, Jay Burchell and Fred Brewer
1Department of Biotechnology and Food Science, The Norwegian University of Science and Technology, NO-7491 Trondheim, Norway; 2W. A. Bernbaum Center for Cystic Fibrosis Research, Departments of Pediatrics and Biochemistry, Case Western Reserve University School of Medicine, Cleveland, Ohio 44106-4948, USA; 3Biophysics and Medical Technology, Department of Physics, The Norwegian University of Science and Technology, NO-7491 Trondheim, Norway; 4Breast Cancer Biology, King’s College London, Guy’s Hospital, London, SE1 9RT, UK; 5Departments of Molecular Pharmacology, and Microbiology and Immunology, Albert Einstein College of Medicine, Bronx, NY 10461, USA

Poster #: B63 (presented @ PS1) || Abstract #: 14
"Anti-Inflammatory Functions of Siglec-E and Siglec-9 and Alteration of Their Ligands in Mouse Airway Inflammation and Lung Emphysema"; Zi Chen, Fengrui Zhang, Haiying Tang, Ryan N. Porell, Ronald L. Schnaar, Tadahiro Kumagai, Michael Tiemeyer, Bruce S. Bochner, Linfu Zhou, Tao Zheng and Zhou Zhu
1Yale University School of Medicine; 2Johns Hopkins University; 3CCRC, University of Georgia; 4Northwestern University; 5Nanjing Medical University

Poster #: B64 (presented @ PS2) || Abstract #: 16
"Regulatory functions of heparan sulfate in prostate stem/progenitor cell activities and prostatic tumorigenesis"; Sumit Rai, Xuanyang Li, Houjian Cai and Lianchun Wang
1Complex Carbohydrate Research Center and Department of Biochemistry and Molecular Biology, University of Georgia, Athens, GA 30602, USA; 2Department of Pharmaceutical and Biomedical Sciences, College of Pharmacy, University of Georgia, Athens, GA 30602, USA

Poster #: B65 (presented @ PS1) || Abstract #: 18
"IgA Nephropathy: An autoimmune kidney disease involving the clustered O-glycans of IgA1 as autoantigens"; Matthew B. Rentrow, Tyler J. Stewart, Audra A. Hargett, Stacy Hall, William J. Placzek, Bruce A. Julian and Jan Novak
University of Alabama at Birmingham

Poster #: B66 (presented @ PS2) || Abstract #: 19
1Oregon Health and Science University; 2Pacific Northwest National Laboratory; 3Undiagnosed Diseases Network

Poster #: B68 (presented @ PS2) || Abstract #: 46
"Futh2 is required for methacholine-induced airway hyperreactivity in a mouse model of allergic asthma"; Dorota S. Raclawksa, Rachel Waagmeester, Adrienne L. Stefanski and Christopher M. Evans
Department of Medicine, University of Colorado Denver, Aurora, CO

Poster #: B69 (presented @ PS1) || Abstract #: 47
"Mapping sites and molecular functions of O-glycosylation"; Katrine T. Schjoldager, Shunjun Wang, Hiren J. Joshi, Yang Mao and Sergey Y. Vakhruhev
Copenhagen Center for Glycomics, Department of Molecular Medicine, University of Copenhagen

Poster #: B70 (presented @ PS2) || Abstract #: 105
"Glycans marking subpopulations of pancreatic cancers: characterizing structures derived from type-II N-acetyl-lactosamine using on-chip analysis"; Peter Y. Hsueh, Zachary Klammer, Randall E. Brand and Brian B. Haab
1Center for Cancer and Cell Biology, Van Andel Research Institute, Grand Rapids, MI; 2Cellular and Molecular Biology, Michigan State University, East Lansing, MI; 3University of Pittsburgh Medical Center, Pittsburgh, PA

Poster #: B71 (presented @ PS1) || Abstract #: 106
"Biochemical Characterization of Functional Domains of the Chaperone Cosmc"; Melinda S. Hanes, Kelley W. Moremen and Richard D. Cummings
1Beth Israel Deaconess Medical Center; 2Harvard Medical School; 3Complex Carbohydrate Research Center, University of Georgia

Poster #: B72 (presented @ PS2) || Abstract #: 107
"Mutations in ATP6AP2 are associated to Congenital Disorders of Glycosylation with autophagic defects"; Romain Péanne, Magda Cannata Serio, Maria A. Ruyano, Ganna Panasyuk, Janine Reunert, Dulce Quehlhas
Poster #: B73 (presented @ PS1) || Abstract #: 109
“The odyssey of MAGT1: from magnesium channel back to N-glycosylation?”; Elke Blommaert1, Romain Pêan2, Christophe Verstegen1, Valérie Race3, Erika Souche1, Liesbeth Keldermans4, Daisy Rymen5, Jaak Jaeken6 and Gert Matthijss
1Laboratory for Molecular Diagnostics, Centre for Human Genetics, KU Leuven, Belgium; 2Centre for Metabolic Diseases, University Hospital Leuven, Belgium

Poster #: B74 (presented @ PS2) || Abstract #: 109
“Role of protein glycosylation in Drosophila heart physiology and development”; Brooke Howell1, Ishita Chandel and Vladislav Panin2
1Department of Biochemistry and Biophysics Texas A&M University, College Station, Texas 77843

Poster #: B75 (presented @ PS1) || Abstract #: 110
“Clinicopathological implications to micropapillary bladder urothelial carcinoma of the presence of sialyl Lewis X-decorated mucin 1 in stroma-facing membranes”; Tomochika Shinagawa1, Hitomi Hoshino1, Minekatsu Taga1, Yasuhiro Sakai1, Yoshiaki Imamura2, Osamu Yokoyama3 and Motohiro Kobayashi1
1Department of Tumor Pathology, Faculty of Medical Sciences, University of Fukui, Eiheiji, Japan; 2Department of Urology, Faculty of Medical Sciences, University of Fukui, Eiheiji, Japan; 3Division of Surgical Pathology, University of Fukui Hospital, Eiheiji, Japan

Poster #: B76 (presented @ PS2) || Abstract #: 111
“N-Glycanase 1 Deficiency Triggers Innate Immune Activation Through Dysregulated Mitophagy”; Kun Yang and Nan Yan
Department of Immunology, UT Southwestern Medical Center, Dallas, TX

Poster #: B77 (presented @ PS1) || Abstract #: 112
“Semi-Automated Identification and MS1-level Quantification of Permethylated Glycan Isomers Separated by RP-HPLC/MS”; M. Osman Sheikh1, Simone Kurz2, Brent Weatherly1, Christopher M. West3, Michael Tiemeyer3 and Lance Wells4
1Complex Carbohydrate Research Center, University of Georgia, Athens, GA, 30602, USA; 2Department of Biochemistry and Molecular Biology, University of Georgia, Athens, GA, 30602, USA

Poster #: B78 (presented @ PS2) || Abstract #: 113
“GlycoStore: a resource for the exploration and annotation of LC and CE glycomics data”; Yingwei Hu, Weiming Yang, Punit Shah, Shisheng Sun, Minghui Ao and Hui Zhang
Department of Pathology, Johns Hopkins University

Poster #: B79 (presented @ PS1) || Abstract #: 114
“Role of Protein O-mannosylation in sensory feedback mechanism in Drosophila”; Ishita Chandel, Ryan Baker, Naosuke Nakamura, Dmitry Lyalin and Vladislav Panin
Texas A&M University, College Station, TX, USA

Poster #: B80 (presented @ PS2) || Abstract #: 115
“N-Acetylmannosamine (ManNAc) for the Treatment of GNE Myopathy: 18-Month Preliminary Results from a Phase 2 Open-Label Study”; Marjan Huizing1, Bradley Class1, Melanie Quintana1, Christina Siota1,2, Petcharat Leoyklang1, Ashleigh Glowacki1, Kennan Bradley2, Carla Ciccone1, May Christine V. Malicdan1, Scott M. Berry1, William A. Gahl1,3 and Nuria Carrillo1,3
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Poster #: B81 (presented @ PS1) || Abstract #: 116
“Quantitation of Sialylation Status by Lectin Immunofluorescence in Muscle Biopsies”; Marjan Huizing1, Petcharat Leoyklang1, Bradley Class2, Colleen Jodarski1, Carla Ciccone1, Ashleigh Glowacki1, William A. Gahl1,3, Nuria Carrillo1,2 and May Christine V. Malicdan1,3
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Poster #: B82 (presented @ PS2) || Abstract #: 117
“GPQuest 3: A Tool for Large-scale and Comprehensive Glycosylation Analysis on MS data”; William A. Gahl1,2,3, Bradley Class2, Colleen Jodarski1, Carla Ciccone1, Ashleigh Glowacki1, William A. Gahl1,3, Nuria Carrillo1,2 and May Christine V. Malicdan1,3
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Poster #: B83 (presented @ PS2) || Abstract #: 118
“GlycoStore: a resource for the exploration and annotation of LC and CE glycomics data”; Matthew P. Campbell1, Sophie Zhao1, Ian Walsh1, Jodie L. Abrahams1, Louise Royle1, Nicolle H. Packer1, Terry Nguyen-Khuong2 and Pauline M. Rudd2
1Institute for Glycomics, Griffith University, Gold Coast, Australia; 2Bioprocessing Technology Institute, Agency for Science, Technology and Research (A*STAR), Singapore; 3Ludger Ltd., Culham Science Centre, Oxfordshire, United Kingdom; 4Department of Chemistry and...
Biomolecular Sciences, Macquarie University, Sydney, Australia

Poster #: B83 (presented @ PS1) || Abstract #: 118
“Biochemical and molecular-genetic analysis of two siblings with congenital disorder of glycosylation caused by a novel mutation in ATP6AP1 gene”; Nina Ondruskova, Alzbeta Vondrackova, Marketa Tesarova, Tomas Honzik, Jiri Zeman and Hana Hansikova
Department of Pediatrics and Adolescent Medicine, First Faculty of Medicine, Charles University and General University Hospital in Prague, the Czech Republic

Poster #: B84 (presented @ PS2) || Abstract #: 119
“Siglec-8 ligands in human airway secretions”; Anabel Gonzalez Gil1, Hyun Sil-Lee2, Ryan Porell1, Steve M. Fernandes1, Jean Kim1,2,3 and Ronald L. Schnaar1
1Department of Pharmacology and Molecular Sciences, Johns Hopkins University School of Medicine, Baltimore, MD; 2Department of Medicine: Allergy and Clinical Immunology, Johns Hopkins University School of Medicine, Baltimore, MD; 3Department of Medicine: Otolaryngology, Head & Neck Surgery, Johns Hopkins University School of Medicine, Baltimore, MD

Poster #: B85 (presented @ PS1) || Abstract #: 120
“Low Level Pancreatic Beta Cell Sialylation in the Onset of Autoimmune Diabetes”; Douglas M. Heithoff, Damien Restagno, Won Ho Yang, Peter V. Aziz and Jamey D. Marth
Center for Nanomedicine, Sanford-Burnham-Prebys Medical Discovery Institute, University of California-Santa Barbara, Santa Barbara, California, USA

Poster #: B86 (presented @ PS2) || Abstract #: 121
“TREX1 prevents the accumulation of an endogenous bioactive disaccharide associated with autoimmunity”; Charles S. Fermaint1, Mark A. Lehrman4 and Nan Yan1
1Department of Immunology; 2Department of Pharmacology: UT Southwestern Medical Center, Dallas, TX

Poster #: B87 (presented @ PS1) || Abstract #: 122
“Inhibition of Notch signaling using fucose analogs”; Huilin Hao1, Michael Schneider2, Hideyuki Takeuchi1, Peng Wu1 and Robert S. Haltiwanger1
1Complex Carbohydrate Research Center, University of Georgia; 2Department of Biochemistry and Cell Biology, Stony Brook University, Stony Brook, NY 11794-5215; 3Department of Chemical Physiology, The Scripps Research Institute, 10550 North Torrey Pines Road, La Jolla, CA 92037

Poster #: B88 (presented @ PS2) || Abstract #: 123
“Endogenous galectin-3 promotes muscle repair “; Lilian Cataldi Rodrigues1, Daniel Giuliano Cerri1, Vani Maria Alves2, Martin K. Amstalden1, Sean R. Stowell3, Richard D. Cummings4 and Marcelo Dias-Baruffi1
1Faculty of Pharmaceutical Sciences of Ribeirão Preto - University of Sao Paulo, Ribeirão Preto, Sao Paulo, Brazil; 2Cell and Molecular Biology and Pathogenic Bioagents – Ribeirão Preto Medical School – University of Sao Paulo, Brazil; 3Department of Pathology, Emory University School of Medicine, Atlanta, GA 30322, USA; 4Department of Surgery, Beth Israel Deaconess Medical Center and Harvard Medical School, Boston, MA 02115, USA

Poster #: B89 (presented @ PS1) || Abstract #: 124
“Identification and Functional Characterization of Genomic-Glycosylation Aberrations in Human Cancers”; Carman KM Ip1, Xinxin Peng2, Patrick KS Ng1, Kang J. Jeong1, Han Liang2 and Gordon B. Mills1,3
1Department of Systems Biology, The University of Texas MD Anderson Cancer Center, Houston, TX, USA; 2Department of Bioinformatics and Computational Biology, The University of Texas MD Anderson Cancer Center, Houston, TX, USA; 3Sheik Khalifa bin Zayed Al Nahyan Institute for Personalized Cancer Therapy, The University of Texas MD Anderson Cancer Center, Houston, TX, USA

Poster #: B90 (presented @ PS2) || Abstract #: 125
“RECOMBINANT ANTIBODY FRAGMENTS AGAINST SYNTHETIC GLYCOPEPTIDE MIMICKING CANCER MUCINS: A PROMISING TOOL FOR DIAGNOSIS AND DRUG DELIVERY SYSTEMS”;; Thais Canassa De Leo1, Marcelo M. Brigido1, Andrea Q. Maranhão2, Vanessa L. Campo1 and Marcelo Dias-Baruffi1
1School of Pharmaceutical Sciences of Ribeirão Preto, University of Sao Paulo, Brazil; 2Institute of Biological Sciences, University of Brazil, Brazil

Poster #: B91 (presented @ PS1) || Abstract #: 126
“Endogenous galectin-3 impairs neutrophil migration and increases susceptibility in a murine model of severe polymicrobial sepsis “; Raphael G. Ferreira1, Lilian C. Rodrigues2, Daniele CB Nascimento1, Alexandre Kanashiro1, Paulo H. de Melo1, Vanessa F. Borges1, Aline Gozzi1, Marcos C. Borges1, Sean R. Stowell4, Richard D. Cummings5, Marcelo Dias-Baruffi5, Fernando Q. Cunha1 and José Carlos Alves-Filho1
1Pharmacology Department, Ribeirão Preto Medical School, University of São Paulo-Brazil; 2Department of Clinical Analyses, Toxicology and Food Sciences, School of Pharmaceutical Sciences of Ribeirão Preto, University of São Paulo-Brazil; 3Department of Internal Medicine, Ribeirão Preto Medical School, University of São Paulo-Brazil; 4Department of Pathology, Emory University School of Medicine, Atlanta, GA 30322, United States of America; 5Department of Surgery, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, Massachusetts, United States of America.

Poster #: B92 (presented @ PS2) || Abstract #: 127
“Mass spectrometry analysis of adeno-associated virus glycan receptor expression in nigrostriatal pathway in aging rats.”; Rekha Raghunathan1.
Nicole Polinski1, John D. Hogan1, Joshua Klein4, Kshitij Khatri1, Chun Shao1, Caryl Sortwell1 and Joseph Zaia1
1Department of Molecular and Translational Medicine, Boston University; 2Department of Biochemistry, Boston University; 3Department of Translational Science and Molecular Medicine, Michigan State University; 4Department of Bioinformatics, Boston University

Poster #: B93 (presented @ PS1) || Abstract #: 128
“A Well-Characterized Human Chimeric Anti-Tn Monoclonal Antibody with Cytotoxic Potential”1; Yasuyuki Matsumoto1, Matthew R. Kudelka2, Melinda S. Hanes1, Sylvain Lehoux1, Jamie Heimburg-Molinaro1, David F. Smith2, Tongzhong Ju2 and Richard D. Cummings1
1Department of Surgery, Beth Israel Deaconess Medical Center - Harvard Medical School; 2Department of Biochemistry, Emory University School of Medicine

Poster #: B94 (presented @ PS2) || Abstract #: 129
“GRITS Toolbox 1.2 - New features in our freely available software system for processing and archiving of glycomics mass spectrometry data”1; Rene Ranzinger, Brent Weatherly, Sena Arpinner, Mindy Porterfield, Lovina Dmello, Michael Tiemeyer and William S. York
Complex Carbohydrate Research Center, University of Georgia, Athens, Georgia, USA

Poster #: B95 (presented @ PS1) || Abstract #: 130
“DIFFERENTIAL SIALYATION AND POLYSIALYATION IN SKIN AND ORAL MUCOSAL WOUND HEALING”1; Veronica A. Haywood1, Lin Chen1, Karen J. Colley2 and Luisa A. DiPietro1
1Center for Wound Healing & Tissue Regeneration, College of Dentistry, University of Illinois, Chicago, IL; 2Department of Biochemistry, College of Medicine, University of Illinois, Chicago, IL

Poster #: B96 (presented @ PS2) || Abstract #: 131
“Beyond ERAD: N-glycanase will bring you to tears.”1; Mitali A. Tambe, Bobby G. Ng and Hudson H. Freeze
Sanford Burnham Prebys Medical Discovery Institute

Poster #: B97 (presented @ PS1) || Abstract #: 132
“GPTwiki - A Glycopeptide Transition Database for Quantitative Glycoproteomics using SWATH”1; Nathan J. Edwards1, Miloslaw Sandra and Radoslav Goldman
Georgetown University

Poster #: B98 (presented @ PS2) || Abstract #: 133
“Exploring the role of Nrf1 in NGlyt deficiency”1; Ulla IM Gerling-Driessen1, Frederick M. Tomlin1, CJ Cambier1, Yi-Chang Liu1 and Carolyn R. Bertozzi1,2
1Department of Chemistry, Stanford University, Stanford, California 94305, United States; 2Howard Hughes Medical Institute, Chevy Chase, Maryland 20815, United States

Poster #: B99 (presented @ PS1) || Abstract #: 134
“Glycosylation impacts antibody Fc receptor function and is tuned by the immune system”1; Nickita Mehta1, Kevin B. Chandler1,2, Catheirin E. Costello2 and Gallit Alter1
1Ragon Institute of MGH, MIT and Harvard, Cambridge, MA 02139; 2Center for Biomedical Mass Spectrometry, Boston University School of Medicine, Boston, MA

Glycolipids in health and disease

Poster #: B100 (presented @ PS2) || Abstract #: 23
“A New Hypothesis For Lec5”1; Mark A. Lehrman and Hua Lu
UT Southwestern Medical Center

Poster #: B101 (presented @ PS1) || Abstract #: 24
“LmeA, a Periplasmic Membrane-Bound Protein, is Critical for Lipomannan Biosynthesis and Cell Envelope Integrity in Mycobacteria”1; Yasu S. Morita1, Sarah Osman and Kathryn C. Rahlwes
Department of Microbiology, University of Massachusetts, Amherst, MA, 01003, USA

Poster #: B102 (presented @ PS2) || Abstract #: 135
“DANGO: An MS Data Annotation System for Glycolipidomics”1; Masaaki Matsubara1, Mayumii Ishihara, Michael Tiemeyer, Kazuhiro Aoki and René Ranzinger
Complex Carbohydrate Research Center, University of Georgia, Athens, GA

Poster #: B103 (presented @ PS1) || Abstract #: 136
“Leucine-rich repeat-containing G-protein coupled receptor 6 (LGRL6) functions in the O-GlcNAc-mediated regulation of colon cancer stem cell driven tumorigenesis”1; Huabei Guo1,2, Alison V. Nairn1,2, Shutan Xu1, Tamas Nagy3, Shaying Zhao4, Kelley W. Moremen1,2, Phillip Buckhaults4 and Michael Pierce1,2
1Complex Carbohydrate Research Center, University of Georgia, Athens, GA.30602; 2Department of Biochemistry and Molecular Biology, University of Georgia, Athens, GA.30602; 3Pathology, College of Veterinary Medicine, University of Georgia, Athens, GA.30602; 4South Carolina College of Pharmacy, The University of South Carolina, Columbia, SC 29208

Poster #: B104 (presented @ PS2) || Abstract #: 137
“T Cells Require Extended O-Glycans To Populate Peripheral Lymphoid Organs”1; Christopher E. Cutler1,2 and Richard D. Cummings1
1Beth Israel Deaconess Medical Center; 2Emory University

Poster #: B105 (presented @ PS1) || Abstract #: 138
“Characterization of a novel hemolysin that possesses specificities for glycoproteins and lipids”1; Christina Welch1, Priyanka Kadav, Ni Fan, Robert Brown, Alexander
Glycans in pathogenesis and infection

Poster #: B106 (presented @ PS2) || Abstract #: 27
"Neoglycoproteins as biomarkers for cutaneous leishmaniasis"; Alba L. Montoya, Krishanthi Subramaniam, Alvaro Acosta-Serrano, Igor C. Almeida and Katja Michael
1Department of Chemistry, University of Texas at El Paso;
2Department of Biological Sciences, University of Texas at El Paso;
3Border Biomedical Research Center, University of Texas at El Paso;
4Department of Parasitology and Department of Vector Biology, Liverpool School of Tropical Medicine

Poster #: B107 (presented @ PS1) || Abstract #: 28
"Identifying the in vitro Arginine-GlcNAcylation targets of the NleB/SseK family of effectors"; Nicholas E. Scott, Josh Newson, Georgina L. Pollock, Jaclyn S. Pearson and Elizabeth L. Hartland
Department of Microbiology and Immunology, University of Melbourne at the Peter Doherty Institute for infection and Immunity, Victoria, Australia

Poster #: B108 (presented @ PS2) || Abstract #: 30
"Changes in cell surface glycans in women with bacterial vaginosis and impact on Fusobacterium vaginal colonization"; Kavita Agarwal, Lloyd S. Robinson, Lynne Foster, Hueylie Lin, Nicole M. Gilbert, Warren G. Lewis and Amanda L. Lewis
1Department of Medicine, Washington University in St. Louis;
2Department of Molecular Microbiology, Washington University in St. Louis;
3Department of Obstetrics and Gynecology, Washington University in St. Louis

Poster #: B109 (presented @ PS1) || Abstract #: 31
"Antibody fucosylation restricts Fc gamma receptor IIIA (CD16A) N-glycan motion to reduce affinity"; Adam W. Barb, Daniel J Falconer and Ganesh P. Subedi
Roy J Carver Dept of Biochem, Biophys & Mol Biol, Iowa State University, Ames

Poster #: B110 (presented @ PS2) || Abstract #: 33
"Inhibition of O-glycan biosynthesis using hexosamine analogs"; Srim Neelamegham, Shuen-Shiuan Wang, Virginia del Solar Fernandez, Gino Stolfi, Aristotelis Antonopoulos, Anne Dell, Stuart M. Haslam, Mehrab Nasirikenari, Joseph T. Lau and S. G. Sampathkumar
1Department of Chemical and Biological Engineering, State University of New York, Buffalo, NY, USA;
2Department of Life Sciences, Imperial College London, London, UK;
3Department of Cellular and Molecular Biology, Roswell Park Cancer Institute, Buffalo, NY, USA;
4Laboratory of Chemical Glycobiology, National Institute of Immunology, New Delhi, India

Poster #: B111 (presented @ PS1) || Abstract #: 139
"Microbiota polysaccharides mediate immune suppression via memory T to regulatory T cell cooperativity"; Mark B. Jones, Jenny L. Johnson, Carlos A. Alvarez, Julie Y. Zhou, Kelsey D. Oliva, Nathan Morris and Brian A. Cobb
Case Western Reserve University

Poster #: B112 (presented @ PS2) || Abstract #: 140
"Cooperative ligand binding of a C-type lectin like receptor Dectin-1"; Yoshihiko Yamauchi, Harri P. Dulal, Yoshiyuki Adachi and Naohito Ohno
1Structural Glycobiology Team, RIKEN, Japan;
2Tokyo Medical and Dental University, Japan;
3Tokyo University of Pharmacy and Life Science, Japan

Poster #: B113 (presented @ PS1) || Abstract #: 141
"Plasma glycomics predicts cardiovascular sequelae in patients with controlled HIV infections"; Douglas M. Oswald, Edward S. Sim, Obada Farhan, Sara Debanne, Nathan Morris, Benigno Rodriguez, Mark B. Jones and Brian A. Cobb
1Department of Pathology, Case Western Reserve University School of Medicine;
2Department of Population and Qualitative Health Science, Case Western Reserve University School of Medicine;
3Department of Medicine, Division of Infectious Diseases and HIV medicine, Case Western Reserve University School of Medicine and University Hospitals Cleveland Medical Center

Poster #: B114 (presented @ PS2) || Abstract #: 142
"Site-specific glycosylation of viral surface proteins using mass spectrometry"; Cassandra L. Pegg, Toan K. Phung and Benjamin L. Schulz
School of Chemistry and Molecular Biosciences, University of Queensland, Queensland 4072, Australia

Poster #: B115 (presented @ PS1) || Abstract #: 143
"Galectins from the eastern oyster (Crassostrea virginica) preferentially recognize the protozoan Perkinsus marinus by carbohydrate-based parasite mimicry"; Chiquang Feng, Anita Ghosh, Mohammed N. Amin, Tsvetan B. Bachvaroff, Mario A. Blanchet, Lai-Xi Wang, Daniel Zheng, Deandra Watson, Iain B. H. Wilson and Gerardo R. Vasta
1Department of Microbiology and Immunology, University of Maryland School of Medicine, UMB, Institute of Marine and Environmental Technology, Baltimore, Maryland, USA;
2Departments of Neurology and Biophysics and Biophysical Chemistry, The Johns Hopkins University School of Medicine, Baltimore, Maryland, USA;
3Department of Chemistry and Biochemistry, University of Maryland, College Park, Maryland, USA;
4University of Maryland Center for Environmental Science, and Institute of Marine and Environmental Technology, Baltimore, Maryland, USA;
5Department fuer Chemie, Universitat fur
POSTER PROGRAM

Poster #: B116 (presented @ PS2) || Abstract #: 144
"Probing the Function of N-glycans in Platelet-Collagen Interaction";
Christian Toostra and Hui Zhang
Department of Pathology, Johns Hopkins University

Poster #: B118 (presented @ PS2) || Abstract #: 146
"Kdn, a Free Sialic Acid in Humans has Therapeutic Potential Against Non-typeable Haemophilus influenzae (NTHI) infections";
Sudeshna Saha1, Sandra Diaz1, Biswa Choudhury1, Victor Nizet2, Sanjay Ram1, Ian Schoenhofen3 and Ajit Varki1
1Department of Cellular and Molecular Medicine, University of California, San Diego, La Jolla, CA, USA; 2Division of Pediatrics, and the Glycobiology Research and Training Center, University of California, San Diego, La Jolla, CA, USA; 3Division of Infectious Diseases and Immunology, University of Massachusetts Medical School, Worcester, Massachusetts, MA, USA; 4Center for Environmental Health and Human Health Therapeutics Portfolio, National Research Council of Canada, Ottawa, Ontario, Canada

Poster #: B119 (presented @ PS1) || Abstract #: 147
"Hydrogen bonding and three-dimensional structure in glycans from bacteria and cancer";
Marcos D. Battistel, Hugo F. Azurmendi and Daron I. Freedberg
CBER/FDA

Poster #: B120 (presented @ PS2) || Abstract #: 148
"Identifying O-acetylated Sialic Acids Using Viral-Derived Sialoglycan-Recognizing Probes";
Brian R. Wasilk, Karen N. Barnard, Brynn K. Lawrence and Colin R. Parrish
Baker Institute for Animal Health, College of Veterinary Medicine, Cornell University, Ithaca, New York, USA

Poster #: B121 (presented @ PS1) || Abstract #: 149
"Intracellular galectins control cellular responses commensurate with cell surface carbohydrate alterations";
Ming-Hsiang Hong1, Wei-Han Lin1, J-Chun Weng1, Yu-Hsien Hung2, Hung-Lin Chen1, Huan-Yuan Chen1, Wei-Yuan Yang2 and Fu-Tong Liu1
1Institute of Biomedical Sciences, Academia Sinica, Taipei, Taiwan, Republic of China (R.O.C); 2Institute of Biological Chemistry, Academia Sinica, Taipei, Taiwan, Republic of China (R.O.C)

Poster #: B122 (presented @ PS2) || Abstract #: 150
"Structural Insights into Bacterial Sialic Acid Transport";
Weixiao Y. Wahlgren1,2, Elin Dunevall1, Rachel A. North3,4, Aviv Paz1, Maríafrancesca Scalise5, Paola Bisignano5, Johan Bengtsson-Palme6,7, Parveen Goyal1,2, Elin Claesson1, Ulf Nilsson8, Anne Farewell1,2, Lorena Pochini9, Cesare Indiveri1, Michael Grabe1, Renwick CJ Dobson1,10, Jeff Abramson1,1, S. Ramaswamy1 and Rosmarie Friemann1,12
1Department of Chemistry and Molecular Biology, University of Gothenburg, Sweden; 2Centre for Antibiotic Resistance Research, CARR, University of Gothenburg, Sweden; 3Biomolecular Interaction Centre and School of Biological Sciences, University of Canterbury, Christchurch, New Zealand; 4Department of Physiology, David Geffen School of Medicine, University of California, Los Angeles, United States; 5Cardiovascular Research Institute, Department of Pharmaceutical Chemistry, University of California, San Francisco, United States; 6Department DiBEST (Biologia, Ecologia, Scienze della Terra) Unit of Biochemistry and Molecular Biotechnology, University of Calabria, Rende, Italy; 7Institute for Stem Cell Biology and Regenerative Medicine, Bengaluru, India; 8Biomolecular Interaction Centre and School of Biological Sciences, University of Canterbury, New Zealand; 9Department of Biochemistry and Molecular Biology, Bio21 Molecular Science and Biotechnology Institute, University of Melbourne; 10Department of Infectious Diseases, Institute for Biomedicine, Sahlgrenska Academy, University of Gothenburg, Sweden; 11Centre for Analysis and Synthesis, Department of Chemistry, Lund University, Sweden

Poster #: B123 (presented @ PS1) || Abstract #: 151
"ST3Gal3 deficient mice exhibit spontaneous and induced morbidity and mortality";
Adriane L. Stefanski1, Rachel L. Waagmeester1, Vanessa L. Richardson2, Stacey Thomas3, Dorota S. Raclawksa1, William J. Janssen1,2 and Christopher M. Evans1
1Department of Medicine, University of Colorado Denver, Aurora, CO; 2Department of Medicine, National Jewish Health, Denver, CO

Poster #: B124 (presented @ PS2) || Abstract #: 152
"Glycoproteomics analysis to examine the role of chlamydial protease-like activity factor";
Julian Saba1, Fred Zinnel1, Christa Feasley1, Stuart McCorrister1, Garrett Westmacott1, Grant McClarty1 and Chris Grant1
1Thermo Fisher Scientific, Mississauga, ON, Canada; 2Thermo Fisher Scientific, Somerset, NJ

Poster #: B125 (presented @ PS1) || Abstract #: 153
"Cholera toxin binds to LewisX and fucosylated glycoproteins play a functional role in human intestinal cell intoxication";
Jakob Cervin1, Amberlyn M. Wands2, Anna Casselbrant1, Aleksander Cyjetkovic1, Johanna Estelius1, Benjamin Dedic2, Anirudh Sethi2, Kerri-Lee Wallom3, Rebecca Riise3, Malin Bäckström3, Ville Wallenius3, Frances M. Platti4, Michael Lebens5, Susann Teneberg6, Lars Fändriks6, Jennifer J. Kohler2 and Ulf Yrlid1
1Department of Microbiology and Immunology, Institute of Biomedicine, University of Gothenburg; 2Department of Medical Biochemistry, University of Texas Southwestern Medical Center; 3Department of Gastrointestinal Research and Education, Institute of Clinical Sciences, Sahlgrenska Academy, University of Gothenburg; 4Department of Biochemistry and Cell Biology, Institute of Biomedicine, Sahlgrenska
Academy, University of Gothenburg; 1Department of Pharmacology, University of Oxford; 1 Sahlgrenska Cancer Center, University of Gothenburg; 1 Mammalian Protein Expression Core Facility, University of Gothenburg

Poster #: B126 (presented @ PS2) || Abstract #: 154
“Accelerated Aging and Turnover of Host Anti-Inflammatory Enzymes in the Pathogenesis of Gram-negative Sepsis”; Won Ho Yang1,2, Douglas M. Heithoff1,3, Peter V. Aziz1,2, Benjamin S. Haslund-Gourley1,2, Michael J. Mahan1,3, Victor Nizet4 and Jamey D. Marth1,2,3
1Center for Nonomadic; 2Sanford-Burnham-Prebys Medical Discovery Institute; 3Department of Molecular, Cellular, and Developmental Biology, University of California-Santa Barbara, Santa Barbara, California 93106; 4Department of Pediatrics and Skaggs School of Pharmacy and Pharmaceutical Sciences, University of California San Diego, La Jolla, California 92093

Poster #: B127 (presented @ PS1) || Abstract #: 155
“Surface Glycan-Binding Protein Uniquely Facilitate Starch Metabolism in the Gut Symbiont Bacteroides thetaiotaomicron”; Matthew Foley, Hannah Tuson, Julie Biteen and Nicole Koropatkin
University of Michigan

Poster #: B128 (presented @ PS2) || Abstract #: 156
“Recurrent Infection Progressively Disables Host Protection Against Intestinal Inflammation”; Won Ho Yang1,2,3, Douglas M. Heithoff1,3, Peter V. Aziz1,2,3, Markus Sperandio4, Victor Nizet5, Michael J. Mahan1,3 and Jamey D. Marth1,2,3
1Center for Nonomadic; 2Sanford-Burnham-Prebys Medical Discovery Institute; 3Department of Molecular, Cellular, and Developmental Biology, University of California Santa Barbara, Santa Barbara, California 93106; 4Walter Brendel Center for Experimental Medicine, Ludwig-Maximilians-University, Munich, Germany; 5Department of Pediatrics and Skaggs School of Pharmacy and Pharmaceutical Sciences, University of California San Diego, La Jolla, California 92093

Poster #: B130 (presented @ PS2) || Abstract #: 158
“Regulation of endothelial N-glycans in atherosclerosis: a role for alpha -mannosidases”; Kellie Regal-McDonald1,2, Jarrod W. Barnes3 and Rakesh P. Patel4
1Department of Pathology; 2Center for Free Radical Biology; 3Department of Pulmonary, Allergy, and Critical Care Medicine, University of Alabama at Birmingham, Birmingham, AL

Poster #: B131 (presented @ PS1) || Abstract #: 159
“The zebrafish tandem-repeat galectin 9 (Drgal9-L1) promotes in vitro adhesion and infection of the infectious hematopoietic necrosis virus (IHNV)”; Kelsey Abernathy1, Justin Mancini1, Nuria González-Montalbán1, Chiguang Feng1, Sheng Wang1, Lia Schipper4 and Gerardo Vasta1
1Department of Microbiology and Immunology, University of Maryland School of Medicine, UMB, Institute of Marine Environmental Technology, Baltimore, Maryland; 2School of Life Sciences, San Ysidro University, Guangzhou, PR China; 3North County High School, Glen Burnie, MD

Poster #: B132 (presented @ PS2) || Abstract #: 160
“Antibody-based detection of influenza H5 Hemagglutinin Binding to a Sialoglycan Receptor Using Surface Plasmon Resonance (SPR) as an Alternate to Live Virus-based Assays “; Malgorzata Norton1, Alexey Khalekov1, Tracy L. Kamikawa2, Thomas Kort1, Peter Pushko3, Michael C. Kennedy1 and Dorothy E. Scott1
1Division of Plasma Protein Therapeutics, Center for Biologics Evaluation and Research, U.S. Food and Drug Administration; 2Medigen, Inc.

Poster #: B133 (presented @ PS1) || Abstract #: 161
“Identifying cell-surface glycans that mediate binding of Pertussis toxin.”; Nicole Nischan and Jennifer J. Kohler
Department of Biochemistry, 5323 Harry Hines Blvd., Dallas, TX 75390-9185.

Poster #: B134 (presented @ PS2) || Abstract #: 162
“A shotgun glycomics approach to identify influenza virus receptors in human lungs”; Nan Jia1, Lauren A. Byrd-Leotis1, Chao Gao1, Sandra F. Cummings1, David A. Steinhauser2 and Richard D. Cummings1
1Department of Surgery, Beth Israel Deaconess Medical Center, Harvard Medical School; 2Department of Microbiology and Immunology, Emory University School of Medicine

Poster #: B135 (presented @ PS1) || Abstract #: 163
“NanoLC-MS/MS-based Quantitative N-glycomics following 2-Aminobenzoic Acid Labeling and Methylamidation”; Haiying Li, John W. Froehlich, Patricia S. Cho, Stephen A. Kostel, Shannon E. DiMartino and Richard S. Lee
Department of Urology and The Proteomics Center, Boston Children’s Hospital and Harvard Medical School

Poster #: B136 (presented @ PS2) || Abstract #: 164
“GlcNDAz, a diazirine-containing sugar, can be incorporated into cell surface N-linked glycans”; Han Wu1, Amberlyn M. Wands1, Asif Shajahan1, Roberto Sonon2, Parastoo Azadi1 and Jennifer J. Kohler1
1Department of Biochemistry, UT Southwestern Medical Center, Dallas, TX; 2Complex Carbohydrate Research Center, University of Georgia, Athens, GA

Poster #: B137 (presented @ PS1) || Abstract #: 165
“Analysis of HIV-1 gp120 O-glycosylation in the Context of Structure and Function”; Audra A. Hargett1, Qing Wei1, Barbara Knoppova2, Milan Raska1,2, Stacy Hall1, Zina Moldoveanu1, Zhi-Qiang
Huang, Zhi-Qiang Huang, Jan Novák and Matthew Renfrow

1University of Alabama at Birmingham; 2Palacky University in Olomouc, Olomouc Czech Republic

Poster #: B138 (presented @ PS2) || Abstract #: 166
“Expression of the Tn Tumor Antigen in Carcinomas Is Caused by Mislocalization of Cosmc/T-synthase due to Dysregulation of MAPK Pathway”; Yuliang Jiang1, Sheet Kotian2, Connie Arthur2, Sean Stowell2, David F. Smith1, Guangyu An1 and Tongzhong Ju1,3

1Department of Biochemistry, Emory University School of Medicine Atlanta, GA; 2Department of Pathology, Emory University School of Medicine Atlanta, GA; 3Department of Oncology, the Capital Medical University Beijing Chongyang Hospital, Beijing, China; 4U.S. Food & Drug Administration, Silver Spring, MD

Poster #: B139 (presented @ PS1) || Abstract #: 167
“The immunomodulatory activity of ArtinM contributes to the protection against the in vitro and in vivo infection with Cryptococcus gattii”; Patricia Kellen M. Oliveira-Brito1, Raquel A. Oliveira1, Caroline Rezende1, Pappanaičienė Kumar2, Maria Cristina Roque-Barreira1 and Thiago A. da Silva1

1Department of Cellular and Molecular Biology, School of Medicine of Ribeirão Preto, University of São Paulo – USP, Ribeirão Preto, Brazil; 2Department of Pediatrics-Research, MD Anderson Cancer Center, Houston, Texas, USA

Poster #: B140 (presented @ PS2) || Abstract #: 168
“Using Glycan Microarrays and Molecular Dynamics to Understand the Carbohydrate Specificities of the Human Intelectins”; Jonathan Viola1, Jin Kyu Lee2, Ryan McBride3, Richard Cummings4, Jamie Heimburg-Molinaro5, James Paulson5, Kelley Moremen1, Amika Sood2, Robert Woods1 and Michael Pierce1

1Department of Biochemistry and Molecular Biology, University of Georgia, Athens, GA; 2Complex Carbohydrate Research Center, University of Georgia, Athens, GA; 3Department of Biochemistry, Emory University School of Medicine, Atlanta, GA; 4Department of Surgery, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA; 5Department of Cell and Molecular Biology, Chemical Physiology and Immunology and Microbial Sciences, The Scripps Research Institute, La Jolla, CA

Poster #: B141 (presented @ PS1) || Abstract #: 169
“Urinary Glycan Microheterogeneity and Host Susceptibility to Urinary Tract Infections”; John W. Froehlich and Richard S. Lee

Boston Children’s Hospital

Poster #: B142 (presented @ PS2) || Abstract #: 170
“Glycoprofiling of Dirofilaria immitis and infected dog sera for the identification of new drug targets and glycomarkers”; Anna-Janina Behrens1, Max Crispin1, Christopher Taron1 and Jeremy M. Foster1

1New England Biolabs; 2University of Oxford

Poster #: B143 (presented @ PS1) || Abstract #: 171
“HUMAN ADENOVIRUS TYPE 5 INCREASES CELL HOST FUCOSYLATION”; Gutiérrez Huante K. and Gonzalez R. A. Martínez Duncker I.

Cell Dynamics Research Center, Morelos State Autonomous University. Av. Universidad 1001, Cuernavaca, Morelos, 62209. Tel. 3297000, ext.3364.

Poster #: B144 (presented @ PS2) || Abstract #: 172
“Correlations between the MGAT3 and BACH2 promoter methylation and IgG glycans suggest the role of these genes in IgG glycosylation and inflammatory bowel disease”; Vlatka Zoldoš1, Dora Markulin1, Marija Klašić1, Aleksandar Vojta1, Irena Trbojević-Akmačić1, N. Ventham1, N. Kennedy1, J. Satsangi2, V. Annesse3, S. Pinho4 and Gordon Lauc2

1University of Zagreb, Faculty of Science, Department of Biology, Division of Molecular Biology, Hrvatskog 102A, 10 000 Zagreb, Croatia; 2Genos Ltd, Glycobiology Laboratory, Zagreb, Croatia; 3University of Edinburgh, Faculty of Science, Edinburgh, UK; 4University of Carregi, Florence, Italy; 5IPATIMUM, Lisbon, Portugal

Expect the unexpected from microbes

Poster #: B145 (presented @ PS1) || Abstract #: 37
“Understanding Influenza A Specificity: An Evolution of Paradigms”; Ye Ji, Yohanna J.B. White, Oliver C. Grant and Robert J. Woods

Complex Carbohydrate Research Center, University of Georgia

Poster #: B146 (presented @ PS2) || Abstract #: 38
“Nascent microbiome and early metabolism are perturbed by pre- and post-natal exposure to artificial sweeteners”; Stephanie Olivier-Van Stichelen, Kristina I. Rother and John A. Hanover

National Institute of Health, NIDDK

Poster #: B147 (presented @ PS1) || Abstract #: 173
“Multivalent substrates for protein glycosylation: new avenues in substrate engineering and fundamental insight in mechanism of Actinobacillus pleuroptomoniae N-glycosyltransferase”; Hanne L.P. Tytgat, Chia-Wei Lin, Jacqueline Mock, Timothy G. Keys and Markus Aebi

Institute of Microbiology, ETH Zurich, Zurich, Switzerland

Poster #: B148 (presented @ PS2) || Abstract #: 174
“Reproduction of an L-Rhamnose and D-Galactose-specific Lectin from a Lost Strain of Streptomyces”; Yoko Fujita-Yamaguchi1,2, Karine Bagramyan1, Yoshiki Yamaguchi1, Akemi Ikeda1, Teresa B. Hong1 and Markus
variable fragment antibodies”; Ulrika Wendel¹, Nina Persson¹, Christian Rissingер¹, Ekaterina Mirgorodskaya², Carina Sihlbohm², Eva Bengtsson³, Björn Nodin¹, Lena Danielsson⁴, Charlotte Welinder⁴, Maria Panico⁵, Anne Dell⁵, Stuart Haslam⁵, Gunilla Nordin Fredriksson⁶, Bo Jansson⁶ and Ola Blixt⁷
¹Chemical Glyco-Biology Laboratory, Department of Chemistry, Faculty of Science, Copenhagen University, Denmark; ²The Proteomics Core Facility, Sahlgrenska Academy, University of Gothenburg, Sweden; ³Department of Clinical Sciences, Scania University Hospital, Malmö Lund University, Sweden; ⁴Division of Oncology and Pathology, Dept. of Clinical Sciences, Lund University, Sweden; ⁵Division of Clinical Chemistry and Pharmacology, Dept. of Laboratory Medicine, Lund University, Sweden; ⁶Centre of Excellence in Biological and Medical Mass Spectrometry “CEBMMS”, Biomedical Centre D13, Lund University, Sweden; ⁷Department of Life Sciences, Imperial College London, South Kensington Campus, UK

Poster #: B154 (presented @ PS2) || Abstract #: 180 “New insect cell line to produce recombinant glycoproteins with EndoH sensitive N-glycans”; Hideaki Mabashi-Asazuma and Donald L. Jarvis²,³
²Ochanomizu University, Tokyo, Japan; ³University of Wyoming, Laramie, WY; ⁴GlycoBac, LLC, Laramie, WY

Poster #: B155 (presented @ PS1) || Abstract #: 181 “Deep sequencing of proteoglycans”; Joshua A. Klein, Le Meng and Joseph Zaia
Boston University

Poster #: B156 (presented @ PS2) || Abstract #: 182 “Harnessing the Power of Natural Selection to Define and Optimize Sialoglycan-Recognizing Probes (SGRPs) for Exploring the Biology, Physiology and Pathology of the Dynamic Sialoglycome”; Saurabh Srivastava, Andrea Verhagen⁴, Brian Wasik⁵, Hai Yu⁶, Aniruddha Sasmal⁵, Barbara Bensing⁵, Naazneen Khan⁵, Zahra Khedri⁵, Sandra Diaz⁵, Paul Sullam⁶, Nissi Varki⁵, Xi Chen⁵, Colin Parrish⁶ and Ajit Varki⁵
⁴Glycobiology Research and Training Center, University of California, San Diego, San Diego, CA; ⁵College of Veterinary Medicine, Cornell University, Ithaca, NY; ⁶Department of Chemistry, University of California-Davis, Davis, CA; ⁷School of medicine, University of California, San Francisco, San Francisco, CA

Poster #: B157 (presented @ PS1) || Abstract #: 183 “DrawGlycan-SNFG: Aiding mass spectrometry data analysis by rendering glycans and glycopeptides with fragmentation information”; Kai Cheng, Yusen Zhou and Sriram Neelamegham
Department of Chemical and Biological Engineering, Clinical and Translational Research Center, University at Buffalo, The State University of New York, Buffalo, NY 14260, USA.

Glycoengineering and glycan related therapeutics

Poster #: B151 (presented @ PS1) || Abstract #: 177 “Intact and Native Mass Analysis of Glycoproteins”; Marshall Bern¹, Yong J. Kil¹, Tomislav Cava², Vojtech Franc² and Albert J.R. Heck²
¹Protein Metrics Inc.; ²Utrecht University

Poster #: B152 (presented @ PS2) || Abstract #: 178 “Are polysialylated exosomes an endogenous defense mechanism against neutrophil extracellular traps?”; Kristina Zlatina¹, Max Saffenberger¹, Christina E. Galuska¹, Jan Dambon¹,², Andrea Kühne¹, Thomas Lütteke¹ and Sebastian P. Galuska¹,²
¹Institute of Reproductive Biology, Leibniz Institute for Farm Animal Biology; ²Institute of Biochemistry, Faculty of Medicine, Justus-Liebig-University; ³Institute of Veterinary Physiology and Biochemistry, Justus-Liebig-University

Poster #: B153 (presented @ PS1) || Abstract #: 179 “Site-specific detection of advanced glycation endproducts with newly developed single-chain Kalkum³
³Department of Molecular & Cellular Biology, BRI of City of Hope; ²Department of Diabetes Complications & Metabolism, BRI of City of Hope; ³Department of Molecular Immunology, BRI of City of Hope, Duarte, CA 91010, USA; ⁴Structural Glycobiology Team, Systems Glycobiology Research Group, RIKEN Global Research Cluster; RIKEN, Saitama 351-0198, Japan

Poster #: B149 (presented @ PS1) || Abstract #: 175 “Comprehensive Analysis for Structural Characterization of Peptidoglycan”¹,²; Sara Portifiro, Stephanie Archer-Hartmann, Russell W. Carlson and Parastoo Azadi
Complex Carbohydrate Research Center, UGA

Poster #: B150 (presented @ PS2) || Abstract #: 176 “Determining the structure of Cryptococcus neoformans polysaccharide capsule”; Maggie P. Wear¹, Radames JB Cordero¹, Anthony Bowen², Anne Jedlicka³, Marcos D. Battistel¹, Aaron Marcella², Lorenzo Guazzelli³, Stefan Oscarson¹, Darón I. Freedberg¹ and Artoo Casadevall¹
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Poster #: B154 (presented @ PS2) || Abstract #: 180 “New insect cell line to produce recombinant glycoproteins with EndoH sensitive N-glycans”; Hideaki Mabashi-Asazuma and Donald L. Jarvis²,³
²Ochanomizu University, Tokyo, Japan; ³University of Wyoming, Laramie, WY; ⁴GlycoBac, LLC, Laramie, WY

Poster #: B155 (presented @ PS1) || Abstract #: 181 “Deep sequencing of proteoglycans”; Joshua A. Klein, Le Meng and Joseph Zaia
Boston University

Poster #: B156 (presented @ PS2) || Abstract #: 182 “Harnessing the Power of Natural Selection to Define and Optimize Sialoglycan-Recognizing Probes (SGRPs) for Exploring the Biology, Physiology and Pathology of the Dynamic Sialoglycome”; Saurabh Srivastava, Andrea Verhagen⁴, Brian Wasik⁵, Hai Yu⁶, Aniruddha Sasmal⁵, Barbara Bensing⁵, Naazneen Khan⁵, Zahra Khedri⁵, Sandra Diaz⁵, Paul Sullam⁶, Nissi Varki⁵, Xi Chen⁵, Colin Parrish⁶ and Ajit Varki⁵
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Poster #: B157 (presented @ PS1) || Abstract #: 183 “DrawGlycan-SNFG: Aiding mass spectrometry data analysis by rendering glycans and glycopeptides with fragmentation information”; Kai Cheng, Yusen Zhou and Sriram Neelamegham
Department of Chemical and Biological Engineering, Clinical and Translational Research Center, University at Buffalo, The State University of New York, Buffalo, NY 14260, USA.
Annual Meeting of the Society For Glycobiology (SFG)

Poster #: B158 (presented @ PS2) || Abstract #: 184
“Glycoengineering in Biopharma: A New Dimension in Drug Discovery”; Henning Stockmann, Violeta Marin, Viktor Todorovic, Victoria Scott, Claire Gerstein, Marc Lake, Leyu Wang, Ramkrishna Sadhukhan, Paul Nimmer, Corina Balut, Paul Richardson and Anil Vasudevan
AbbVie

Poster #: B159 (presented @ PS1) || Abstract #: 185
“Glycan analog libraries for the development of high affinity ligands of glycan binding proteins.”; Corwin M. Nycholat1, Shiteng Duan, Sam Moons1, Buyankhishig Tsoogbaatar1, Eike Wamhoff2, Grant Bare3, Ryan McBride1, Kevin Worrell2, Christoph Rademacher3, Sean Stowell4, Barry Sharpless2 and James C. Paulson1
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Poster #: B160 (presented @ PS2) || Abstract #: 186
“Development of a New Human CD22 transgenic Mouse”; Matthew S. Macauley1,2, Kyle J. Bednar1,2, Elena Shainina1, Romain Ballet1, Edward P. Connors1, Shiteng Duan1, Joana Juan1, Britni M. Arlian1, Mike D. Kulis2, Eugene C. Butcher3, Wai-Ping Fung4, Leung5, Tadimeti S. Rao2 and James C. Paulson1
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Poster #: B161 (presented @ PS1) || Abstract #: 187
“Carbohydrate-neuroactive (CNH) strategy for non-invasive modulation of glycoconjugates of the central nervous system in vivo in mice.”; Surbhi Goswami1, Asif Shajahan1, Shubham Parashar1, Hema Swasthi1, Shanta Sen1, Nagarajan Perumal2 and Srinivasa Gopalan Sampathkumar1
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Poster #: B162 (presented @ PS2) || Abstract #: 188
“N-glycans in the antibody receptor CD16A exhibit carbohydrate-polypeptide contacts identified through solution NMR spectroscopy”; Ganesh P. Subedi, Daniel J. Falconer and Adam W. Barb
Roy J. Carver Department of Biochemistry, Biophysics and Molecular Biology. 2437 Pammel Drive. Molecular Biology Building, rm 4210. Iowa State University, Ames, IA 50011

Poster #: B163 (presented @ PS1) || Abstract #: 189
“Mouse IgG2b, 2c and human IgG1 antibodies have distinct structures and inequivalent function”; Daniel J. Falconer and Adam W. Barb
Roy J. Carver Department of Biochemistry, Biophysics and Molecular Biology, Iowa State University, Ames, IA 50011, USA

Poster #: B164 (presented @ PS2) || Abstract #: 190
“Synthesis and analysis of rare sugar functionalized graphene oxide”; Toru Mizuki1,2, Keisuke Hirata1, Yoshikata Nakajima1, Takashi Uchida1,2 and Toru Maekawa1,2
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Poster #: B165 (presented @ PS1) || Abstract #: 191
“AlphaScreen assays for detection of hyaluronan-protein binding”; Mary K. Cowman1, Xiayun Huang1, Tannin A. Schmidt2, Claire Shortt2, Shivani Arora1, Akira Asari4 and Thorsten Kirsch1
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Poster #: B166 (presented @ PS2) || Abstract #: 192
“Engineering of IgG Fc Glycosylation and the Relevant Activity Studies”; Chung-Yi Wu1,2, Chin-Wei Lin1,2,3 and Chi-Huey Wong1,2,3
1Genomics Research Center, Academia Sinica, Taipei 115, Taiwan; 2Chemical Biology and Molecular Biophysics Program, Taiwan International Graduate Program, Academia Sinica, Taipei 115, Taiwan; 3Department of Chemistry, National Taiwan University, Taipei 106, Taiwan

Poster #: B167 (presented @ PS1) || Abstract #: 193
“Determination of the minimum enzymatic domain of keratanase II”; Tomoya O. Akama1, Toshisuke Kawasaki2 and Tomoyuki Nakamura1
1Kansai Medical University; 2Ritsumeikan University

Poster #: B168 (presented @ PS2) || Abstract #: 194
“High throughput comprehensive analysis of glycoproteins through Tool for Rapid Analysis of glycopeptide by Permethylation (TRAP) method.”; Asif Shajahan, Nitin T. Supekar, Christian Heiss, Ian Black and Parastoo Azadi
Complex Carbohydrate Research Center, University of Georgia, Athens, GA - 30602

Poster #: B169 (presented @ PS1) || Abstract #: 195
“Novel Sialoglycan Lectenz® Reagents”; Sheng-Cheng
Poster #: B170 (presented @ PS2) || Abstract #: 196
"GALECTIN-1/MALTOSE BINDING PROTEIN FUSION MOLECULE: A PROMISING TOOL TO DESIGN A ELETROCHEMICAL LECTIN-BASED BIOSENSOR."

Wu¹, J. Christopher Cooper¹, Mallory K. Paul¹, Ziad M. Eletri¹, Shani L. Ben-Arye², Vered Padler-Karavani², Kausar N. Samli¹ and Robert J. Woods³
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Poster #: B171 (presented @ PS1) || Abstract #: 197
"Characterization of a Novel Mouse Strain Expressing Human Siglec-8 Only on Eosinophils"

Pâmela O M Gomes¹, Thais C. De Leo², Marina R. Batistuti¹, Richard D. Cummings³, Marcelo Dias-Baruffi² and Zeki Naal²
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Poster #: B172 (presented @ PS2) || Abstract #: 198
"Identification of carbohydrate-mimetic D-amino acid peptides by peptide-display library screening as chemotherapy for malignant brain tumors"

Motohiro Nonaka¹,², Misa S. Anekoji², Tomoya O. Akama³, Jun Nakayama⁴ and Michiko N. Fukuda¹,²
¹Advanced Industrial Science and Technology; ²Sanford-Burnham-Prebys Medical Discovery Institute ; ³Kansai Medical University; ⁴Shinshu University School of Medicine

Poster #: B173 (presented @ PS1) || Abstract #: 199
"Development of high affinity and immunomodulatory ligands of C-type lectin receptor langerin by oligomerizing a keratan sulfate disaccharide L4";

Fumi Ota¹, Yasuhiko Kizuka¹, Tetsuya Hirayama², Yoshiki Yamaguchi³, Masahiro Nagata⁴, Hendra S. Ismanto⁴, Bernd Lepenies⁵, Jonas Aretz⁶, Christoph Rademacher⁶,⁷, Peter H. Seeberger⁶,⁷, Takashi Angata⁸, Shinobu Kitazume¹, Keiichi Yoshida¹, Tomoko Betsuyaku⁹, Kozui Kida⁸, Sho Yamasaki¹⁰,¹¹,¹² and Naoyuki Taniguchi¹
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Poster #: B174 (presented @ PS2)
"Automated Identification and Subsequent Relative Quantitation of Glycans Using Stable Isotope Labels by MS with SimGlycan software"

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Annual Meeting of the Society For Glycobiology (SFG)

April 28-30, 2022

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B. N. Singh, SUNY Upstate Medical University (singsh@upstate.edu)
DAVID SMITH, Emory University School of Medicine (dsmith@emory.edu)
Problem - Current glycosylated biopharmaceuticals present heterogeneous glycoprofiles where optimal glycoform is often unknown

Solution – By applying our proprietary platform we enable glycan display on any protein allowing screening of individual glyco-variants for identification of optimal lead candidate

Optimizing Biologics by GlycoDisplay:

1) Produce protein in engineered cell lines

GlycoDisplay produce glycovariants of the protein

2) Screen glycovariants for Lead

Partner screen for improved drug function

3) Generation of production cell line

Glycodisplay transfer optimal design into any host cell line

For Glyco-optimization of your Protein
contact: Claus Kristensen, CEO
GlycoDisplay Aps
mail: info@glycodisplay.com
phone: +45 42703088

About GlycoDisplay – GlycoDisplay is a science driven spin-out company from Copenhagen Center for Glycomics (www.glycomics.ku.dk). The team has extensive experience in glycomics, cell engineering and industrial production cell line development.

Partner Model – GlycoDisplay offer glycan display solutions for design and development of improved drugs and production cell lines. We favor partnership models where GlycoDisplay does glycoengineering for optimal glycan presentation and partner does functional validation in their assays.

Target proteins – GlycoDisplay can optimize any glycoprotein with N- or O-glycans, including lysosomal enzymes and antibodies.

Imperial College London
SAVE THE DATE
2018 Society for Glycobiology Annual Meeting
November 5-8, 2018
San Juan, Puerto Rico
Caribe Hilton

Meeting Chair:
Dr. Kelley Moremen
Complex Carbohydrate Research Center
University of Georgia

For more information: www.glycobiology.org
<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Event</th>
<th>Location</th>
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<tbody>
<tr>
<td><strong>Sunday, November 5, 2017</strong></td>
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<tr>
<td></td>
<td>8:00 a.m. – 6:00 p.m.</td>
<td>Registration</td>
<td>Plaza Foyer</td>
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<td></td>
<td>9:00 a.m. – 3:00 p.m.</td>
<td>Satellite 3: Trainee Mentoring Program</td>
<td>Broadway 3/4</td>
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<tr>
<td></td>
<td>9:00 a.m. – 100 p.m.</td>
<td>Satellite 2: Glycoprotein Technologies</td>
<td>Broadway 2</td>
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<tr>
<td></td>
<td>10:00 a.m. – 5:00 p.m.</td>
<td>Satellite 1: Bioinformatics</td>
<td>Broadway 1</td>
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<td>3:30 p.m. – 5:00 p.m.</td>
<td>Board of Directors Meeting (Invitees Only)</td>
<td>Broadway 3/4</td>
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<tr>
<td></td>
<td>5:30 p.m. – 7:15 p.m.</td>
<td>Session 1: Meyer and Kornfeld Awards Lectures</td>
<td>Pavilion Ballroom</td>
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<tr>
<td></td>
<td>7:30 p.m. – 9:30 p.m.</td>
<td>Welcome Reception &amp; Exhibits</td>
<td>Plaza Foyer and Atrium Ballroom</td>
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<tr>
<td><strong>Monday, November 6, 2017</strong></td>
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<td>7:30 a.m. – 4:00 p.m.</td>
<td>Registration</td>
<td>Plaza Foyer</td>
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<td>7:30 a.m. – 8:30 a.m.</td>
<td>Continental Breakfast</td>
<td>Plaza Foyer</td>
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<td></td>
<td>8:30 a.m. – 10:00 a.m.</td>
<td>Session 2: Glycans in metabolic regulation and development</td>
<td>Pavilion Ballroom</td>
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<td>10:00 a.m. – 10:30 a.m.</td>
<td>Coffee Break</td>
<td>Plaza Foyer</td>
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<td></td>
<td>10:30 a.m. – 12:30 p.m.</td>
<td>Session 3: Glycan biosynthesis and function</td>
<td>Pavilion Ballroom</td>
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<td>12:30 p.m. – 1:30 p.m.</td>
<td>Lunch on your own</td>
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<td></td>
<td>12:30 p.m. – 1:30 p.m.</td>
<td>Glycobiology Editorial Board Meeting (Invitees only)</td>
<td>Broadway 3/4</td>
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<tr>
<td></td>
<td>1:30 p.m. – 4:00 p.m.</td>
<td>Poster Session I and Exhibits</td>
<td>Plaza Foyer and Atrium Ballroom</td>
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<td></td>
<td>3:00 p.m. – 3:55 p.m.</td>
<td>“NIH Listens, Discussion with NIH Program Staff”</td>
<td>Broadway 3/4</td>
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<td></td>
<td>4:00 p.m. – 5:30 p.m.</td>
<td>Session 4: Glycan related diseases and disorders I</td>
<td>Pavilion Ballroom</td>
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<td><strong>Tuesday, November 7, 2017</strong></td>
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<td>7:30 a.m. – 8:30 a.m.</td>
<td>Continental Breakfast</td>
<td>Plaza Foyer</td>
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<td>8:00 a.m. – 4:00 p.m.</td>
<td>Registration</td>
<td>Plaza Foyer</td>
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<td>8:30 a.m. – 10:00 a.m.</td>
<td>Session 6: Glycolipids in health and disease</td>
<td>Pavilion Ballroom</td>
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<td>10:00 a.m. – 10:30 a.m.</td>
<td>Coffee Break</td>
<td>Plaza Foyer</td>
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<td>10:30 a.m. – 12:15 p.m.</td>
<td>Session 7: Glycans in pathogenesis and infection</td>
<td>Pavilion Ballroom</td>
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<td>12:15 p.m. – 1:30 p.m.</td>
<td>Lunch on your own</td>
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<td>1:30 p.m. – 4:00 p.m.</td>
<td>Poster Session II and Exhibits</td>
<td>Plaza Foyer and Atrium Ballroom</td>
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<td>4:00 p.m. – 4:45 p.m.</td>
<td>SFG Business Meeting (open to all attendees)</td>
<td>Pavilion Ballroom</td>
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<td>4:45 p.m. – 6:15 p.m.</td>
<td>Session 8: MCP and Glycobiology Significant Achievement Award Lectures</td>
<td>Pavilion Ballroom</td>
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<td>6:15 p.m. – 7:00 p.m.</td>
<td>Break</td>
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<td>7:00 p.m. – 11:00 p.m.</td>
<td>Banquet</td>
<td>Atrium Ballroom</td>
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<td>Ticket purchase required. Extra tickets for guests may be ordered.</td>
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<tr>
<td><strong>Wednesday, November 8, 2017</strong></td>
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<td>8:00 a.m. – 8:30 a.m.</td>
<td>Continental Breakfast</td>
<td>Plaza Foyer</td>
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<td>8:30 a.m. – 1:00 p.m.</td>
<td>Registration</td>
<td>Plaza Foyer</td>
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<td>8:30 a.m. – 9:50 a.m.</td>
<td>Session 9: Expect the unexpected from microbes</td>
<td>Pavilion Ballroom</td>
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<td>9:50 a.m. – 10:15 a.m.</td>
<td>Coffee Break</td>
<td>Plaza Foyer</td>
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<td>10:15 a.m. – 11:45 a.m.</td>
<td>Session 10: Glycoengineering and glycan related therapeutics</td>
<td>Pavilion Ballroom</td>
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<td>11:45 a.m. – 1:00 p.m.</td>
<td>Lunch on your own</td>
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<td>1:00 p.m. – 2:20 p.m.</td>
<td>Session 11: Glycan related diseases and disorders II</td>
<td>Pavilion Ballroom</td>
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<td>2:25 p.m. – 2:40 p.m.</td>
<td>Closing Remarks</td>
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