



SOCIETY for
Glycobiology
PROGRAM BOOK

2016

ANNUAL MEETING
November 19-22, 2016

Glycoscience Communities

New Orleans, Louisiana, USA Hilton New Orleans Riverside

Organizer: Christine M. Szymanski, Ph.D., Complex Carbohydrate Research Center, University of Georgia

www.glycobiology.org

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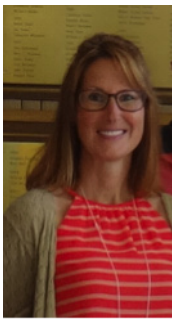
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ABOUT THE SOCIETY FOR GLYCOBIOLOGY (SFG)



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.

www.glycobiology.org



Dear Conference Attendees,

A warm welcome to the 2016 Society for Glycobiology Annual Meeting in New Orleans, the city known as the Big Easy! The Society is currently composed of 410 Glycoscientists from around the world and is part of the Federation of American Societies for Experimental Biology representing over 120,000 researchers.

This year, the theme for the meeting is **Glycoscience communities**. We, in the glycoscience field recognize that carbohydrates impact all aspects of life. What is becoming more apparent is that each system that we study is influenced by the environment that surrounds us, including the resources that are available, the stressors that must be overcome, and the ability to co-exist with the array of organisms that populate our ecosystem. This meeting will highlight how these complex community networks influence each other and describe the important roles carbohydrates play in this intricate web of life.

Prior to the start of the annual meeting, there will be two open satellite meetings on Saturday morning:
 Satellite I: Glycoprotein Technologies
 Satellite II: Glyco-Bioinformatics

This year, a new feature for the annual meeting is that the first session on Saturday afternoon will be organized by the Consortium for Functional Glycomics. This session will be focused on using model systems to understand the biological roles of glycans.

The opening session will be followed by the Society award lectures. The purpose of the **President's Innovator Award** is to acknowledge the contributions of one scientist each year that has made a significant impact on society. This year, Ajit Varki and I will be presenting Jeffrey Gordon with the Innovator Award for introducing the scientific community to the concept of the microbiome and demonstrating its influence on human biology. This will be followed by the **Karl Meyer Award** lecture by Anne Dell and the opportunity to interact with all attendees at the opening reception. On Monday afternoon, Hudson Freeze, who is also the 2016 President of FASEB, will present the **Rosalind Kornfeld Award** lecture. His presentation will be followed by the **MCP Award** lecture by Lance Wells, and the new **Glycobiology Significant Achievement Award** lecture by Tadashi Suzuki. We are grateful to Oxford University Press (publisher of Glycobiology) for initiating the Significant Achievement award.

The Society also congratulates the 55 students selected to receive travel awards, the 8 poster prize winners and 26 speakers selected from the abstract submissions. We have an outstanding group of students attending the meeting this year! Note that the posters will be on display during both poster sessions and all abstracts will be published in Glycobiology.

The support we receive from our sponsors is key to the sustainability of our meetings. Please visit their booths and tables and provide them with feedback that the Society very much appreciates their sponsorships.

My deepest thanks goes out to the Program Committee / Session Chairs for developing the program and selecting the student awardees, and to Silvy Song and her staff at FASEB for all their organizational expertise.

We look forward to sharing a memorable Society for Glycobiology Annual Meeting in New Orleans with you!

Sincerely,

A handwritten signature in cursive script that reads "Szymanski".

Professor Christine Szymanski
 President, Society for Glycobiology

Meeting Venue

Hilton New Orleans Riverside
2 Poydras St New Orleans, LA 70130 USA

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.

Social Events

Saturday, November 19, 2016

7:30PM – 9:30PM

Opening Reception & Exhibits

St. Charles Ballroom

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.

Monday, November 21, 2016

7:00PM – 10:00PM

Banquet

Offsite: Audubon Aquarium of the Americas - 1 Canal St, New Orleans, LA 70130 (5 minute walk from hotel)

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

Enjoy this banquet reception with full buffet dinner, cash bar, New Orleans jazz entertainment, and conversation with fellow scientists. It will be held inside of the Audubon Aquarium with open wildlife exhibits to walk through and enjoy.



Other Meetings

Saturday, November 19, 2016

Satellite I: Glycoprotein Technologies

Magazine Room

Glycoprotein Technologies: 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 (Structure-Activity-Relationship (SAR), pharmacokinetics/pharmacodynamics, etc.), glyco-optimization, the production of biosimilars, as well as glycosylation as a point of interest for regulatory agencies.

Satellite II: Glyco-Bioinformatics

Canal Room

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 principle 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. An extended discussion 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.

10:00AM – 12:00PM

Board of Directors Meeting (invitees only)

Commerce Room

Sunday, November 20, 2016

12:00PM – 1:30PM

Glycobiology Editorial Board Meeting (Invitees only)

Jefferson Ballroom

Other Meetings

1:30-3:30PM

Glyco-Bioinformatics Hands-on Session

Jackson Room

This workshop will allow you to learn about currently available glycomics software tools and databases. Software developers and database providers will give individual demonstrations of their tools and answer questions.

Monday, November 21, 2016

3:30PM – 4:15PM

SFG Business Meeting – (All attendees encouraged to attend, prizes will be available)

St. James Ballroom

The SFG leadership will report on the Society's current overall status and announce important news relevant to the membership, including updates on the next SFG meeting. 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.

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 the conference, but is also a courtesy to other registrants.

Catering: Included in registration fees are the following catered events:

- Saturday night reception light hors d'oeuvres
- Sunday, Monday, Tuesday light breakfast fare and 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 St. Charles Ballroom during the opening reception, breaks and poster sessions. See the exhibitor listing for detailed information regarding our sponsoring companies.

Exhibit Hours:

Saturday, November 19, 2016 | 7:30PM – 9:30PM

Sunday, November 20, 2016 | 1:30PM - 3:30PM

Monday, November 21, 2016 | 1:30PM - 3:30PM

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

Other Information

conference for attendees in meeting spaces. Use password: glyco2016

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.

Parking: The hotel will offer self-parking at a discounted rate of \$20 per night. Please see the Registration Desk for more information.

Poster Sessions: Poster boards will be set-up in St. Charles 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. Presenters should stand by their posters at least the first hour of their assigned session as indicated in notification letters.

Poster session 1

Sunday, November 20, 2016 | 1:30 – 3:30PM

Poster session 2

Monday, November 21, 2016 | 1:30 – 3:30PM

Set-up: Begin mounting posters starting Saturday, November 19, 2016 from 5PM until any time before poster session 1.

Take-down: Tuesday, November 22, 2016 starting 10:30AM.

Speakers: Presenters are asked to load their talks as soon as possible, and at least 2 hours prior to their sessions by visiting the technician in the general session room, Plaza Ballroom during registration hours. 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.

2016 Leaders

Officers



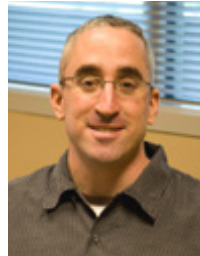
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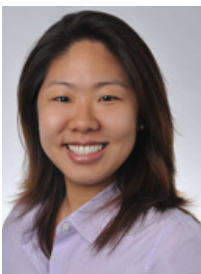


Dr. Stuart Haslam
Imperial College London
United Kingdom



Dr. Lance Wells
University of Georgia

Administrative Office



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

Invited Speakers

Markus Aebi | *ETH Zurich*

Fikri Avci | *University of Georgia*

David Bolam | *Newcastle University*

Michael Boyce | *Duke University*

Arturo Casadevall | *Johns Hopkins Bloomberg School of Public Health*

Jin Won Cho | *Yonsei University*

Brian Cobb | *Case Western Reserve University*

Charles Dimitroff | *Brigham and Women's Hospital*

Mario Feldman | *Washington University School of Medicine, St Louis*

Hudson Freeze | *Sanford Children's Health Research Center & Sanford Burnham Prebys Medical Discovery Institute*

Jorge Galan | *Yale University*

Rita Gerardy-Schahn | *Hannover Medical School*

Harry Gilbert | *Newcastle University*

Jeff Gildersleeve | *NIH*

Thierry Hennet | *University of Zurich*

Lucas Jae | *The Netherlands Cancer Institute*

Nathalie Juge | *Institute of Food Research*

Laura Kiessling | *University of Wisconsin-Madison*

Nicole Koropatkin | *University of Michigan Medical School*

Joseph Lau | *Roswell Park Cancer Institute*

Gordon Lauc | *University of Zagreb*

Kaspar Locher | *ETH Zurich*

Lara Mahal | *New York University*

Celso Reis | *Institute of Molecular Pathology and Immunology*

Richard Steet | *Complex Carbohydrate Research Center, University of Georgia*

Kelly Ten Hagen | *NIH*

Michael Tiemeyer | *Complex Carbohydrate Research Center, University of Georgia*

Michela Tonetti | *University of Genova*

Ajit Varki | *UC San Diego*

Hans Wandall | *University of Copenhagen*

Lance Wells | *Complex Carbohydrate Research Center, University of Georgia*

Lori West | *University of Alberta*

Yu Yamaguchi | *Sanford-Burnham Medical Research Institute*

Program Committee & Session Chairs

Markus Aebi | *ETH Zurich*

Brian Cobb | *Case Western Reserve University*

Karen Colley | *University of Illinois College of Medicine*

Thierry Hennet | *University of Zurich*

Nicole Koropatkin | *University of Michigan Medical School*

Joseph Lau | *Roswell Park Cancer Institute*

Vlad Panin | *Texas A&M University*

Michael Pierce | *Complex Carbohydrate Research Center, University of Georgia*

Richard Steet | *Complex Carbohydrate Research Center, University of Georgia*

Ajit Varki | *UC San Diego*

Hans Wandall | *University of Copenhagen*

2016 Awards

President's Innovator Award

The President's Innovator Award was established in 2015 and is given by the President of the Society for Glycobiology to acknowledge the contributions of one scientist each year that has made a significant impact on society.

2016 winner: Jeffrey Gordon, Washington University in St. Louis

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."

2016 winner: Dr. Anne Dell, Imperial College London

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.

2016 winner: Dr. Hudson Freeze, Sanford Children's Health Research Center and Sanford Burnham Prebys Medical Discovery Institute

MCP 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.

2016 winner: Lance Wells, Complex Carbohydrate Research Center, University of Georgia

Glycobiology Significant Achievement Award

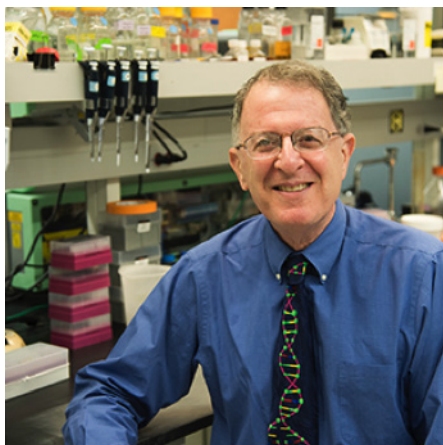
Oxford University Press (publisher of Glycobiology) and the Society for Glycobiology have recently established an award for new and mid-career scientists that have made a key discovery during their early careers with the potential to have a substantial impact on the glycoscience community.

2016 winner: Tadashi Suzuki, RIKEN Global Research Cluster

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.

President's Innovator Award Winner



The Society for Glycobiology has recently inaugurated the President's Innovator Award. The purpose of the award is to acknowledge the contributions of one scientist each year that has made a significant impact on society. This year, the Innovator Award will be presented to Jeffrey Gordon, the Dr. Robert J. Glaser Distinguished University Professor at Washington University in St. Louis, MO, for introducing the scientific community to the concept of the microbiome and demonstrating its influence on human biology. Dr. Gordon obtained his undergraduate education at Oberlin College, his M.D. from the University of Chicago, his clinical training in internal medicine and gastroenterology at Washington University and did a post-doctoral fellowship at the NIH. He joined the faculty at Washington University in 1981 where he has spent his entire career, first in the Departments of Medicine and Biological Chemistry, then as head of the

Department of Molecular Biology and Pharmacology (1991-2004), and subsequently as founding Director of an interdepartmental, interdisciplinary Center for Genome Sciences and Systems Biology. Dr. Gordon has been a mentor to over 125 PhD and MD/PhD students as well as postdoctoral fellows. Together, they have helped redefine the way that we look at self by investigating the integral relationship between our microbial communities and our physiologic and metabolic features. To do so, they have created gnotobiotic animal models, and developed new experimental and computational approaches for characterizing the assembly, dynamic operations, functional properties, and biological effects of human gut microbial communities. He has combined these preclinical models with human studies of twins, as well as with members of birth cohorts living in low-, middle- and high-income countries. His group is focused on addressing the global health challenges of obesity and childhood undernutrition through new understanding of the interactions between diets and the gut microbiome and new ways of promoting healthy development of the gut community during the first several years of postnatal life. The quality and impact of Dr. Gordon's research cannot be over-stated and his pioneering expertise in the field speaks for itself in his publications. He is a member of the National Academy of Sciences, the American Academy of Arts and Sciences, the National Academy of Medicine, and the American Philosophical Society, plus the recipient of a number of awards, including the Selman A. Waksman Award in Microbiology, the Robert Koch Award, the Passano Award, the Dickson Prize in Medicine, and the Keio Medical Science Prize.

2016 Karl Meyer Lectureship Award Winner

Dr. Anne Dell (Professor of Carbohydrate Biochemistry, Department of Life Sciences, Faculty of Natural Sciences, Imperial College London) graduated with a first class honors degree in organic chemistry from the University of Western Australia in 1971. She was awarded a scholarship from the Royal Commission for the Exhibition of 1851, which supported her PhD studies in the Department of Chemistry at the University of Cambridge under the supervision of Howard Morris. This was the start of a scientific collaboration and friendship that continues to this day. It was during her PhD that Anne was first exposed to the analytical power of mass spectrometry, initially for peptides and proteins, but later for other polar biological molecules. After completing her PhD in 1975, Anne moved with Howard to Imperial College and helped him set up the first high mass biopolymer mass spectrometry laboratory in the world.

Anne's initial forays into mass spectrometry for glycopolymer analysis were stimulated in 1979 by a sabbatical visit to Imperial



by Clint Ballou, Chair of Biochemistry at Berkeley. Together, they undertook pioneering work revising the structure of the 6-O-methylglucose polysaccharide of *Mycobacterium smegmatis* utilizing field desorption and fast-atom bombardment mass spectrometry. A few years later, her research on leukocyte glycosylation with Minoru Fukuda at the La Jolla Cancer Research Foundation was fundamental to the emerging field of glycobiology, laying foundations for studies into the roles of carbohydrates in the immune system. A seminal discovery was her identification of sialyl-Lewis X on neutrophils, pivotal to defining ligands for the selectins when they were cloned in 1989. Anne's characterization of the glycoprotein hormone that controls erythropoiesis (erythropoietin) in the late 1980s was crucial for biopharmaceutical progress, as it provided the first evidence the recombinant product carried natural glycosylation and could be safely used to treat anemia.

During the ensuing decades with the development of MALDI- and electrospray- mass spectrometry technologies, Anne devised ever more powerful methodologies, which continue to fuel international collaborations. A highlight of this research was the discovery that human sperm-egg binding is mediated by sialyl-Lewis X on the zona pellucida in collaboration with Kay-Hooi Khoo (Academia Sinica, Taipei), Gary Clark (University of Missouri) and William Yeung (University of Hong Kong).

As highlighted above, Anne's central research philosophy has been to provide structural and glycoinformatic information underpinning worldwide collaborative research in glycobiology. As such, she has advanced glycobiology research in numerous research laboratories around the world.

As well as being a pioneering glycobiology research scientist Anne is a tireless teacher, mentor, and advocate for glycobiology. She has supervised over forty PhDs students, of whom the vast majority have remained in scientific fields in academia, industry and medicine. In 2004 she established, and continues to head, the Glycobiology Training Research and Infrastructure Centre (GlycoTRIC) at Imperial College. Since then over 70 trainees from all over the world have attended hands-on glycomics courses and glycobiology workshops.

In 2011 Anne was President of the Society for Glycobiology and organized the highly successful annual SFG meeting in Seattle. In addition, throughout her career, Anne has diligently served and championed the field of glycobiology through numerous activities such as membership on the Steering Committee of the NIH Consortium for Functional Glycomics, UK Representative on the International Glycoconjugate Organisation (IGO) Board, Member of the External Advisory Committee for the NIH Program of Excellence in Glycosciences (CardioPEG) Johns Hopkins Department of Biological Chemistry, Chair of the 2001 Glycobiology Gordon Conference and alongside Jerry Hart, has been instrumental in establishing the Society's journal, *Glycobiology*, and acting as an Executive editor for the journal for 15 years.

For her outstanding research achievements and dedication to the field of Glycobiology, Anne has previously been recognized with the Whistler Medal of the International Carbohydrate Organisation, the IGO Award of the International Glycoconjugates Society and, in the Queen's birthday honours list of 2009, she was made Commander of the Order of the British Empire (CBE). Anne now adds the Karl Meyer Lectureship Award from the Society for Glycobiology to her list of well-deserved honors.

2016 Rosalind Kornfeld Award for Lifetime Achievement in Glycobiology Winner

Dr. Hudson Freeze (*Professor, Sanford Children's Health Research Center and Director of the Human Genetics Program at Sanford Burnham Prebys Medical Discovery Institute, La Jolla, CA*) began his formal scientific career as a graduate student with William Loomis at UCSD, where he applied genetics and analytical chemistry to study the polysaccharide-rich surface sheath of the social amoeba *Dictyostelium discoideum*. His interest in carbohydrates was further fostered as a postdoc with Arnie Miller at UCSD by his investigation of the glycosylation of lysosomal hydrolases in *Dictyostelium*. With his newfound curiosity



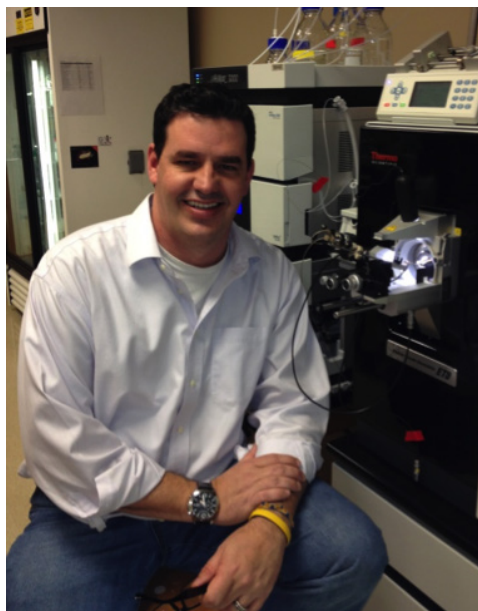
in sugars prevailing over prospects of a professional acting career, Hud migrated to the laboratory of Stuart Kornfeld at Washington University to explore the mammalian side of the budding field of *N*-glycosylation of lysosomal hydrolases. Resisting the temptation to pursue a career in medicine, Hud continued his work in *Dictyostelium* as an independent investigator. Ultimately his early insights into mammalian glycobiochemistry led him to investigate the congenital disorders of glycosylation, a focus that has defined his major scientific contribution. Today, Hud's lab at the SBP Medical Discovery Institute is the only one in the US that is fully dedicated to the study of CDGs. Over his career in the CDG field, his

laboratory has been responsible for the identification of 18 new CDGs. Before the advent of whole exome sequencing, many of these defects were solved in Hud's lab "the old fashioned way" – with thoughtful and exhaustive biochemistry on patient-derived cells. A major impact of this work has been a new appreciation and understanding of the factors influencing glycosylation such as Golgi trafficking proteins (COGs), ER-associated complexes (TRAP subunits), lipid and dolichol metabolism enzymes (SRD5A3), and glycosidases (NGY1). His lab also made contributions to the treatment of CDGs via sugar supplementation, the generation and analysis of CDG animal models, the study of mechanisms that drive carbohydrate-dependent protein-losing enteropathy and the function of carboxylated *N*-glycans. Hud has authored or co-authored over 200 journal articles, 40 book chapters, 30 reviews and 20 methods papers related to the identification and characterization of CDGs, the pathogenesis and treatment of these diseases, the role of metabolic flux in glycosylation and the identification of biomarkers for glycosylation disorders. Several of these papers appear in top journals such as *Nature Medicine*, *Journal of Clinical Investigation* and *Cell*. He also was a key contributor to the textbook, *Essentials of Glycobiochemistry*.

Hud has been PI or co-PI on several grants from NIH and other public and private agencies. He has also received a number of awards over the years in recognition of his outstanding science. In 2013, he received the Golden Goose Award, along with his mentor at the time, Thomas Brock, for their discovery of the thermophile, *Thermus aquaticus* (Taq), when Hud was just an undergraduate researcher. In the glycobiochemistry community, Hud has been an exceptional contributor and role model. He has organized or co-organized more than 10 meetings in the last 25 years, including the Glycobiochemistry Gordon Research Conference and a highly successful joint meeting between the Society for Glycobiochemistry and American Society for Matrix Biology in 2012. More recently, he has chaired and organized the SBP Rare Disease Day Symposium, an outstanding platform for investigators working on rare diseases including CDGs. Hud has served on numerous grant review panels, editorial boards and scientific advisory boards. This year, he represents the Society for Glycobiochemistry as president of FASEB, a major advocacy group for life sciences research in the USA. His lobbying efforts have helped secure increases in the NIH budget, whose benefits extend far beyond glycoscience to all areas of biomedical research.

Aside from his advocacy for our field, Hud has been a hero for the CDG community, taking a personal approach with both the patients and their families. These efforts have brought him full circle back to his love of medicine by providing molecular diagnoses for the affected kids and support for them beyond the laboratory with his advocacy for rare disease research. His achievements - along with his efforts for the CDG families, and his tireless service to the Society and scientific community - make him an ideal choice for the Rosalind Kornfeld award.

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



Dr. Lance Wells is currently the Georgia Research Alliance Lars G. Ljungdahl Distinguished Investigator, Director of Graduate Studies and Professor of Biochemistry and Molecular Biology at the Complex Carbohydrate Research Center at the University of Georgia, and has made seminal contributions in the glycosciences. Dr. Wells has not only been involved in the development of mass-spectrometry tools such as IDAWG, isotopic detection of aminosugars with glutamine, to make glycomics technologies more accessible to non-glycobiologists, but he has been instrumental in understanding the importance of alpha-dystroglycan glycosylation in the development of muscular dystrophies. Lance has also been actively involved in investigating the roles of post-translational O-GlcNAc protein modification and has linked this nutrient sensing pathway to regulation of hyperglycemia and more recently has shown that mutations in O-GlcNAc transferase are causal for X-linked intellectual disability in humans. His contributions and knowledge of the field are highly regarded not only by his peers, but also by MCP who has renewed Lance for another 5-year term on the Editorial Board of the journal.

2016 Glycobiology Significant Achievement Award Winner



When **Dr. Tadashi Suzuki**, (*RIKEN Global Research Cluster*) was an undergraduate student in the laboratory of Professor Yasuo Inoue, he discovered a peptide:N-glycanase (commonly known to all of us as PNGase) that is responsible for removing intact N-glycans from glycoproteins during protein recycling. The relevance of this discovery was not fully appreciated until recently when a new Congenital Disorder of Glycosylation was discovered in the human ortholog, NGLY1. Children born with this rare genetic disorder lack N-glycanase resulting in an accumulation of misfolded glycoproteins within their cells that leads to the malfunction of several organ systems. Tadashi's pioneering work has led to the identification of an enzyme that could be targeted with inhibitors to potentially treat patients with NGLY1 deficiencies. Thus, Dr. Suzuki's studies have already impacted the glycoscience community through the

identification of reagents capable of removing N-glycans from glycoproteins and elucidation of the process for N-glycoprotein recycling and degradation, but will also impact the families and children living with NGLY1 deficiencies.

2016 Travel Award Winners

- Megan Aarnio | *University of Georgia - CCRC*
 Markus Abeln | *Medical School Hannover*
 Ieva Bagdonaite | *University of Copenhagen*
 Steven Berardinelli | *University of Georgia*
 Gaurang Bhide | *University of Illinois at Chicago*
 Andrew Boland | *University of Georgia*
 Lauren Byrd-Leotis | *Emory University*
 Ishita Chandel | *Texas A&M University*
 Hayley Dingerdissen | *George Washington University*
 Justin Duma | *University of Georgia*
 Charles Fermaintt | *University of Texas Southwestern*
 Antonio Galeone | *Baylor College of Medicine*
 Jenna Geddes Sweeney | *Brigham & Women's / Harvard*
 Nicholas Giovannone | *Brigham & Women's / Harvard University*
 Jennifer Groves | *Johns Hopkins School of Medicine*
 Wanyi Guan | *Georgia State University*
 Audra Hargett | *University of Alabama Birmingham*
 Vishwanath-Reddy Hothpet | *University of Nebraska Medical Center*
 Peter Hsueh | *Van Andel Institute*
 Nourine Kamili | *Emory University*
 Joshua Klein | *Boston University*
 Barbora Knoppova | *University of Alabama Birmingham*
 Matthew Kudelka | *Beth Israel Deaconess / Harvard*
 Dimitrios Latousakis | *Institute of Food Research*
 Rachel LoPilato | *University of Georgia*
 Ana Magalhaes | *i3S-Inst for Res & Innovation in Health*
 Marissa Martinez | *Johns Hopkins School of Medicine*
 Yasuyuki Matsumoto | *Beth Israel Deaconess / Harvard*
 Stefan Mereiter | *University of Porto*
 Dustin Middleton | *University of Georgia*
 Waqas Nasir | *University of Gothenburg*
 Sarah Needs | *The Open University*
 Roisin O'Flaherty | *NIBRT*
 Isadora Oliveira | *Univ Federal do Rio de Janeiro*
 Earnest James Paul Daniel | *Case Western Reserve University*
 Nina Persson | *University of Copenhagen*
 Ryan Porell | *Johns Hopkins School of Medicine*
 Sara Porfirio | *University of Georgia*
 Emma Reungoat | *Cancer Research Center of Lyon*
 Katelyn Rosenbalm | *University of Georgia - CCRC*
 Mohammed Sardar | *Beth Israel Deaconess / Harvard*
 Hilary Scott | *Texas A&M University*
 Anirudh Sethi | *UT Southwestern Medical Center*
 Manveen Sethi | *Boston University School of Medicine*
 Aleksandra Shcherbakova | *Hannover Medical School*
 M. Osman Sheikh | *University of Georgia*
 Shoib Siddiqui | *University of California San Diego*
 Danish Singh | *University of Georgia*
 Abigael Songok | *Louisiana State University*
 Tyler Stewart | *University of Alabama Birmingham*
 Cody Thomas | *University of Georgia*
 Michael Vaill | *University of California San Diego*
 Jonathan Viola | *University of Georgia*
 Xiaocong Wang | *University of Georgia*
 Paeton Wantuch | *University of Georgia*
 Zhigang Wu | *Georgia State University*
 Li Zhen | *Imperial College London*

2016 Poster Award Winners

- Hilary Scot | *Texas A&M University*
 Ute Schuster | *Medical School Hannover*
 Lise Hafkenscheid | *Leiden University Medical Center*
 Yaron Vinik | *Weizmann Institute of Science*
 Felipe De Oliveira | *Uppsala University*
 Carolin Hoppe | *Hannover Medical School*
 Iain Wils | *Universitaet fuer Bodenkultur Wien*
 Justina Briliute | *Newcastle University*

Access all of the conference abstracts for free on the Glycobiology website:

<http://glycob.oxfordjournals.org/content/early/2016/10/31/glycob.cww110.full.pdf+html>

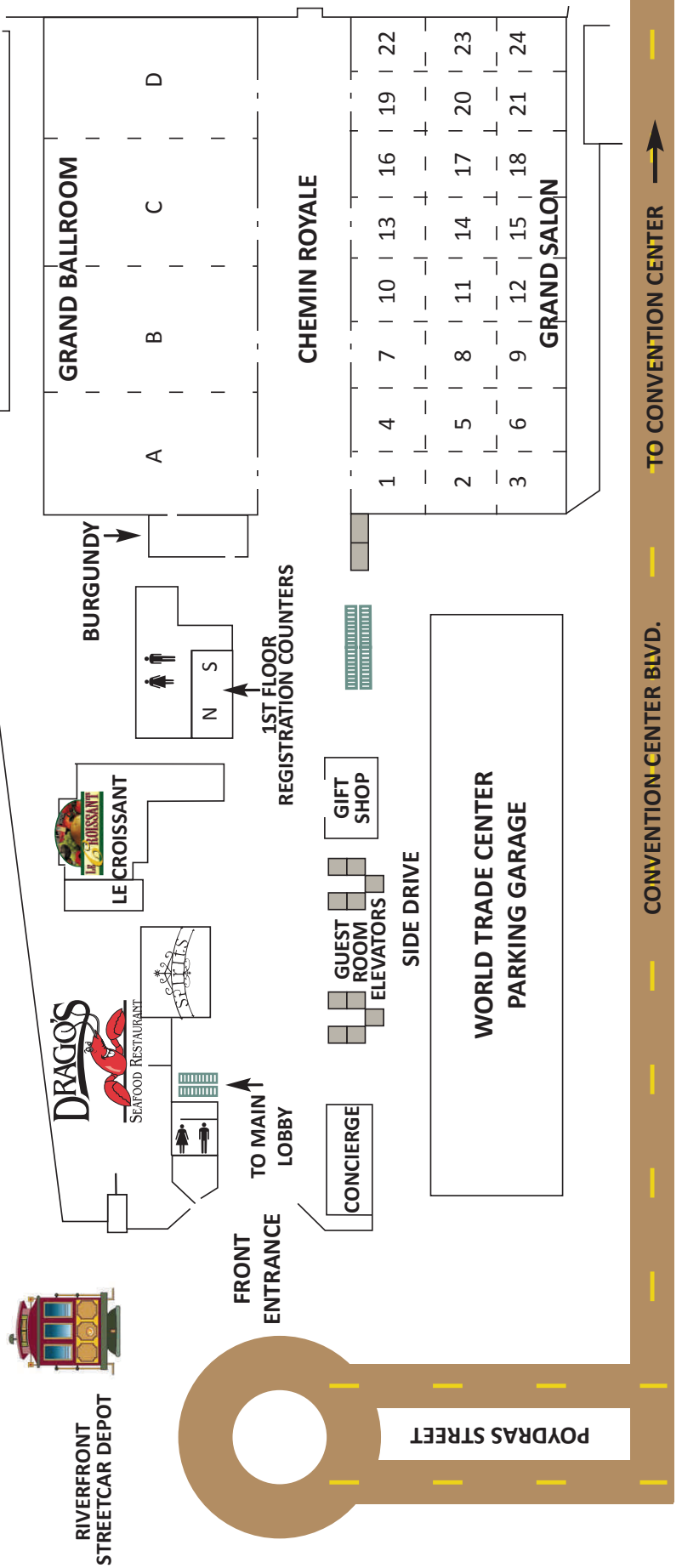
or

<http://tinyurl.com/gunelg3>

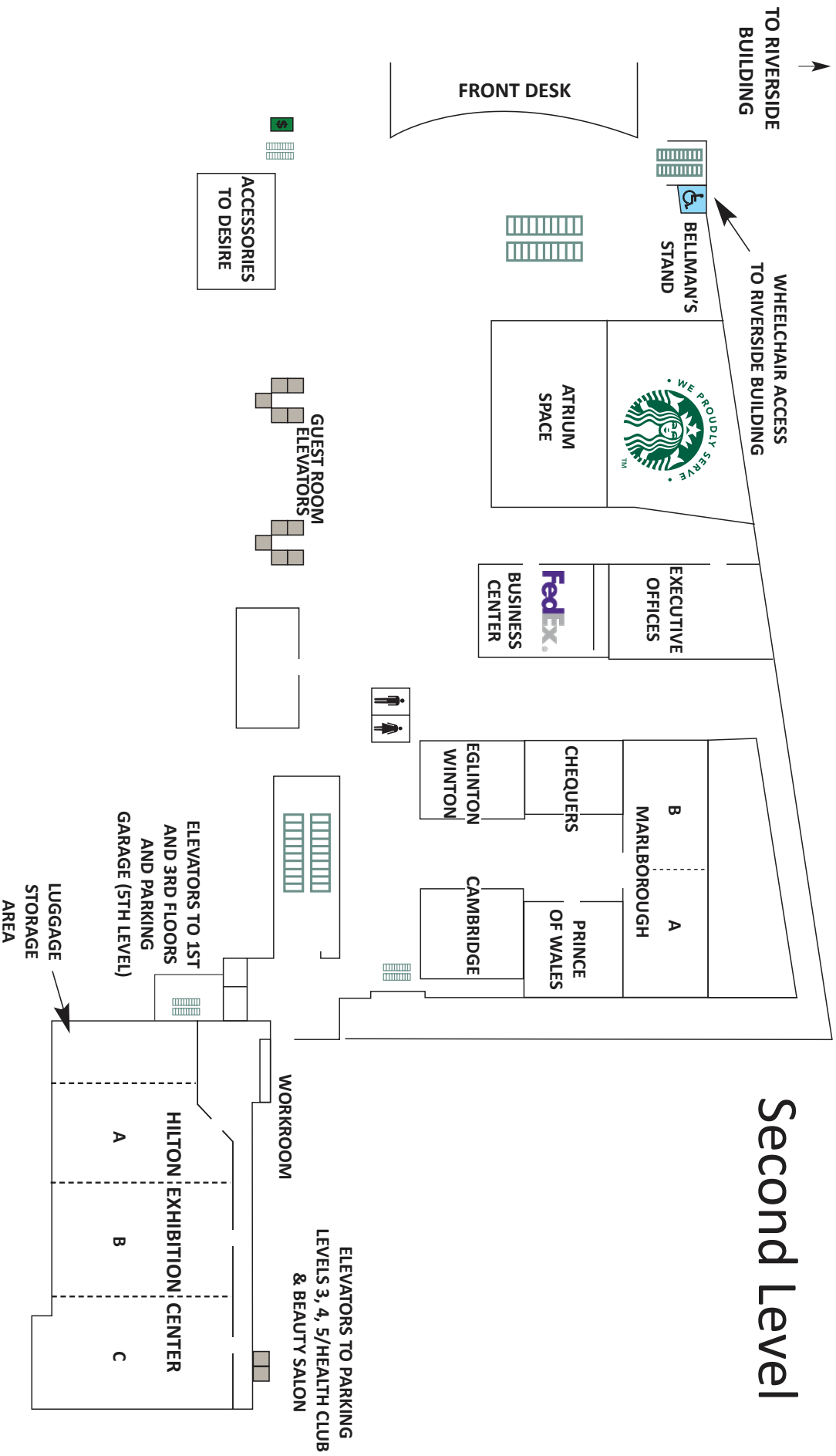


Hotel Map

First Level

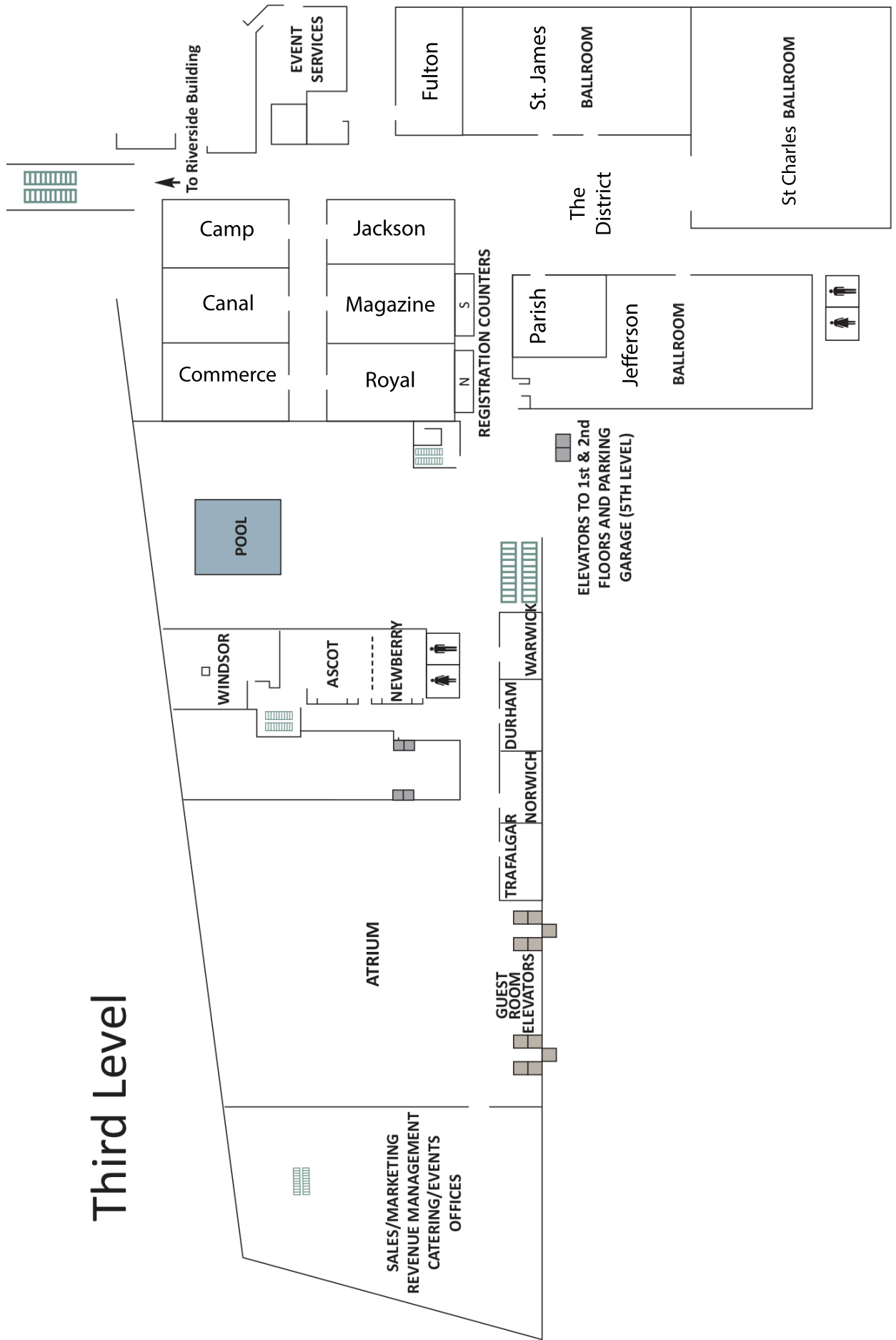


Hotel Map



Hotel Map

Third Level



St. Charles Ballroom



Table 1:
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Day 1 | Saturday, November 19, 2016

7:00AM - 6:00PM

Registration

The District Registration Counters

8:00AM - 12:00PM

Satellite 1 | Glycoprotein Technologies

Organizers: Sam Tep, Amgen; Eoin Cosgrave, Seattle Genetics

Magazine Room

8:00AM - 12:00PM

Satellite 2 | Glyco-Bioinformatics

Organizer: René Razingar, Complex Carbohydrate Research Center, University of Georgia

Canal Room

10:00AM - 12:00PM

Board of Directors Meeting (*invitees only*)

Commerce Room

1:00PM - 1:15PM

Conference Opening Remarks

Christine Szymanski and Richard Cummings

Hilton Exhibition Center (HEC) A

1:15PM - 4:15PM

Session 1: CFG Theme | Using model systems to understand biological roles of glycans

Chairs: Hans Wandall, Richard Steet, Vlad Panin

Hilton Exhibition Center (HEC) A

Control of vesicle trafficking by intracellular glycosylation: From chemical biology to vertebrate development; Invited Speaker - *Michael Boyce, Duke University School of Medicine*

Self-glycans in autoimmune disease; Invited Speaker - *Nan Yan, UT Southwestern Medical Center*

Uniquely human genetic changes in sialic acid biology: implications for human evolution and disease; Invited Speaker - *Ajit Varki, University of California, San Diego*

Ultra-deep genome mutagenesis in haploid human cells; Invited Speaker - *Lucas Jae, Netherlands Cancer Institute, Amsterdam*

The glycomic consequences of altered protein homeostasis in *Drosophila* neural tissue; Invited Speaker - *Michael Tiemeyer, Complex Carbohydrate Research Center, University of Georgia*

Poster Blitz

Efficient myelination, myelin repair and motor recovery after demyelination require Ncam1 and St8sia2; *Herbert Hildebrandt, Hannover Medical School (Poster B1)*

Role of O-linked glucose modification of DNA in regulating transcription termination and gene expression in kinetoplastids; *Robert Sabatini, University of Georgia (Poster B3)*

C-mannosylation and its role in protein stability; *Aleksandra Shcherbakova, Hannover Medical School (Poster B2)*

Involvement of glycosylation and proteasomal protein degradation in O₂-dependent development in *Dictyostelium*; *Andrew Boland, University of Georgia (Poster B20)*

Mucin extended core glycopeptides to decipher lectin and antibody binding recognition events; *Ulrika Westerlind, Leibniz Institute for Analytical Sciences – ISAS (Poster B23)*

Global mapping of O-glycosylation of human herpesviruses; *Ieva Bagdonaite, University of Copenhagen (Poster B53)*

Deciphering the role of N-glycosylation in *Campylobacter jejuni* and exploitation in its host; *Harald Nothaft, University of Alberta (Poster B45)*

The Gut-brain axis: a glycoproteomic view; *Mariana Barboza, University of California Davis (Poster B19)*

6:00PM - 7:30PM

Session 2 | Opening session (Innovator and Meyer awards)

Chair: Ajit Varki

Hilton Exhibition Center (HEC) A

6:05PM

President's Innovator Award Winner Presentation

Jeffrey Gordon, Washington University in St. Louis

6:50PM

Karl Meyer Lectureship Award Winner Presentation

Anne Dell, Imperial College London

7:30PM - 9:30PM

Welcome Reception & Exhibits

St. Charles Ballroom

Day 2 | Sunday, November 20, 2016

7:30AM - 4:00PM

Registration

The District Registration Counters

7:30AM - 8:30AM

Continental Breakfast

St. Charles Ballroom

8:30AM - 10:00AM

Session 3 | Glycan foraging by vertebrates and microbes

Chair: Nicole Koropatkin

St. James Ballroom

8:30

Understanding complex glycan utilization in the human microbiota; Invited Speaker - *Harry Gilbert, Newcastle University*

8:50 The role of intramolecular trans-sialidases in intestinal mucin-degrading bacteria; Invited Speaker - *Nathalie Juge, Institute Food Research*

9:10

Structural basis for glycan acquisition by dominant members of the human gut microbiota; Invited Speaker - *David Bolam, Newcastle University*

9:30

A molecular view of glycan utilization by the human gut microbiota; Invited Speaker - *Nicole Koropatkin, University of Michigan*

9:50

L-fucose metabolism in *Campylobacter jejuni*; Abstract Talk - *Jolene Garber, University of Georgia & University of Alberta (Poster B24)*

9:55

Fungal cell wall glucan metabolism by *Bacteroides* in the human gut; Abstract Talk - *Elisabeth Lowe, Newcastle University (Poster B25)*

10:00AM - 10:30AM

Coffee Break

St. Charles Ballroom

10:30AM - 12:00PM

Session 4 | Host-pathogen interactions

Chair: Thierry Hennet

St. James Ballroom

10:30

Regulation of intestinal dysbiosis by bacterial sialidases; Invited Speaker - *Thierry Hennet, University of Zurich*

10:50

The glycosylation strategies of giant viruses: old tools for new functions; Invited Speaker - *Michela Tonetti, University of Genova*

11:10

Outer membrane vesicles of friends and foes; Invited Speaker - *Mario Feldman, Washington University School of Medicine, St Louis*

11:30

Invited Speaker - Jorge Galan, Yale University School of Medicine

11:50

Mucin-type O-glycans are essential for homeostasis between host and microbiota in the colon; Abstract Talk - *Kirk Bergstrom, Oklahoma Medical Research Foundation (Poster B34)*

11:55

The deleterious effect of AB5 toxins on *Campylobacter jejuni* strains that mimic GM1 ganglioside: a means of bacterial warfare; Abstract Talk - *Robert Patry, University of Georgia & University of Alberta (Poster B35)*

12:00PM - 1:30PM

Lunch on your own

12:00PM - 1:30PM

Glycobiology Editorial Board Meeting (Invitees only)

Jefferson Ballroom

1:30PM - 3:30PM

Poster Session I and Exhibits

St. Charles Ballroom

Coffee break provided

1:30PM - 3:30PM**Glyco-Bioinformatics Hands-on Session***Jackson Room***3:30PM - 5:00PM****Session 5 | Prokaryote versus eukaryote glycobiology: similarities and differences***Chair: Markus Aebi**St. James Ballroom***3:30**N-linked protein glycosylation in pro- and eukaryotes; Invited Speaker - *Markus Aebi, ETH Zurich***3:50**Structural and mechanistic studies of oligosaccharyltransferase and LLO flippase; Invited Speaker - *Kaspar Locher, ETH Zurich***4:10**Lectins as microbial detectors; Invited Speaker - *Laura Kiessling, University of Wisconsin - Madison***4:30**Catalysis and allostery of UDP-sugar pyrophosphorylases: A new approach to anti-microbial treatments; Invited Speaker - *Rita Gerardy-Schahn, Hannover Medical School***4:50**The oligosaccharyltransferase subunit DC2 mediates the association between the STT3A and Sec61 complexes; Abstract Talk - *Shiteshu Shrimal, University of Massachusetts Medical School (Poster B67)***4:55**An alternative N-linked protein glycosylation biosynthesis pathway in *Campylobacter fetus* utilizing a unique lipid intermediate; Abstract Talk - *Justin Duma, University of Georgia (Poster B68)***Day 3 | Monday, November 21, 2016****7:30AM - 3:00PM****Registration***The District Registration Counters***7:30AM - 8:30AM****Continental Breakfast***St. Charles Ballroom***8:30AM - 10:00AM****Session 6 | Glycans in development and genetic disorders***Chair: Karen Colley**St. James Ballroom***8:30**Using the chemical glycobiology toolkit to identify sensitive glycoproteins in the context of CDGs; Invited Speaker - *Richard Steet, Complex Carbohydrate Research Center, University of Georgia***8:50**O-Glycosylation in developmentally regulated exocytosis; Invited Speaker - *Kelly Ten Hagen, NIDCR/NIH***9:10**

Consequences of genetic deficiency of heparan sulfate – What we have learned from multiple hereditary

exostoses; Invited Speaker - *Yu Yamaguchi, Sanford Burnham Prebys Medical Discovery Institute*

9:30

ABO(H) glycans in infant heart transplantation: new insights in immunobiology and clinical applications in transplant medicine; Invited Speaker - *Lori West, University of Alberta/CNTRP*

9:50

Protein O-mannosylation is required for normal sensory feedback and coordinated muscle contractions in *Drosophila*; Abstract Talk - *Ishita Chandel, Texas A&M University (Poster B77)*

9:55

Nutrient-driven O-GlcNAc cycling impacts neurodevelopmental timing and metabolism; Abstract Talk - *Stephanie Olivier-Van Stichelen, National Institute of Health, NIDDK (Poster B78)*

10:00 AM - 10:30AM

Coffee Break

St. Charles Ballroom

10:30AM - 12:00PM

Session 7 | Relevance of carbohydrates in disease, diagnosis, prevention and treatment

Chair: Joseph Lau

St. James Ballroom

10:30

Extrinsic glycan modeling by extracellular sialyltransferase ST6Gal-1. Potential biological roles; *Invited Speaker - Joseph Lau*

10:50

Glycomic regulation through I-branching is a critical feature of melanoma progression; Invited Speaker - *Charles Dimitroff, Brigham and Women's Hospital, Harvard Medical School*

11:10

The role of glycoproteome alterations in gastric cancer and its clinical applications; Invited Speaker - *Celso Reis, Institute of Molecular Pathology and Immunology, University of Porto*

11:30

O-GlcNAc modification of Mef2c regulates C2C12 myoblast differentiation; Invited Speaker - *Jin Won Cho, Yonsei University*

11:50

ST6Gal-1 sialyltransferase promotes an anti-apoptotic, cancer stem cell phenotype; Abstract Talk - *Susan Bellis, University of Alabama at Birmingham (Poster B100)*

11:55

Cell surface glycoprotein aging and turnover modulates a constitutive anti-inflammatory mechanism of host protection that is progressively disabled by foodborne pathogen; Abstract Talk - *Won-Ho Yang, SBP Medical Discovery Institute & University of California Santa Barbara (Poster B101)*

12:00PM - 1:30PM

Lunch on your own

1:30PM - 3:30PM

Poster Session II and Exhibits

St. Charles Ballroom

Coffee break provided

3:30PM - 4:15PM**SFG Business Meeting** (*all attendees encouraged to attend*)

St. James Ballroom

4:15PM - 6:00PM**Awards Ceremony**

Chair: Karen Colley

St. James Ballroom

4:15

Rosalind Kornfeld Award For Lifetime Achievement in Glycobiology - *Hudson Freeze, Sanford Children's Health Research Center & Sanford Burnham Prebys Medical Discovery Institute*

4:40

Molecular and Cellular Proteomics (MCP) Award - *Lance Wells, Complex Carbohydrate Research Center, University of Georgia*

5:05

Glycobiology Significant Achievement Award – *Tadashi Suzuki, RIKEN, Japan*

5:30**Poster Award Blitz**

Cell non-autonomous regulation of neural sialylation; *Hilary Scott, Texas A&M University (Poster B21)*

Polysialic acid synthesis by ST8SIA2 is essential for cortical interneuron development; *Ute Schuster, Medical School Hannover (Poster B80)*

Extensive glycosylation of anti-citrullinated protein antibody variable domains in rheumatoid arthritis; *Lise Hafkenscheid, Leiden University Medical Center (Poster B231)*

Galectin-8 as a regulator of bone remodeling and osteoporosis; *Yaron Vinik, Weizmann Institute of Science (Poster 102)*

Detection of post-translational modification of cancer biomarkers via proximity ligation assay; *Felipe De Oliveira, Uppsala University (Poster B166)*

C-mannosylation of thrombospondin type 1 repeats in Apicomplexan parasites; *Carolin Hoppe, Hannover Medical School (Poster B54)*

Structure and biosynthesis of complex N-glycan cores and antennae in nematodes; *Iain Wilson, Universitaet fuer Bodenkultur Wien (Poster B75)*

Insight into N-glycan breakdown by the gut microbiota; *Justina Briliute, Newcastle University (Poster B32)*

6:00PM - 7:00PM**Break****7:00PM - 10:00PM****Banquet**

Audubon Aquarium of the Americas - 1 Canal St, New Orleans, LA 70130 (5 minute walk from hotel)

Nominal fee. Extra tickets for guests may be ordered.

Day 4 | Tuesday, November 22, 2016**8:00AM - 10:00AM****Registration**

The District Registration Counters

7:30AM - 8:30AM

Continental Breakfast

St. Charles Ballroom

8:30AM - 10:00AM

Session 8 | New tools and their applications

Chair: Michael Pierce

St. James Ballroom

8:30

Understanding and exploiting anti-glycan immunity to improve cancer care; Invited Speaker - *Jeff Gildersleeve, National Cancer Institute*

8:50

Decoding the glycome with systems-based approaches; Invited Speaker - *Lara Mahal, New York University*

9:10

Molecular dissection of glycan function by simple cells and simplified tissues; Invited Speaker - *Hans Wandall, University of Copenhagen*

9:30

Sweet and stealthy drug delivery; Heparosan-based systems for enhancing therapeutics; Abstract Talk - *Paul DeAngelis, University of Oklahoma Health Sciences Center & Caisson Biotech, LLC (Poster B158)*

9:35

Knocking-out fdl gene in a baculovirus host insect cell line using new CRISPR-Cas9 tools for lepidopteran insect cell lines; Abstract Talk - *Hideaki Mabashi-Asazuma, University of Wyoming (Poster B159)*

9:40

Comprehensive glycoproteomics of glioblastoma biospecimens; Abstract Talk - *Joseph Zaia, Boston University (Poster B160)*

9:45

Highly sensitive detection of fucosylated glycans with a novel click chemistry probe; Abstract Talk - *Naoyuki Taniguchi, RIKEN (Poster B161)*

9:50

Homogenous detection of glycosyltransferase activities with universal bioluminescent assays; Abstract Talk - *Hicham Zegzouti, Promega Corporation (Poster B162)*

9:55

Cellular O-glycome reporter/amplification to explore O-glycans of living cells; Abstract Talk - *Matthew Kudelka, Harvard Medical School & Emory University School of Medicine (Poster B163)*

10:00AM - 10:30AM

Coffee Break

St. Charles Ballroom

10:30AM - 12:00PM

Session 9 | Glycans and glycan binding proteins in immunity

Chair: Brian Cobb

St. James Ballroom

10:30AM

B cell-Independent Antibody Sialylation; Invited Speaker - *Brian Cobb, Case Western Reserve University School of Medicine*

10:50AM

New Insights in to polysaccharide capsule structure and antibody-function from *Cryptococcus neoformans*; Invited Speaker - *Arturo Casadevall, Johns Hopkins Bloomberg School of Public Health*

11:10AM

Carbohydrate-specific adaptive immune responses ; Invited Speaker - *Fikri Avci, Complex Carbohydrate Research Center, University of Georgia*

11:30AM

The story of 50,000 glycomes; Invited Speaker - *Gordan Lauc, University of Zagreb*

11:50AM

Human milk oligosaccharides early in life modulate and program intestinal microbiota and immunity in an autoimmune mice model; Abstract Talk - *Bernd Stahl, Nutricia Research (Poster B225)*

11:55AM

Dissecting the unique features of neutrophil glycobiochemistry in inflammation and infection using glycoanalytics; Abstract Talk - *Morten Thaysen-Andersen, Macquarie University (Poster B226)*

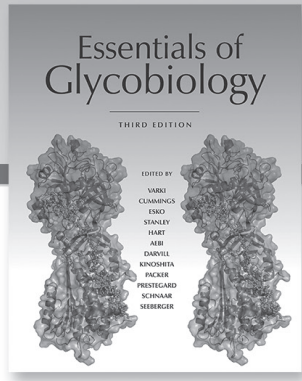
12:00PM - 12:10PM

Closing Remarks



Essentials of Glycobiology

Third Edition



Edited by **Ajit Varki**, *University of California, San Diego, California, USA*; **Richard D. Cummings**, *Harvard University School of Medicine, Boston, Massachusetts, USA*; **Jeffrey D. Esko**, *University of California, San Diego, California, USA*; **Pamela Stanley**, *Albert Einstein College of Medicine, New York, New York, USA*; **Gerald W. Hart**, *Johns Hopkins University, Baltimore, Maryland, USA*; **Markus Aebi**, *EETH Zurich, Zurich, Switzerland*; **Alan G. Darvill**, *University of Georgia, Athens, Georgia, USA*; **Taroh Kinoshita**, *Osaka University, Osaka, Japan*; **Nicolle H. Packer**, *Macquarie University, Sydney, Australia*; **James H. Prestegard**, *University of Georgia, Athens, Georgia, USA*; **Ronald L. Schnaar**, *Johns Hopkins University, Baltimore, Maryland, USA*; **Peter H. Seeberger**, *Max-Planck-Institute of Colloids and Interfaces, Potsdam, Germany*

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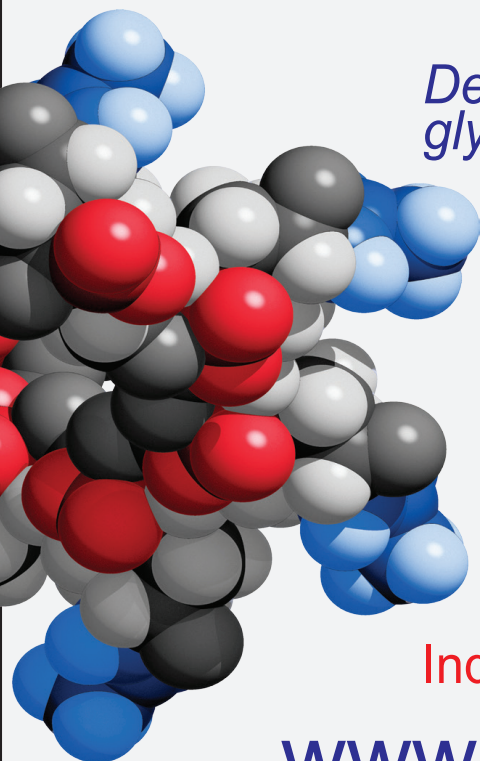
—James E. Rothman, Nobel Laureate in Medicine, 2013

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Poster Listing

Poster Session 1:

Sunday, November 20, 2016 @ 1:30 – 3:30PM

Poster Session 2:

Monday, November 21, 2016 @ 1:30 – 3:30PM

All posters will be on display for the duration of the conference.

Set-up: Begin mounting posters starting Saturday, November 19, 2016 from 5PM until any time before the first poster session.

Break-down: Tuesday, November 22, 2016 starting 10:30AM.

Session 1 | Using model systems to understand the biological roles of glycans

Poster #: B1 || Abstract #: 33

"Efficient myelination, myelin repair and motor recovery after demyelination require Ncam1 and St8sia2"; Herbert Hildebrandt¹, Sebastian Werneburg¹, Iris Röckle¹, Burkhardt Hannelore¹, Iris Albers¹, Viktoria Gudi², Thomas Skripuletz², Martin Stangel²

¹Institute for Cellular Chemistry, Hannover Medical School, Hannover, Germany; ²Clinical Neuroimmunology and Neurochemistry, Department of Neurology, Hannover Medical School, Hannover, Germany

Poster #: B2 || Abstract #: 34

"C-mannosylation and its role in protein stability"; Aleksandra Shcherbakova, Manuel Taft, Matthias Preller, Birgit Tiemann, Julia Weder, Falk Buettner, Hans Bakker
Hannover Medical School

Poster #: B3 || Abstract #: 35

"Role of O-linked glucose modification of DNA in regulating transcription termination and gene expression in kinetoplastids"; Robert Sabatini, Whitney Bullard, Rudo Kieft
University of Georgia

Poster #: B4 || Abstract #: 36

"Arabidopsis as a model system to study N-glycan-based protein quality control"; Jianming Li^{1,2}

¹Shanghai Center for Plant Stress Biology, Shanghai Institutes of Biological Sciences, Chinese Academy of Sciences, Shanghai, China 201602; ²Department of Molecular, Cellular, and Developmental Biology, University of Michigan, Ann Arbor, MI 48103

Poster #: B5 || Abstract #: 37

"N-glycosylation modulates the tethered-extended equilibrium of the extracellular domain of EGFR"; Maryam Azimzadeh Irani^{1,2}, Chandra Verma^{1,2}

¹Bioinformatics Institute (A*-STAR), 30 Biopolis Street, #07-01 Matrix, 138671, Singapore; ²School of Biological Sciences, Nanyang Technological University, 60 Nanyang Drive, 637551, Singapore

Poster #: B6 || Abstract #: 38

"Maturation of Asn-linked glycans in the mammalian secretory pathway: structural basis of substrate recognition by GH47 alpha mannosidases"; Yong Xiang, Khanita Karaveg, Kelley W. Moremen
Complex Carbohydrate Research Center, University of Georgia

Poster #: B7 || Abstract #: 39

"Glycoproteomic analysis of human glycoproteins in STT3A(-/-) and STT3B(-/-) knockout cell lines"; Natalia A. Cherepanova, Reid Gilmore

Poster #: B8 || Abstract #: 40

"Presence of multiple isomers of polygalactosylated-Fucose (polyGaln=1-6-Fuc) containing high-mannose and paucimannose type N-glycans in planaria *S.mediterranea*"; [Sabarinath PS](#)¹, Ponnusamy Babu², Ramaswamy Subramanian¹, Dasaradhi Palakodeti¹

¹Institute for Stem Cell Biology and Regenerative Medicine, Bangalore, India; ²Glycomics and Glycoproteomics, Centre for Cellular and Molecular Platform, Bangalore, India

Poster #: B9 || Abstract #: 41

"N-GLYCOME PROFILE IN MEDAKA FISH EXPOSE TO LOW DOSES OF IONIZATION RADIATION"; [Yeni N. Perez-Gelvez](#)¹, Simone Kurz¹, Michael Tiemeyer¹, Olin E. Rhodes², Carl W. Bergmann¹, Gerardo Gutierrez-Sanchez¹

¹Complex Carbohydrate Research Center, University of Georgia; ²Savannah River Ecology Laboratory, University of Georgia

Poster #: B10 || Abstract #: 42

"TREG1 regulates oligosaccharyltransferase to prevent the liberation of bioactive atypical free oligosaccharides and autoimmune diseases"; [Charles S. Fermaintt](#)¹, Mark A. Lehrman², Nan Yan¹

¹Department of Immunology, University of Texas Southwestern; ²Department of Pharmacology, University of Texas Southwestern

Poster #: B11 || Abstract #: 43

"Identification of novel transporters for UDP-arabinose in plants"; [Henrik V. Scheller](#)^{1,2}, Berit Ebert^{3,1}, Carsten Rautengarten^{3,1}, Devon S. Birdseye¹, Joshua L. Heazlewood^{3,1}

¹Joint Bioenergy Institute, Lawrence Berkeley National Laboratory, Berkeley, California; ²Department of Plant and Microbial Biology, University of California Berkeley; ³ARC Centre of Excellence in Plant Cell Walls, University of Melbourne, Australia

Poster #: B12 || Abstract #: 44

"Regulation of protein O-glycosylation in epithelial cells – the polypeptide GalNAc-transferases direct cellular differentiation and maintenance of tissue homeostasis"; [Emil MH Pallesen](#)¹, Ieva Bagdonaite¹, Sergey Y. Vakhrushev¹, Lars Hansen¹, Hiren J. Joshi¹, Sally Dabelsteen², Hans H. Wandall¹

¹Copenhagen Center for Glycomics, Department of Cellular and Molecular Medicine, University of Copenhagen; ²School of Dentistry, University of Copenhagen

Poster #: B13 || Abstract #: 45

"T Cells require extended O-glycosylation to populate peripheral lymphoid organs."; [Christopher E. Cutler](#)^{1,2}, Richard D. Cummings¹

¹Beth Israel Deaconess Medical Center; ²Emory University

Poster #: B14 || Abstract #: 46

"Systems Biology of Caenorhabditis elegans Glycosyltransferases."; [Olatomiwa O. Bifarin](#)^{1,2}, Max Colonna^{1,2}, Francesca Ponce², Goncalo Gouveia², Fariba Tayyari², Arthur S. Edison^{1,2}

¹Department of Biochemistry and Molecular Biology, University of Georgia, Athens, GA 30602; ²Complex Carbohydrate Research Center, 315 Riverbend Road, Athens, GA 30602

Poster #: B15 || Abstract #: 47

"A Campylobacter jejuni bacteriophage depends on early pseudaminic acid biosynthesis enzymes for infection"; [Jessica C. Sacher](#)^{1,2}, M. Afzal Javed², Christine M. Szymanski^{1,2}

¹Complex Carbohydrate Research Center and Department of Microbiology, University of Georgia, Athens, Georgia; ²Department of Biological Sciences, University of Alberta, Edmonton, Canada

Poster #: B16 || Abstract #: 48

"Increased susceptibility to ionizing radiation in mice with ST6Gal-1 deficiency"; [Patrick R. Punch](#), Mehrab Nasiri-Kenari, Charles T.T. Manhardt, Himangi Marathe, Joseph T.Y. Lau

Department of Molecular and Cellular Biology, Roswell Park Cancer Institute, Buffalo, NY, USA

Poster #: B17 || Abstract #: 49

"Platelet derived sialic acids support extrinsic sialylation in vivo"; [Charles T. Manhardt](#), Patrick R. Punch, Christopher W. Dougher, Joseph T.Y. Lau

Poster #: B18 || Abstract #: 50

"Identification of glycosylation sites and mutations determining antigenic drift events for influenza A viruses using sparse group lasso regression"; [Lei Li](#), Lei Han, Xiu-feng Wan

Department of Basic Sciences, College of Veterinary Medicine, Mississippi State University

Poster #: B19 || Abstract #: 51

"The Gut-Brain Axis: a glycoproteomic view"; [Mariana Barboza](#)^{1,2}, Amy Gerety¹, Kuei-Pin Huang¹, Gege Xu², Melanie Gareau¹, Helen Raybould¹, Carlito B. Lebrilla^{2,3}

¹Department of Anatomy, Physiology & Cell Biology, School of Veterinary Medicine, University of California Davis; ²Department of Chemistry, University of California Davis; ³Department of Biochemistry, School of Medicine, University of California Davis

Poster #: B20 || Abstract #: 52

"Involvement of glycosylation and proteasomal protein degradation in O2-dependent development in Dictyostelium"; [Andrew W. Boland](#)¹, Braxton Nottingham², Mohammed O. Sheikh^{1,2}, Christopher M. West^{1,2}

¹Dept. of Biochemistry & Molecular Biology, University of Georgia, Athens, GA; ²Dept. of Biochemistry & Molecular Biology, University of Oklahoma Health Sciences Center, Oklahoma City, OK

Poster #: B21 || Abstract #: 53

"Cell Non-Autonomous Regulation of Neural Sialylation"; [Hilary Scott](#), Ilya Mertsalov, Courtney Caster, Rafique Islam, Vlad Panin

Department of Biochemistry and Biophysics, Texas A&M University, College Station, TX

Poster #: B22 || Abstract #: 54

"Chemistry based tools to explore tyrosine O-glycosylation"; [Manuel Schorlemer](#), Ulrika Westerlind

Department of Bioanalytics, Leibniz Institute for Analytical Sciences - ISAS

Poster #: B23 || Abstract #: 55

"Mucin extended core glycopeptides to decipher lectin and antibody binding recognition events"; [Christian Pett](#), Manuel Schorlemer, Ulrika Westerlind

Department of Bioanalytics, Leibniz Institute for Analytical Sciences - ISAS

Session 3 | Glycan foraging by vertebrates and microbes

Poster #: B24 || Abstract #: 56

"L-fucose metabolism in Campylobacter jejuni"; [Jolene Garber](#)^{1,2}, Eric Line³, Christine M. Szymanski^{1,2}

¹University of Georgia, Athens, GA, USA; ²University of Alberta, Edmonton, AB, Canada; ³United States Department of Agriculture National Poultry Research Center, Athens, GA, USA

Poster #: B25 || Abstract #: 57

"Fungal cell wall glucan metabolism by Bacteroides in the human gut"; [Elisabeth C. Lowe](#)¹, Fiona Cuskin¹, Max J. Temple¹, Arnaud Basle¹, Spencer J. Williams², Harry J. Gilbert¹

¹Institute for Cell and Molecular Biosciences, Newcastle University; ²Bio21 Molecular Science and Biotechnology Institute, University of Melbourne

Poster #: B26 || Abstract #: 58

"Unravelling the determinants of resistant starch utilization by human gut microorganisms"; [Darrell Cockburn](#), Krizia Perez Medina, Ryan Kibler, Carolyn Suh, Nicole Koropatkin

Department of Microbiology and Immunology, University of Michigan

Poster #: B27 || Abstract #: 59

"Testing to Get the Email"; [john ormes](#)¹, Kim Kline¹

¹univ of virginia; ²univ of maryland

Poster #: B28 || Abstract #: 60

"Pivotal alpha mannosidase generates specificity for N-glycans through requirement for GlcNac at +2 subsite.

"; [Fiona Cuskin](#), [Lucy I. Crouch](#), [Arnaud Basle](#), [David N. Bolam](#), [Harry J Gilbert](#)

Institute for Cell and Molecular Biosciences, Newcastle University

Poster #: B29 || Abstract #: 61

"Degradation of complex N-glycans by gut Bacteroides species"; [Lucy I. Crouch](#), [Fiona Cuskin](#), [Justina Briliute](#),

[Arnaud Basle](#), [David N. Bolam](#)

Newcastle University

Poster #: B30 || Abstract #: 62

"An integrative strategy to decipher glycan recognition in the human gut microbiome"; [Viviana G. Correia](#)¹, [Joana L.A. Brás](#)², [Yan Liu](#)³, [Lisete Silva](#)³, [Yibing Zhang](#)³, [Benedita A. Pinheiro](#)¹, [Maria João Romão](#)¹, [Ana Luísa Carvalho](#)¹, [Wengang Chai](#)³, [Carlos M.G.A. Fontes](#)^{2,4}, [Ten Feizi](#)³, [Angelina S. Palma](#)^{1,3}

¹UCIBIO@REQUIMTE, Department of Chemistry, Faculty of Science and Technology, NOVA University of Lisbon, Portugal;

²NZYTech, Lda - Genes & Enzymes, Lisbon, Portugal; ³Glycosciences Laboratory, Department of Medicine, Faculty of

Medicine, Imperial College London, United Kingdom; ⁴CIISA/FMV-UL, Faculty of Veterinary Medicine, University of Lisbon, Portugal

Poster #: B31 || Abstract #: 63

"Bacteroides thetaiotaomicron requires rhamnose release to grow with Gum Arabic"; [Jose L. Munoz](#), [Alan](#)

[Cartmell](#), [Harry J. Gilbert](#)

ICaMB-Institute of Cell and Molecular Biosciences, Newcastle University, Newcastle Upon Tyne, United Kingdom

Poster #: B32 || Abstract #: 64

"Insight into N-glycan breakdown by the gut microbiota"; [Justina Briliute](#), [Lucy I. Crouch](#), [David N. Bolam](#)

Institute for Cell and Molecular Biosciences, Newcastle University

Poster #: B33 || Abstract #: 65

"Analysis Human Microbiome Reveals a New Glycoside Hydrolase Family, Which Lacks the Canonical Catalytic Apparatus"; [Alan Cartmell](#), [Jose Munoz-Munoz](#), [Harry J. Gilbert](#)

Institute of Cellular and Molecular Biosciences, Newcastle University

Session 4 | Host-pathogen interactions

Poster #: B34 || Abstract #: 66

"Mucin-type O-glycans are essential for homeostasis between host and microbiota in the colon"; [Kirk B. Bergstrom](#), [Jianxin Fu](#), [Lijun Xia](#)

Cardiovascular Biology Research Program, Oklahoma Medical Research Foundation, Oklahoma City, USA

Poster #: B35 || Abstract #: 67

"The deleterious effect of AB5 toxins on Campylobacter jejuni strains that mimic GM1 ganglioside: a means of bacterial warfare."; [Robert T. Patry](#)^{1,2}, [Martin Stahl](#)³, [Jessica Sacher](#)², [Bruce A. Vallance](#)³, [Christine M. Szymanski](#)^{1,2}

¹Complex Carbohydrate Research Center and Department of Microbiology, University of Georgia, Athens, Georgia, USA;

²Department of Biological Sciences, University of Alberta, Edmonton, AB, Canada; ³Division of Gastroenterology, BC's Children's Hospital, The Child and Family Research Institute and the University of British Columbia, Vancouver, BC, Canada

Poster #: B36 || Abstract #: 68

"Discovery and Implication of a Unique Extracellular Polysaccharide in Members of the Pathogenic Bacillus that can Co-form with Spores"; [Zi Li](#)^{1,2}, [Soyoun Hwang](#)², [Maor Bar-peled](#)^{1,2}

¹University of Georgia; ²Complex Carbohydrate Research Center

Poster #: B37 || Abstract #: 69

"Identification of influenza A virus receptors found in natural tissue using shotgun glycomics approach";

[Lauren A. Byrd-Leotis](#)¹, [Rempeng Liu](#)², [Konrad C. Bradley](#)¹, [Yi Lasanajak](#)², [Sandra F. Cummings](#)³, [Xeuzheng Song](#)², [Jamie Heimburg-Molinaro](#)³, [Summer E. Galloway](#)¹, [Marie R. Culhane](#)⁴, [David F. Smith](#)², [David A. Steinhauer](#)¹, [Richard D. Cummings](#)³

¹Department of Microbiology and Immunology, Emory University School of Medicine; ²Department of Biochemistry, Emory University School of Medicine; ³Department of Surgery, Beth Israel Deaconess Medical Center, Harvard Medical School; ⁴Minnesota Veterinary Diagnostic Laboratory, University of Minnesota

Poster #: B38 || Abstract #: 70

"The glycan receptors of *Helicobacter pylori*: decoding the pathways underlying gastric glycophenotype modulation"; [Ana Magalhaes](#)^{1,2}, Ricardo Marcos-Pinto^{3,4}, Joana Gomes^{1,2}, Alison V. Nairn⁵, Yannick Rossez⁶, Catherine Robbe-Masselot⁶, Emmanuel Maes⁶, Jeanna Bugaytsova⁷, Céu Figueiredo^{1,2,8}, Thomas Borén⁷, Kelley W. Moremen⁵, Celso A. Reis^{1,2,3}

¹i3S-Institute for Research and Innovation in Health, University of Porto, Portugal; ²IPATIMUP- Institute of Molecular Pathology and Immunology of the University of Porto, Portugal; ³Institute of Biomedical Sciences Abel Salazar (ICBAS), University of Porto, Portugal; ⁴Centro Hospitalar do Porto (CHP), Gastroenterology Department, Portugal; ⁵Complex Carbohydrate Research Center and Department of Biochemistry and Molecular Biology, University of Georgia, Athens, GA, USA; ⁶Structural and Functional Glycobiology Unit, UMR CNRS 8576, University of Lille, France; ⁷Department of Medical Biochemistry and Biophysics, Umeå University, Sweden; ⁸Medical Faculty, University of Porto, Portugal

Poster #: B39 || Abstract #: 71

"ADP-ribosylation in the innate immune response"; [Aleksandra Nita-Lazar](#), Arthur G. Nuccio, Casey M. Daniels
Cellular Networks Proteomics Unit, Laboratory of Systems Biology, NIAID, NIH

Poster #: B40 || Abstract #: 72

"Function and mechanisms of O-fucosylation of malaria parasite TSR-domain proteins"; [Silvia Sanz Sender](#)^{1,2,3}, Rebecca Tweedell^{2,3}, Bernadette Hritz³, Abhai Tripathi³, Tim Hamerly^{2,3}, Matilde de las Rivas⁴, Ramon Hurtado-Guerrero^{4,5}, Kristina Han⁶, James M. Rini⁶, Rhoel R. Dinglasan^{2,3}, Luis Izquierdo¹

¹Malaria Glycobiology, ISGlobal (Barcelona Institute for Global Health); ²Department of Infectious Diseases & Pathogens, University of Florida, Gainesville; ³Molecular Microbiology and Immunology, Johns Hopkins University, Baltimore; ⁴BIFI, University of Zaragoza, Spain; ⁵Fundación ARAID, Zaragoza, Spain; ⁶Department of Molecular Genetics and Biochemistry, University of Toronto

Poster #: B41 || Abstract #: 73

"Early remodeling of the hepatocyte glycocalyx during hepatitis C virus infection: toward the settling of viral persistence and chronicity?"; [Emma REUNGOAT](#)^{1,2}, Boyan GRIGOROV¹, Birke BARTOSCH¹, Fabien ZOULIM¹, Eve-Isabelle PECHEUR¹

¹Cancer Research Center of Lyon, Inserm U1052, CNRS 5286, University of Lyon, 151 cours Albert Thomas, 69003 Lyon, France; ²Région Rhône-Alpes Auvergne ARC1

Poster #: B42 || Abstract #: 74

"Chlorella viruses: antigenic variants act as tools to correlate gene-to function of protein A064R, an apparent multifunctional glycosyltransferase."; [Cristina De Castro](#)¹, Garry Duncan², Michela Tonetti³, James L. Van Etten⁴

¹Department of Agricultural Sciences University of Napoli, Italy; ²Department of Biology Nebraska Wesleyan University Lincoln, NE, USA; ³Department of Experimental Medicine and Center of Excellence for Biomedical Research University of Genova; ⁴Department of Plant Pathology and Nebraska Center for Virology University of Nebraska Lincoln, NE (USA)

Poster #: B43 || Abstract #: 75

"Design of a Influenza A virus-glycan interaction map (glycointeractome)"; [Juliane Mayr](#)¹, Jimmy C. Lai², John Nicholls², Mark von Itzstein¹, Thomas Haselhorst¹

¹Institute for Glycomics, Griffith University, Gold Coast Campus, Australia; ²Dept. of Pathology, The University of Hong Kong, China

Poster #: B44 || Abstract #: 76

"The Structure of the UDP-Glc/GlcNAc 4-Epimerase from the Human Pathogen *Campylobacter jejuni*"; [Hyun Gi Yun](#), Kyoung-Soon Jang, Shiho Tanaka, William M. Clemons, Jr
Division of Chemistry and Chemical Engineering, California Institute of Technology

Poster #: B45 || Abstract #: 77

"Protein glycosylation in *Campylobacter jejuni*: Deciphering the role of the N-glycan on the CmeABC efflux pump"; [Harald Nothaft](#), Rajinder Dubb, Bernadette Beadle, Mickey Richards, Christine M. Szymanski
Department of Biological Sciences, University of Alberta, Edmonton, Alberta, Canada

Poster #: B46 || Abstract #: 78

“Structure-activity relationship (SAR) study on the role of L-fucose in cholera toxin binding to intestinal epithelial cells”; Amberlyn M. Wands¹, He Huang², Ye Zhang², Nicole S. Sampson², Jennifer J. Kohler¹

¹Department of Biochemistry, UT Southwestern Medical Center, Dallas, TX; ²Department of Chemistry, Stony Brook University, Stony Brook, NY

Poster #: B47 || Abstract #: 79

“Characterization of the synthesis pathways of acylated dideoxyhexosamines in *Campylobacter jejuni* strains with lipooligosaccharide biosynthesis loci E and H.”; Michel Gillbert, Zack Z. Li, Marie-France Goneau, Anna-Maria Cunningham, Evgeny Vinogradov, Jianjun Li, Ian C. Schoenhofen

National Research Council Canada

Poster #: B48 || Abstract #: 80

“Conformation of the 216-loop of human parainfluenza type 1 hemagglutinin-neuraminidase determines inhibitor selectivity”; Tanguy Eveno, Larissa Dirr, Moritz Winger, Ibrahim M. El Deeb, Patrice Guillon, Mark von Itzstein

Institute for Glycomics, Gold Coast Campus, Griffith University, Queensland, 4222, Australia

Poster #: B49 || Abstract #: 81

“How sweet are our gut beneficial microbes?”; Dimitrios Latousakis¹, Donald A. MacKenzie¹, Devon Kavanaugh¹, Karine Lecointe¹, Patrick Gunning¹, Robert A. Field², Nathalie Juge¹

¹Institute of Food Research, Norwich, UK; ²John Innes Centre, Norwich, UK

Poster #: B50 || Abstract #: 82

“Plasmodium falciparum rosetting domain recognizes ABH histo-blood group antigens in a type specific manner”; Isadora A. Oliveira¹, Laércio Pol-Fachin^{2,3}, Sebastião T. Carvalho¹, Roberto D. Lins³, Thereza A. Soares², Ronaldo Mohana-Borges¹, Jorge L. Neves², Adriane R. Todeschini¹

¹Instituto de Biofísica Carlos Chagas Filho, Universidade Federal do Rio de Janeiro, Rio de Janeiro - RJ, Brazil; ²Departamento de Química Fundamental, Universidade Federal de Pernambuco, Recife - PE, Brazil; ³Centro de Pesquisas Aggeu Magalhães, Fundação Oswaldo Cruz, Recife - PE, Brazil

Poster #: B51 || Abstract #: 83

“The Price of Flexibility – A Conformational Study on Oxepanes as Mannose Mimetics”; Said Rabbani¹, Christoph P. Sager¹, Brigitte Fiege¹, Pascal Zihlmann¹, Raghu Vannam², Roman P. Jacob³, Roland C. Preston¹, Timm Maier³, Mark P. Peczu², Beat Ernst¹

¹Institute of Molecular Pharmacy, Pharmazentrum, University of Basel, Switzerland; ²Department of Chemistry, University of Connecticut; ³Structural Biology, Biozentrum, University of Basel, Switzerland

Poster #: B52 || Abstract #: 84

“Structural studies of the lipopolysaccharide produced by plant pathogen *Xylella fastidiosa*”; Justyna M. Dobruchowska¹, Artur Muszyński¹, Ian C. Black¹, Caroline Roper², Parastoo Azadi¹

¹Complex Carbohydrate Research Center, The University of Georgia, Riverbend Road 30602; ²Department of Plant Pathology and Microbiology, The University of California, Riverside 92521

Poster #: B53 || Abstract #: 85

“Global Mapping of O-Glycosylation of Human Herpesviruses”; Ieva Bagdonaitė¹, Rickard Nordén², Hiren J. Joshi¹, Sarah L. King¹, Sergey Y. Vakhrushev¹, Sigvard Olofsson², Hans H. Wandall¹

¹Copenhagen Center for Glycomics, Department of Cellular and Molecular Medicine, University of Copenhagen, Denmark; ²Department of Infectious Diseases, Institute of Biomedicine, University of Gothenburg, Sweden

Poster #: B54 || Abstract #: 86

“C-mannosylation of Thrombospondin Type 1 Repeats in Apicomplexan Parasites”; Carolin M. Hoppe, Aleksandra Shcherbakova, Patricia Zarnovican, Falk F. R. Buettner, Hans Bakker, Françoise H. Routier

Hannover Medical School, Institute for Cellular Chemistry, Hannover, Germany

Poster #: B55 || Abstract #: 87

“Histo-blood group antigen presentation is critical for norovirus VLP binding to glycosphingolipids in membranes”; Waqas Nasir¹, Martin Frank², Angelika Kunze¹, Marta Bally³, Francisco Parra⁴, Per-Georg Nyholm^{2,5}, Fredrik Höök³, Göran Larson¹

¹Department of Clinical Chemistry and Transfusion Medicine, Sahlgrenska Academy, University of Gothenburg, Gothen-

burg, Sweden; ²Biognos AB, Generatorsgatan 1, P.O. Box 8963, 40274 Gothenburg, Sweden; ³Department of Applied Physics, Chalmers University of Technology, S-412 96 Gothenburg, Sweden; ⁴Instituto Universitario de Biotecnología de Asturias, Departamento de Bioquímica y Biología Molecular, Universidad de Oviedo, 33006 Oviedo, Spain; ⁵Department of Medical Biochemistry and Cell Biology, University of Gothenburg, Gothenburg, Sweden

Poster #: B56 || Abstract #: 88

"The effect of tandem-repeat galectins on morphology of Escherichia coli and their adhesion to host cells";

Chi-Shan Li, Ting-Jui Tu, Fu-Tong Liu

Institute of Biomedical Sciences, Academia Sinica, Taipei, Taiwan

Poster #: B57 || Abstract #: 89

"Trypanosoma cruzi chronic infection in Galectin-8 knock out mice"; María S. Leguizamón¹, Adriano Bertelli¹, Carla Pascuale¹, Miriam Postan², Oscar Campetella¹

¹Universidad Nacional de San Martín, Instituto de Investigaciones Biotecnológicas; ²Instituto Fátala Chabén, Buenos Aires, Argentina

Poster #: B58 || Abstract #: 90

"Fucosylation contributes to Cholera toxin intoxication, even in the presence of GM1"; Anirudh Sethi¹, Amberlyn Wands¹, Marcel Mettlen², Jennifer J. Kohler¹

¹Biochemistry, UT Southwestern Medical Center; ²Cell Biology, UT Southwestern Medical Center

Poster #: B59 || Abstract #: 91

"Examination of the protease inhibitor ecotin and N-linked glycosylation, an insight into protein protection in the protease rich environment of the oral cavity"; Cody L. Thomas¹, Harald Nothhaft², Martin Douglass¹, Christine M. Szymanski^{1,2}

¹Department of Microbiology, University of Georgia, Athens, GA, USA; ²Department of Biological Sciences, University of Alberta, Edmonton, AB, Canada

Poster #: B60 || Abstract #: 92

"NMR Structure of Streptococcal IgA-Fc Receptor Siglec-5 Binding Domain"; Alexander Eletsy¹, Cheng-Yu Chen¹, Jerry J. Fong^{2,3}, Victor Nizet^{2,4}, Ajit Varki^{2,3,5}, James H. Prestegard¹

¹Complex Carbohydrate Research Center, University of Georgia, Athens; ²Glycobiology Research and Training Center, University of California, San Diego; ³Department of Cellular and Molecular Medicine, University of California, San Diego; ⁴Department of Pediatrics, Skaggs School of Pharmacy and Pharmaceutical Sciences, University of California, San Diego; ⁵Department of Medicine, University of California, San Diego

Poster #: B61 || Abstract #: 93

"Innate Immune Galectin Targets Sialylated Microbe"; Nourine A. Kamili¹, Connie M. Arthur¹, Christian Gerner-Smidt¹, Victor Nizet², Ryan McBride⁴, Jim C. Paulson⁴, Richard D. Cummings⁵, Sean R. Stowell¹

¹Department of Pathology and Laboratory Medicine, Emory University, Atlanta, GA; ²University of California San Diego School of Medicine, La Jolla, CA; ⁴Department of Cell and Molecular Biology, Chemical Physiology and Immunology and Microbial Sciences, The Scripps Research Institute, La Jolla, CA; ⁵Department of Surgery, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA

Poster #: B62 || Abstract #: 94

"Clostridium difficile chemotaxes towards intestinal mucus and forms biofilms in a complex community";

Melinda A. Engevik^{1,2}, Berkley K. Luk^{1,2}, Jennifer Actung³, Anne Hall^{1,2}, Bhanu P. Ganesh^{1,1}, James Versalovic^{1,2}

¹Department of Pathology and Immunology, Baylor College of Medicine; ²Department of Pathology, Texas Children's Hospital; ³Department of Molecular Virology and Microbiology, Baylor College of Medicine

Poster #: B63 || Abstract #: 95

"A Novel Periplasmic Mannan-Binding Protein Involved in the Synthesis of Lipomannan in Mycobacteria";

Yasu S. Morita¹, Kathryn Rahlwes¹, Stephanie A. Ha¹, Lisa R. Baumoeil¹, Jacob A. Mayfield², Shota Nakamura³

¹Department of Microbiology, University of Massachusetts, Amherst; ²Division of Rheumatology, Immunology and Allergy, Brigham and Women's Hospital, Boston; ³Research Institute for Microbial Diseases, Osaka University, Osaka

Poster #: B64 || Abstract #: 96

"A Y161F hemagglutinin substitution improves yields of a 2009 H1N1 influenza A vaccine virus in cells by increasing their binding affinities to alpha 2,3-linked and 2,6-linked sialic acid receptors"; Feng Wen¹, Richard

Webby², Xiu-Feng Wan¹

¹Department of Basic Sciences, College of Veterinary Medicine, Mississippi State University, Mississippi State, Mississippi, the United States; ²Department of Infectious Diseases, St. Jude Children's Research Hospital, 262 Danny Thomas Place, Memphis, TN 38105, United States

Poster #: B65 || Abstract #: 97

"Mutations in hemagglutinin of H6N6 influenza A virus changed glycan receptor binding properties when being transmitted from avian to swine"; Minhui Guan¹, Hailiang Sun¹, Lei Li², Chun-Kai Yang¹, Georgia P. Wang², Xiu-Feng Wan¹

¹Department of Basic Sciences, College of Veterinary Medicine, Mississippi State University; ²Department of Chemistry, Georgia State University

Poster #: B66 || Abstract #: 98

"HUMAN ADENOVIRUS TYPE 5 MODIFIES FUCOSYLATION IN A CELL MODEL OF HUMAN LUNG EPITHELIUM"; Kathya Gutierrez Huante¹, Ivan Martinez Duncker R.¹, Ramon A. Gonzalez²

¹Laboratory of Human Glycobiology, Center for Research in Cellular Dynamics, State University of Morelos; ²Molecular Virology Laboratory, Center for Research in Cellular Dynamics, State University of Morelos

Session 5 | Prokaryote versus eukaryote glycobiology: similarities and differences

Poster #: B67 || Abstract #: 99

"The oligosaccharyltransferase subunit DC2 mediates the association between the STT3A and Sec61 complexes"; Shiteshu Shrima, Natalia A. Cherepanova, Reid Gilmore

University of Massachusetts Medical School, Worcester, Massachusetts

Poster #: B68 || Abstract #: 100

"An alternative N-linked protein glycosylation biosynthesis pathway in Campylobacter fetus utilizing a unique lipid intermediate"; Justin M. Duma¹, Harald Nothaft², Yuan Zhao³, Bernadette Beadle², Jonathan M. Curtis³, Christine M. Szymanski^{1,2}

¹Complex Carbohydrate Research Center and Department of Microbiology, University of Georgia, GA, USA; ²Department of Biological Sciences, University of Alberta, Edmonton, AB, Canada; ³Department of Agricultural Food & Nutritional Sciences, University of Alberta, Edmonton, AB, Canada

Poster #: B69 || Abstract #: 101

"N-Glycan transition of early developmental Oryza sativa seedlings exposed by silver nanocolloids"; Risa Horiuchi¹, Yukari Nakajima², Shosaku Kashiwada^{1,3}, Nobumitsu Miyaniishi^{1,3,4}

¹Graduate School of Life Sciences, Toyo University; ²Department of Food and Life Sciences, Toyo University; ³Research center for Life and Environmental Sciences, Toyo University; ⁴Graduate School of Food and Nutritional Sciences, Toyo University

Poster #: B70 || Abstract #: 102

"Primary structure determination of a blood group B-specific lectin purified from Streptomyces sp. 27S5 reveals insight into its mechanism of expression and unique structural features"; Yoko Fujita-Yamaguchi^{1,2,4}, Yoshiki Yamaguchi³, Akemi Ikeda³, Naoshi Domae⁴, Karine Bagramyan⁵, Teresa B. Hong⁵, John P. Murad⁵, Markus Kalkum⁵

¹Department of Molecular & Cellular Biology, Beckman Research Institute of City of Hope; ²DMRI, BRI of City of Hope; ³Structural Glycobiology Team, RIKEN; ⁴Biomolecular Characterization Team, RIKEN; ⁵Department of Molecular Immunology, BRI of City of Hope

Poster #: B71 || Abstract #: 103

"Human fucosyltransferase FUT5: Crystal structure and Acceptor specificity"; Digantkumar Chapla¹, Shuo Wang¹, Annapoorani Ramiah¹, Farhad Forouhar², Liang Tong², Kelley W. Moremen¹

¹Complex Carbohydrate Research Center, The University of Georgia, Athens, GA, 30602; ²Columbia University, New York City, NY, 10027

Poster #: B72 || Abstract #: 104

"The roles played by the other half of a glycoconjugate: contributions of scaffolds to lectin-glycoconjugate interactions"; [Melanie L. Talaga](#)¹, Ni Fan¹, Ashli L. Fueri¹, Robert K. Brown¹, Yoann M. Chabre², Purnima Bandyopadhyay¹, René Roy², Tarun K. Dam¹

¹*Mechanistic Glycobiology, Department of Chemistry, Michigan Technological University;* ²*Department of Chemistry, Université du Québec à Montréal, Montréal*

Poster #: B73 || Abstract #: 105

"Comparative analysis of N-glycans in skeletal muscle cells and its exercise condition"; [Takumi Wakisaka](#)¹, Hitoshi Sato¹, Takayuki Ishii¹, Risa Horiuchi¹, Taku Nedachi¹, Nobumitsu Miyanishi^{1,2}

¹*Grad. school of Life Sci., Toyo Univ.;* ²*Grad. school of Food and Nutritional Sci., Toyo Univ.*

Poster #: B74 || Abstract #: 106

"Evolutionary analysis of UDP-GlcNAc binding site in O-GlcNAc transferase using the modify evolutionary trace method"; [Masaoki Fujii](#)¹, Jun Tanaka¹, Ryuta Ueda², Hisao Kojima¹, Masahiro Ito¹

¹*Graduate school of life sciences, Ritsumeikan University;* ²*Graduate school of technology management, Ritsumeikan University*

Poster #: B75 || Abstract #: 107

"Structure and biosynthesis of complex N-glycan cores and antennae in nematodes"; [Katharina Paschinger](#), Shi Yan, Jorick Vanbeselaere, Iain B.H. Wilson

Universitaet fuer Bodenkultur Wien

Poster #: B76 || Abstract #: 108

"Role of the oxygen-dependent Skp1 glycan in Skp1 organization in Dictyostelium"; [Xianzhong Xu](#)¹, M.Osman Sheikh², David Thieker³, Christopher M. Schafer², Gordon Chalmers³, Alexander Eletsy³, Robert Woods³, James H. Prestegard³, Brad Bendiak⁴, John N. Glushka³, Christopher M. West^{1,2}

¹*Department of Biochemistry & Molecular Biology, University of Georgia, Athens, GA, 30602 USA;* ²*Department of Biochemistry & Molecular Biology, Oklahoma Center for Medical Glycobiology, University of Oklahoma, Health Sciences Center, Oklahoma City, OK 73104 USA;* ³*Complex Carbohydrate Research Center, University of Georgia, Athens, GA 30602 USA;* ⁴*Cell and Developmental Biology, University of Colorado Anschutz Medical Campus, School of Medicine, Aurora, Colorado 80045 USA*

Session 6 | Glycans in development and genetic disorders

Poster #: B77 || Abstract #: 109

"Protein O-mannosylation is required for normal sensory feedback and coordinated muscle contractions in Drosophila"; [Ishita Chandel](#), Ryan Baker, Dmitry Lyalin, Naosuke Nakamura, Vlad Panin

Texas A&M University, College station, Texas, United States

Poster #: B78 || Abstract #: 110

"Nutrient-driven O-GlcNAc cycling impacts Neurodevelopmental Timing and Metabolism"; [stephanie Olivier-Van Stichelen](#)¹, Peng Wang¹, Joshua Ohde¹, marcy Comly¹, Dona C. Love², John A. Hanover¹

¹*National Institute of Health, NIDDK;* ²*National Institute of Health, NCI*

Poster #: B79 || Abstract #: 111

"Subcellular expression of core fucosylated glycoproteins in postmortem human cortex: preliminary evidence for targeted glycoproteomic evaluation of schizophrenia brain."; [Toni M. Mueller](#), Stefani D. Yates, James H. Meador-Woodruff

Department of Psychiatry and Behavioral Neurobiology, University of Alabama at Birmingham

Poster #: B80 || Abstract #: 112

"Polysialic acid synthesis by ST8SIA2 is essential for cortical interneuron development"; [Ute E. Schuster](#)¹, Charlotte Rossdam¹, Tim Kröcher¹, Iris Röckle¹, Nicoletta Kessaris², Yuchio Yanagawa³, Birgit Weinhold¹, Herbert Hildebrandt¹

¹*Institute for Cellular Chemistry, Medical School Hannover, Germany;* ²*Wolfson Institute for Biomedical Research, University College London, UK;* ³*National Institute for Physiological Sciences, Gunma University, Japan*

Poster #: B81 || Abstract #: 113

"COG Deficiency Drastically Alters Mucin-Type Glycosylation on Alpha-Dystroglycan Increasing its Proteolytic Susceptibility"; Seok-Ho Yu^{1,2}, Peng Zhao^{1,2}, Tiantian Sun^{1,2}, Pradeep Chopra^{1,2}, Aaron Breedle¹, Kelly W. Moremen^{1,2}, Geert-Jan Boons^{1,2}, Lance Wells^{1,2}, Richard Steet^{1,2}

¹University of Georgia; ²Complex Carbohydrate Research Center

Poster #: B82 || Abstract #: 114

"Glycans on human undifferentiated pluripotent stem cells revealed by using newly generated monoclonal antibodies, R-10G and R-17F"; Toshisuke Kawasaki¹, Hiromi Nakao¹, Yuko Nagai², Aya Kojima², Hidenao Toyoda², Nobuko Kawasaki¹

¹Research Center for Glycobiotechnology; ²Laboratory of Bio-analytical Chemistry, College of Pharmaceutical Sciences, Ritsumeikan University

Poster #: B83 || Abstract #: 115

"Structural and biochemical analyses suggest that O-fucose and O-glucose glycans modulate protein folding and flexibility of EGF repeats"; Hideyuki Takeuchi¹, Hongjun Yu², Megumi Takeuchi¹, Atsuko Ito¹, Huillin Li², Robert S. Haltiwanger¹

¹CCRC, University of Georgia; ²Van Andel Research Institute

Poster #: B84 || Abstract #: 116

"Drosophila NGLY1 homolog is required for embryonic midgut development"; Antonio Galeone¹, Seung-Yeop Han¹, Chengcheng Huang², Akira Hosomi², Tadashi Suzuki², Hamed Jafar-Nejad¹

¹Baylor College of Medicine, Houston, TX; ²RIKEN Advanced Science Institute, Wako, Saitama, Japan

Poster #: B85 || Abstract #: 117

"A new congenital disorder of glycosylation is due to mutations in Fucokinase"; Bobby G. Ng¹, Jill Rosenfeld², Lisa Emrick³, Mahim Jain⁴, Lindsay Burrage², Brendan Lee², Members of UDN⁵, Brett H. Graham², Hudson H. Freeze¹

¹Human Genetics Program, Sanford-Burnham-Prebys Medical Discovery Institute, La Jolla, CA, USA; ²Department of Molecular and Human Genetics, Baylor College of Medicine, Houston, TX, USA; ³Neurology Section, Department of Pediatrics, Baylor College of Medicine, Houston, TX, USA; ⁴Department of Pediatrics, Johns Hopkins School of Medicine, Baltimore, MD, USA; ⁵Undiagnosed Diseases Network (UDN)

Poster #: B86 || Abstract #: 118

"Identification and expression analysis of zebrafish polypeptide a-N-acetylgalactosaminyltransferase genes during the embryonic development"; Akira Kurosaka¹, Naosuke Nakamura¹, Yuki Tsujimoto¹, Yui Takahashi¹, Yoshiaki Nakayama^{1,2}, Morichika Konishi²

¹Dept. Mol. Biosci., Fac. Life Sci., Kyoto Sangyo Univ.; ²Microbiol. Chem., Kobe Pharma. Univ.

Poster #: B87 || Abstract #: 119

"Generation of mutant zebrafish that lack multiple vertebrate-specific polypeptide N-acetylgalactosaminyltransferases"; Naosuke Nakamura¹, Yuki Tsujimoto¹, Yui Takahashi¹, Kasumi Tsukada¹, Yoshiaki Nakayama², Morichika Konishi²

¹Dept. of Mol. Biosci., Fac. of Life Sci., Kyoto Sangyo Univ.; ²Microbiol. Chem., Kobe Pharma. Univ.

Poster #: B88 || Abstract #: 120

"N-Glycosylation Changes in the Human Aortic Valve Structure during Development and Disease by Imaging Mass Spectrometry"; R.R. Drake¹, Yan R. Su³, David Bichell², Robert B. Hinton⁴, Peggi M. Angel¹

¹Medical University of South Carolina, Charleston, SC; ²Division of Pediatric Cardiac Surgery Vanderbilt University Medical Center, Nashville, TN; ³Division of Cardiology, Vanderbilt University Medical Center, Nashville, TN; ⁴Cincinnati Children's Hospital Medical Center, Cincinnati, OH

Poster #: B89 || Abstract #: 121

"A Uniquely Human Evolutionary Change in ST8Sia-II Impacts Enzyme Stability and Polysialic Acid Function"; Michael Vaill¹, Masaya Hane², Yuko Naito-Matsui¹, Sandra Diaz¹, Leela Davies¹, Ken Kitajima², Chihiro Sato², Ajit Varki¹

¹UCSD/Salk Center for Academic Research and Training in Anthropogeny, Glycobiology Research and Training Center, UC San Diego; ²Bioscience and Biotechnology Center, Nagoya University

Poster #: B90 || Abstract #: 122

"Analysis of Changes in Glycosylation as Pluripotent Human Stem Cells Differentiate into Separate Germ Cell

Lineages"; [Alison V. Nairn](#)¹, Harrison Grace^{1,4,5}, Katelyn Rosenbalm^{1,2}, Melina Galizzi¹, Mitche dela Rosa¹, Mindy Porterfield¹, Michael Kulik³, J. Michael Pierce^{1,2}, Stephen Dalton^{2,3}, Michael Tiemeyer^{1,2}, Kelley W. Moremen^{1,2}

¹Complex Carbohydrate Research Center, University of Georgia; ²Department of Biochemistry and Molecular Biology, University of Georgia; ³Center for Molecular Medicine, University of Georgia; ⁴Neuroscience Division, Biochemical Health Sciences Initiative, University of Georgia; ⁵Medical College of Georgia at Augusta University

Poster #: B91 || Abstract #: 123

"The role of Nr1 in NGly1 deficiency"; [Ulla I.M. Gerling-Driessen](#), Frederick M. Tomlin, CJ Cambier, Yi-Chang Liu, Carolyn R. Bertozzi

Department of Chemistry and Howard Hughes Medical Institute, Stanford University

Poster #: B92 || Abstract #: 124

"Quantification of Thr vs Ser Acceptor Preferences of the ppGalNAc Transferases That Initiate Mucin Type O-Glycosylation"; [Earnest James](#), Thomas A. Gerken

Department of Biochemistry & Pediatrics, Case Western Reserve University

Poster #: B93 || Abstract #: 125

"Inhibition of N-glycanase1 induces autophagic clearance of protein aggregates"; [Sarah Needs](#)¹, Martin Bootman¹, Dominic Alonzi², Sarah Allman¹

¹Department of Life, Health and Chemical Sciences, The Open University, Milton Keynes; ²Oxford Glycobiology Institute, Department of Biochemistry, University of Oxford, Oxford

Poster #: B94 || Abstract #: 126

"Specificity of mammalian C-mannosyltransferases for different tryptophan residues of thrombospondin type 1 repeats"; [Hans Bakker](#), Birgit Tiemann, Falk FR Buettner, Aleksandra Shcherbakova

Institute for Cellular Chemistry, Hannover Medical School, Germany

Poster #: B95 || Abstract #: 127

"Genotype-Phenotype Correlations for POMGNTs in Congenital Muscular Dystrophy"; [Danish Singh](#)¹, Stephanie M. Halmo¹, Sneha Patel¹, Melanie Edlin², Geert-Jan Boons², Kelley Moremen¹, David Live¹, Lance Wells¹

¹Department of Biochemistry, University of Georgia; ²Department of Chemistry, University of Georgia

Poster #: B96 || Abstract #: 128

"An MPI-independent pathway routes glucose into Mannose-6-P and N-glycans"; [Charles DeRossi](#)², Mie Ichikawa¹, Hudson Freeze¹

¹Human Genetics Program, Sanford-Burnham-Prebys Medical Discovery Institute, La Jolla, CA, USA; ²Departments of Pediatrics and Medicine, Icahn School of Medicine at Mount Sinai, New York, NY USA

Poster #: B97 || Abstract #: 129

"Extracellular O-GlcNAc is required for retinal vascular development and Dll4-Notch signaling"; [Mitsutaka Ogawa](#)¹, Shweta Varshney², Shogo Sawaguchi¹, Yuta Sakaidani¹, Hirokazu Yagi⁴, Kyosuke Takeshita³, Toyooki Murohara³, Koichi Kato^{4,5}, Pamela Stanley², Tetsuya Okajima¹

¹Department of Molecular Biochemistry, Nagoya University Graduate School of Medicine.; ²Department of Cell Biology, Albert Einstein College of Medicine.; ³Department of Cardiology, Nagoya University Graduate School of Medicine.; ⁴Graduate School of Pharmaceutical Sciences, Nagoya City University.; ⁵Institute for Molecular Science and Okazaki Institute for Integrative Bioscience, National Institutes of Natural Sciences.

Poster #: B98 || Abstract #: 130

"Mapping Modification of O-Glycosylation Sites of Delta-like Proteins"; [Rachel K. LoPilato](#)¹, Sky Bochter², Susan Cole², Shinako Kakuda³, Robert S. Haltiwanger^{1,3}

¹University of Georgia, Department of Biochemistry; ²The Ohio State University, Department of Molecular, Cellular, and Developmental Biology; ³Stonybrook University, Department of Biochemistry and Cell Biology

Poster #: B99 || Abstract #: 131

"The Analysis of O-Fucose Glycosylation of Thrombospondin Type 1 Repeats"; [Steven J. Berardinelli](#), Megumi Takeuchi, Robert S. Haltiwanger

Complex Carbohydrate Research Center, University of Georgia

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Poster #: B100 || Abstract #: 132

"ST6Gal-I sialyltransferase promotes an anti-apoptotic, cancer stem cell phenotype"; [Susan L. Bellis](#), Colleen Britain, Matthew Schultz, Andrew Holdbrooks
University of Alabama at Birmingham

Poster #: B101 || Abstract #: 133

"Cell Surface Glycoprotein Aging and Turnover Modulates a Constitutive Anti-Inflammatory Mechanism of Host Protection that is Progressively Disabled by a Foodborne Pathogen"; [Won Ho Yang](#)^{1,2,3}, Douglas M. Heithoff^{1,3}, Peter V. Aziz^{1,2,3}, Markus Sperandio⁴, Victor Nizet⁵, Michael J. Mahan^{1,3}, Jamey D. Marth^{1,2,3}
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Poster #: B102 || Abstract #: 134

"Galectin-8 as a regulator of bone remodeling and osteoporosis"; [Yaron Vinik](#), Hadas Shatz-Azoulay, Yehiel Zick
Weizmann Institute of Science, Rehovot, Israel

Poster #: B103 || Abstract #: 135

"The Effect of Polysaccharides from *Karenia mikimotoi* on CAM Angiogenesis"; [Chengyu Tan](#), Yuting Chen, Xiaojuan Hu, Xifan Tian, Liang Kong, Wei Li
Dalian Ocean University, Dalian, China

Poster #: B104 || Abstract #: 136

"The Anti-angiogenic Activity of Polysaccharides from *Chlorella* spp."; [Chengyu Tan](#), Yuting Chen, Xiaojuan Hu, Liang Kong, Wei Li
Dalian Ocean University, Dalian, China

Poster #: B105 || Abstract #: 137

"Antibacterial membrane attack by a pore-forming of manila clam *Ruditapes philippinarum* lectin"; [Changqing Tong](#), Qingqing Yang, Yue Chen, Wei Li
Dalian Ocean University, Dalian, China

Poster #: B106 || Abstract #: 138

"The anti-hyperglycemic activity of a polysaccharide from *Crassostrea gigas* in alloxan induced diabetes in ICR mice"; [Wei Li](#), Xinyao Li, Changqing Tong, Min Qu
Dalian Ocean University, Dalian, China

Poster #: B107 || Abstract #: 139

"Mass spectrometry analysis of adeno-associated virus glycan receptor expression in aging striatum for gene therapy."; [Rekha Raghunathan](#)¹, Nicole Polinski², Chun Shao¹, Kshitij Khatri¹, Joshua Klein¹, Le Meng¹, Deborah Leon¹, Caryl Sortwell², Joseph Zaia¹
¹Boston University; ²Michigan State University

Poster #: B108 || Abstract #: 140

"High-throughput sequential glycoprofiling of six abundant glycoproteins IgG, IgA, IgM, transferrin, haptoglobin and alpha-1-antitrypsin in ovarian cancer"; [Roisin O'Flaherty](#)¹, Mohankumar Muniyappa¹, Ian Walsh², Henning Stockmann^{1,3}, Richard Hutson⁴, Radka Saldova¹, Pauline M. Rudd¹
¹GlycoScience Group, National Institute for Bioprocessing Research and Training, Fosters Avenue, Mount Merrion, Blackrock, Co. Dublin, A94 X099, Ireland; ²Bioprocessing Technology Institute, Agency for Science, Technology and Research (A*STAR), Singapore, Singapore; ³current address: Abbvie Inc.1, Discovery Chemistry and Technologies, 1 North Waukegan Road, North Chicago, IL 60064, United States; ⁴St James's Institute of Oncology, Beckett Street, Leeds LS9 7TF, United Kingdom

Poster #: B109 || Abstract #: 141

"Depletion of sialic acid in podocytes results in kidney failure"; [Kristina Borst](#)¹, Linda Blume¹, Henri Wedekind¹, Mario Schiffer², Birgit Weinhold¹, Rita Gerardy-Schahn¹, Anja Münster-Kühnel¹

¹Institute for Cellular Chemistry, Hannover Medical School, Hannover, Germany; ²Division of Nephrology and Hypertension, Hannover Medical School, Hannover, Germany

Poster #: B110 || Abstract #: 142

"Nutrient Regulation of Signaling & Transcription by O-GlcNAc"; [Gerald W. Hart](#)

Department of Biological Chemistry, Johns Hopkins University School of Medicine

Poster #: B111 || Abstract #: 143

"The identification of allosteric mechanisms allows utilizing conserved enzymes as novel drug targets"; [Jana Fuehring](#)¹, Johannes Cramer², Petra Baruch², Roman Fedorov², Rita Gerardy-Schahn¹

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Poster #: B112 || Abstract #: 144

"Glycomic analysis of gastric carcinoma cells discloses glycans as modulators of RON receptor tyrosine kinase activation in cancer."; [Stefan Mereiter](#)^{1,2,3}, Ana Magalhães^{1,2}, Barbara Adamczyk⁴, Chunsheng Jin⁴, Andreia Almeida^{5,6}, Lylia Drici⁷, Maria Ibáñez-Vea⁷, Catarina Gomes^{1,2}, José A. Ferreira^{1,2,8}, Luis P. Afonso⁹, Lúcio L. Santos^{8,10}, Martin R. Larsen⁷, Daniel Kolarich⁵, Niclas G. Karlsson⁴, Celso A. Reis^{1,2,3}

¹i3S - Instituto de Investigação e Inovação em Saúde, University of Porto, Portugal; ²Institute of Molecular Pathology and Immunology of the University of Porto - IPATIMUP, Porto, Portugal; ³Institute of Biomedical Sciences of Abel Salazar - ICBAS, University of Porto, Portugal; ⁴Department of Medical Biochemistry and Cell Biology, Institute of Biomedicine, Sahlgrenska Academy, University of Gothenburg, Sweden; ⁵Department of Biomolecular Systems, Max Planck Institute of Colloids and Interfaces, 14424 Potsdam, Germany; ⁶Free University Berlin, Berlin, Germany; ⁷Department of Biochemistry and Molecular Biology, University of Southern Denmark, Odense, Denmark; ⁸Experimental Pathology and Therapeutics Group, Portuguese Institute of Oncology of Porto, Portugal; ⁹Department of Pathology, Portuguese Institute of Oncology of Porto, Portugal; ¹⁰Department of Surgical Oncology, Portuguese Institute of Oncology of Porto, Portugal

Poster #: B113 || Abstract #: 145

"Chondroitin sulfate analysis of myelinated versus non-myelinated regions of human brain tissue"; [Manveen K. Sethi](#)¹, Harry Pantazopoulos^{2,3}, Sabina Sabina Berretta^{2,3}, Joseph Zaia¹

¹Center for Biomedical Mass Spectrometry, Department of Biochemistry, Cell Biology and Genomics, Boston University School of Medicine, Boston, MA, USA; ²Department of Psychiatry, Harvard Medical School, Boston, MA, USA; ³Translational Neuroscience Laboratory, McLean Hospital, Belmont, MA, USA

Poster #: B114 || Abstract #: 146

"Role of Fucosyltransferase 8 in Pathogenesis of Epidermal Proliferation/Differentiation and Psoriasis Development"; [Yungling L. Lee](#)^{1,2}, Liang-Chun Liou¹, Pi-Hui Liang³

¹Institute of Biomedical Sciences, Academia Sinica, Taipei, Taiwan; ²Institute of Epidemiology and Preventive Medicine, National Taiwan University, Taipei, Taiwan; ³School of Pharmacy, National Taiwan University, No. 17, Xu-Zhou Road, Taipei, Taiwan

Poster #: B115 || Abstract #: 147

"Low Level Pancreatic Beta Cell Sialylation in the Onset of Autoimmune Diabetes"; [Douglas M. Heithoff](#)^{1,2,3}, Won Ho Yang^{1,2}, Peter V. Aziz^{1,2,3}, Jamey D. Marth^{1,2,3}

¹Center for Nanomedicine; ²Sanford Burnham Prebys Medical Discovery Institute; ³University of California Santa Barbara

Poster #: B116 || Abstract #: 148

"Accelerated Aging and Turnover of Host Anti-Inflammatory Enzymes Contributes to the Pathogenesis of Gram-negative Sepsis"; [Won Ho Yang](#)^{1,2,3}, Douglas M. Heithoff^{1,2,3}, Peter V. Aziz^{1,2,3}, Michael J. Mahan^{1,3}, Jamey D. Marth^{1,2,3}

¹Center for Nanomedicine; ²Sanford Burnham Prebys Medical Discovery Institute; ³University of California Santa Barbara

Poster #: B117 || Abstract #: 149

"Protein-specific polysialylation: Bringing a biophysical dimension to the biochemical evidence"; [Gaurang P. Bhide](#)¹, Gerd Prehna^{2,3}, Ninoshka RJ Fernandes¹, Joseph L. Zapater¹, Benjamin E. Ramirez^{1,2}, Karen J. Colley¹

¹Department of Biochemistry and Molecular Genetics, University of Illinois at Chicago; ²Center for Structural Biology, Research Resources Center, University of Illinois at Chicago; ³Department of Microbiology and Immunology, University of

Illinois at Chicago

Poster #: B118 || Abstract #: 150

"Defining the OGT interactome: a lesson in survival"; [Marissa R. Martinez](#)¹, Santosh Renuse², Akhilesh Pandey², Natasha E. Zachara¹

¹Department of Biological Chemistry, The Johns Hopkins University School of Medicine; ²Institute of Genetic Medicine, Departments of Biological Chemistry, Oncology, Pathology, The Johns Hopkins University School of Medicine

Poster #: B119 || Abstract #: 151

"Glycosphingolipids involved in contact inhibition of cell growth"; [Xiaohua Huang](#)¹, Nathan Schurman¹, Kazuko Handa¹, Sen-itiroh Hakomori^{1,2}

¹Division of Biomembrane Research, Pacific Northwest Research Institute; ²Depts. of Pathobiology and Global Health, University of Washington, Seattle, WA, USA

Poster #: B120 || Abstract #: 152

"Biochemical characterization of Cosmc, a client specific endoplasmic reticulum chaperone"; [Melinda S. Hanes](#)^{1,2}, Kelley Moremen³, Richard D. Cummings^{1,2}

¹Beth Israel Deaconess Medical Center; ²Harvard Medical School; ³Complex Carbohydrate Research Center, University of Georgia

Poster #: B121 || Abstract #: 153

"A new anti bis-Tn antibody illustrating the usefulness of a new technological platform using a combination of phage display technique and glycopeptide array."; [Nina Persson](#)¹, Lena Danielsson², Christian Risinger¹, Nicolai Stuhr-Hansen¹, András Kovács^{1,2}, Charlotte Welinder^{3,4}, Bo Jansson², Ola Blixt¹

¹Department of Chemistry, University of Copenhagen; ²Department of Laboratory Medicine, Lund University; ³Department of Clinical Science, Lund University; ⁴Centre of Excellence in Biological and Medical Mass Spectrometry "CEBMMS", Lund University

Poster #: B122 || Abstract #: 154

"Development of Defined Human Chimeric anti-Tn Monoclonal Antibody"; [Yasuyuki Matsumoto](#)¹, Matthew R. Kudelka¹, Melinda S. Hanes¹, Sylvain Lehoux¹, Jamie Heimbürg-Molinaro¹, Tongzhong Ju², Richard D. Cummings¹

¹Department of Surgery, Beth Israel Deaconess Medical Center - Harvard Medical School; ²Department of Biochemistry, Emory University School of Medicine

Poster #: B123 || Abstract #: 155

"Detection of N-glycans terminated with a3-mannose on a trans-Golgi glycosyltransferase and altered Golgi localization of a-mannosidase IA in advanced prostate cancer"; [Pi-Wan Cheng](#)^{1,2,3}, Ganapati Bhat^{1,2}, Vishwanath-Reddy Hothpet^{1,2}

¹Veterans Affairs Nebraska and Western Iowa Healthcare System, Omaha, NE; ²Department of Biochemistry and Molecular Biology, College of Medicine, University of Nebraska Medical Center, Omaha, NE; ³Eppley Institute of Research in Cancer and Allied Diseases, University of Nebraska Medical Center, Omaha, NE

Poster #: B124 || Abstract #: 156

"The action of recombinant lysosomal a-glucosidase (rhGAA) and amyloglucosidase on normal human and Pompe disease glycogen"; [Allen K. Murray](#)

HIBM Research Group, Inc.

Poster #: B125 || Abstract #: 157

"Apical membrane expression of distinct sulfated glycans represents a novel marker of cholangiolocellular carcinoma"; [Hitomi Hoshino](#)¹, Makoto Ohta², Makoto Ito³, Kenji Uchimura⁴, Yasuhiro Sakai⁵, Takeshi Uehara⁶, Shulin Low¹, Mana Fukushima⁵, Motohiro Kobayashi¹

¹University of Fukui; ²Fukui Red Cross Hospital; ³Kariya Toyota General Hospital; ⁴Nagoya University Graduate School of Medicine; ⁵Shinshu University Graduate School of Medicine; ⁶Shinshu University School of Medicine

Poster #: B126 || Abstract #: 158

"Alcohol effect on mucin O-glycosylation"; [Vishwanath-Reddy Hothpet](#)^{1,2}, Ganapati Bhat^{1,2}, Kristina Bailey^{1,3}, Pi-Wan Cheng^{1,2}

¹Veterans Affairs Nebraska and Western Iowa Healthcare System, Omaha, NE; ²Department of Biochemistry and Molecular Biology University of Nebraska Medical Center, Omaha, NE USA; ³Department of Medicine, College of Medicine,

Poster #: B127 || Abstract #: 159

"O-GlcNAcase knockout disrupts mammalian cell autophagy"; Michelle R. Bond¹, Melissa M. St. Amand², Marcella C. Kolodrubetz¹, Joseph Shiloach³, John A. Hanover¹

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Poster #: B128 || Abstract #: 160

"Proteomics reveals fatty acid synthase as a novel oxidative stress-induced interactor and inhibitor of the O-GlcNAcase"; Jennifer A. Groves¹, Austin O. Maduka^{1,2}, Robert N. O'Meally^{1,3}, Robert N. Cole^{1,3}, Natasha E. Zachara¹

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Poster #: B129 || Abstract #: 161

"Enzymatic hydrolysis of pneumococcal type III polysaccharide "; Dustin R. Middleton, Paeton L. Wantuch, Fikri Y. Avci

Department of Biochemistry and Molecular Biology, Center for Molecular Medicine, University of Georgia, Athens, Georgia

Poster #: B130 || Abstract #: 162

"Truncated isoform of CD33 encoded by Alzheimer's disease protective allele is selectively diverted into an intracellular pool"; Shoib S. Siddiqui^{1,2}, Andrea L. Verhagen^{1,2}, Venkatasubramaniam Sundaramurthy³, Frederico Alisson-Silva^{1,2}, Sandra Diaz^{1,2}, Nissi Varki^{1,2}, Pradipta Ghosh², Ajit Varki^{1,2}

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Poster #: B131 || Abstract #: 163

"O-GlcNAc expression levels epigenetically regulate colon cancer tumorigenesis by affecting colon cancer stem cells via modulating expression of transcriptional factor MYBL1 "; Huabei Guo¹, Phillip Phillip², Michael Pierce¹

¹CCRC, University of Georgia; ²South Carolina College of Pharmacy, The University of South Carolina

Poster #: B132 || Abstract #: 164

"Impaired lysosomal targeting leads to sustained activation of the Met receptor via ROS-dependent oxidative inactivation of receptor protein-tyrosine phosphatases"; Megan C. Aarnio, Peng Zhao, Seokho Yu, Tiantian Sun, Zhongwei Gao, Kelley Moremen, Geert-Jan Boons, Lance Wells, Richard Steet

Complex Carbohydrate Research Center University of Georgia

Poster #: B133 || Abstract #: 165

"Interactions of Mucins with the Tn or Sialyl Tn Cancer Antigens Including MUC1 are due to GalNAc - GalNAc Interactions"; Curtis F. Brewer¹, Kristin E. Haugstad², Soosan Hadjilirezaei², Bjorn T. Stokke², Thomas A. Gerken³, Joy Burchell⁴, Gianfranco Picco⁴, Marit Sletmoen⁵

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Poster #: B134 || Abstract #: 166

"Carbohydrate-mediated interactions between two thyroid cancer biomarkers and their reversible mutual sequestration "; Ni Fan, Melanie Talaga, Robert Brown, Ashli Fueri, Purnima Bandyopadhyay, Tarun Dam

Mechanistic Glycobiology, Department of Chemistry, Michigan Technological University

Poster #: B135 || Abstract #: 167

“Structural characterization of the N-glycome from malignant melanoma cells reveals galectin ligands”; [Aris-totelis Antonopoulos](#)¹, Jenna E. Geddes-Sweeney², Charles J. Dimitroff², Stuart M. Haslam¹, Anne Dell¹

¹Department of Life Sciences, Imperial College London; ²Department of Dermatology, Brigham and Women’s Hospital, Harvard Medical School

Poster #: B136 || Abstract #: 168

“Identification of novel inhibitors of ppGalNacTs to target mucin secretion in asthma”; [Soumya Krishnamurthy](#), Akiko Fujita, Jennifer Kohler

Department of Biochemistry, UT Southwestern Medical Center, Dallas, Texas

Poster #: B137 || Abstract #: 169

“Reduced molecular size and altered disaccharide composition of cerebral chondroitin sulfate upon Alzheimer’s pathogenesis”; [Zui Zhang](#), Shiori Ohtake-Niimi, Kenji Kadomatsu, Kenji Uchimura

Nagoya University Graduate School of Medicine

Poster #: B138 || Abstract #: 170

“Changes in subcellular structure and ultrastructure of organelles in cultivated fibroblasts from the patients with congenital disorders of glycosylation”; [Nina Ondruskova](#), Jana Sladkova, Tomas Honzik, Jiri Zeman, Hana Hansikova

Department of Pediatrics and Adolescent Medicine, First Faculty of Medicine, Charles University in Prague and General University Hospital in Prague, Czech Republic

Poster #: B139 || Abstract #: 171

“Genetic glyco-engineering for improvement of biopharmaceuticals”; [Karina Nawrath](#), Janine Gündel, Sven Bahrke, Matthias Kaup, Lars Stöckl, Steffen Goletz

Glycotope GmbH, Berlin

Poster #: B140 || Abstract #: 172

“Assessment of glycosylation of recombinant HIV-1 envelope glycoproteins produced in a high-level protein expression system”; [Barbora Knoppova](#)^{1,2}, Qing Wei¹, Audra Hargett³, Rhubell Brown¹, Stacy Hall¹, Zina Moldoveanu¹, Milan Raska^{1,2}, Matthew B. Renfrow³, Jan Novak¹

¹Department of Microbiology, University of Alabama at Birmingham, Birmingham, AL, USA; ²Department of Immunology, Faculty of Medicine and Dentistry, Palacky University and University Hospital, Olomouc, Czech Republic; ³Department of Biochemistry and Molecular Genetics, University of Alabama at Birmingham, Birmingham, AL, USA

Poster #: B141 || Abstract #: 173

“Targeting binding of hypoglycosylated MUC1 to CIN85 to control tumor growth and prevent invasion and metastasis”; [Sandra Cascio](#)^{1,2}, Jacque Faylo³, Anda Vlad^{4,6}, Carlos Camacho⁵, Olivera Finn¹

¹Department of Immunology, University of Pittsburgh, Pittsburgh, PA, USA; ²Fondazione Ri.Med, via Bandiera 11, Palermo, Italy, 90133; ³Department of Chemistry, University of Pennsylvania, Philadelphia, PA, USA; ⁴Department of Obstetrics, Gynecology and Reproductive Sciences, University of Pittsburgh, Pittsburgh, PA, USA; ⁵Department of Computational and Systems Biology, University of Pittsburgh, Pittsburgh, PA, USA; ⁶Magee-Womens Research Institute, Pittsburgh, PA, USA

Poster #: B142 || Abstract #: 174

“The glycomics of Alzheimer’s disease in human and mouse models”; [Katelyn Rosenbalm](#)^{1,2}, David Nix^{1,2}, Michael Tiemeyer^{1,2}

¹Complex Carbohydrate Research Center; ²Department of Biochemistry and Molecular Biology, University of Georgia, Athens, GA

Poster #: B143 || Abstract #: 175

“O-Fucosylation of Plasmodium falciparum proteins plays a key role in the malaria life cycle”; [Ethan D. Goddard-Borger](#)^{1,2}

¹Chemical Biology Division, The Walter and Eliza Hall Institute, Australia; ²Department of Medical Biology, The University of Melbourne, Australia

Poster #: B144 || Abstract #: 176

“Characterization and regulation of the functional O-mannose glycan on a-dystroglycan”; [M. Osman Sheikh](#)¹, Jeremy L. Prassman¹, Tobias Willer³, Takako Yoshida-Moriguchi³, David Venzke³, Mary E. Anderson³, Shuo Wang¹, Pradeep Prabhakar¹, Annapoorani Ramiah¹, John N. Glushka¹, Kelley W. Moremen^{1,2}, Kevin P. Campbell³, Lance Wells^{1,2}

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¹Complex Carbohydrate Research Center, University of Georgia, Athens, GA; ²Department of Biochemistry and Molecular Biology, University of Georgia, Athens, GA; ³Howard Hughes Medical Institute, Department of Molecular Physiology and Biophysics, Neurology, and Internal Medicine, Carver College of Medicine, University of Iowa, Iowa City, IA

Poster #: B145 || Abstract #: 177

“Loss and Gain of N-linked Glycosylation Sequons due to Variation in Cancer”; [Hayley M. Dingerdisen](#)¹, Yu Fan¹, Yu Hu¹, Cheng Yan¹, Yang Pan¹, Radoslav Goldman², Raja Mazumder^{1,3}

¹The Department of Biochemistry & Molecular Medicine, The George Washington University Medical Center, Washington, DC 20037, United States of America; ²Department of Oncology, Georgetown University, Washington, DC 20057, United States of America; ³McCormick Genomic and Proteomic Center, The George Washington University, Washington, DC 20037, United States of America

Poster #: B146 || Abstract #: 178

“Expression of fucosyltransferases is highly associated with metastasis of colorectal cancers”; [Yu-Ching Chen](#)¹, Huan-Yuan Chen¹, Jaw-Yuan Wang², Chen-Yang She¹, Fu-Tong Liu¹

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“A systems biology approach identifies FUT8 as a novel driver of melanoma metastasis”; [Praveen Agrawal](#)^{1,2,6}, Barbara Fontanals^{1,2}, Elena Sokolova^{1,2}, Samson Jacob^{3,4}, Christopher A. Vaiana⁶, Meagan McDermott⁶, Diana Argibay^{1,2}, Farbod Darvishian^{1,5}, Mireia Castillo⁷, Beatrix Ueberheide³, Iman Osman^{2,5}, David Fenyo^{3,4}, Lara K. Mahal^{6,2}, Eva Hernando^{1,2}

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Poster #: B148 || Abstract #: 180

“Characterization of Expression of T-synthase (C1GALT1), Cosmc (C1GalT1C1), and Mucins in Tn-positive Colorectal Cancers”; [Xiaodong Sun](#)¹, Tongzhong Ju², Richard D. Cummings¹

¹Department of Surgery, Beth Israel Deaconess Medical Center, Harvard Medical School; ²Department of Biochemistry, Emory University School of Medicine

Poster #: B149 || Abstract #: 181

“Interactions of the Cytokine Pleiotrophin with Glycosaminoglycan and the PTPRZ Core Protein”; [Xu Wang](#)¹, Eathen Ryan¹, Di Shen¹, Aiseta Baradjji², Ralf Richter^{2,3}

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Poster #: B150 || Abstract #: 182

“Carbohydrate specific T cell stimulation by HIV envelope glycoprotein”; [Ahmet Ozdilek](#), Lina Sun, Dustin R. Middleton, Fikri Y. Avci

Department of Biochemistry and Molecular Biology, Center for Molecular Medicine, and Complex Carbohydrate Research Center, University of Georgia

Poster #: B151 || Abstract #: 183

“Novel anti-Sialyl-Tn monoclonal antibodies and antibody drug conjugates (ADCs) target a cancer stem cell population and demonstrate in vitro and in vivo anti-tumor efficacy.”; [Jillian M Prendergast](#)¹, David Eavarone¹, Kristen Starbuck^{2,3}, Jenna Stein¹, Rosemary Foster^{2,3}, Jeff Behrens¹, Bo R. Rueda^{2,3}

¹Siamab Therapeutics, Newton, MA; ²Vincent Center for Reproductive Biology, Department of Obstetrics and Gynecology, Massachusetts General Hospital, Boston, MA; ³Harvard Medical School, Boston, MA

Poster #: B152 || Abstract #: 184

“Application of the High-throughput GlycanMap® Platform to Discovery of Novel Glycomic Biomarkers”; [Anju M. Dang](#), Yoshi Miura

S-BIO, Vaupell Holding Inc., Hudson, NH

Poster #: B153 || Abstract #: 185

"Aberrant epigenetic regulation of glyco-genes and glycosylation related genes is involved in inflammatory diseases, diabetes and cancer"; [Vlatka Zoldoš](#)¹, Marija Klasić¹, Paula Dobrinić¹, Dora Markulin¹, Aleksandar Vojta¹, Jasminka Krištić³, Gordan Lauc^{2,3}

¹University of Zagreb Faculty of Science, Department of Biology, Division for Molecular Biology, Horvatovac 102a, 10 000 Zagreb, Croatia; ²University of Zagreb Faculty of Pharmacy and Biochemistry, Kovačićeva 1, 10 000 Zagreb, Croatia; ³Genos Glycoscience Research Laboratory, Hondlova 2/11, 10 000 Zagreb, Croatia

Poster #: B154 || Abstract #: 186

"Glycans Related to the CA19-9 Antigen Are Biomarkers of Pancreatic Cancer and Provide Added Value for Diagnostics"; [Peter Hsueh](#)¹, Daniel Barnett¹, Ying Liu¹, Katie Partyka¹, Huiyuan Tang¹, Doron Kletter², Ying Huang³, Richard Drake⁴, Randall E. Brand⁵, Brian B. Haab¹

¹Center for Cancer and Cell Biology, Van Andel Research Institute, Grand Rapids, MI; ²Protein Metrics, Inc., San Carlos, CA; ³Public Health Sciences Division, Fred Hutchinson Cancer Research Center, Seattle, WA; ⁴Medical University of South Carolina, Charleston, SC; ⁵Division of Gastroenterology, University of Pittsburgh School of Medicine, Pittsburgh, PA

Poster #: B155 || Abstract #: 187

"Accurately Representing the Heterogeneity of IgA1 O-glycosylation in patients with IgA Nephropathy"; [Audra Hargett](#), Amanda Holloway, Stacy Hall, Bruce A. Julian, Jan Novak, Matthew Renfrow
University of Alabama at Birmingham

Poster #: B156 || Abstract #: 188

"Elucidating the role of sialylation in cardiac function using a Drosophila model"; [Brooke A. Howell](#), Vladislav M. Panin

Department of Biochemistry and Biophysics, Texas A&M University

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"Sweet and Stealthy Drug Delivery; Heparosan-based systems for enhancing therapeutics"; [Paul L. DeAngelis](#)
University of Oklahoma Health Sciences Center; Caisson Biotech, LLC

Poster #: B159 || Abstract #: 190

"Knocking-out fdl gene in a baculovirus host insect cell line using new CRISPR-Cas9 tools for lepidopteran insect cell lines"; [Hideaki Mabashi-Asazuma](#)¹, Donald L. Jarvis^{1,2}

¹University of Wyoming; ²GlycoBac, LLC

Poster #: B160 || Abstract #: 191

"Comprehensive Glycoproteomics of Glioblastoma Biospecimens"; [Joseph Zaia](#)¹, Chun Shao¹, Joshua Klein¹, Joanna Phillips²

¹Boston University; ²University of California, San Francisco

Poster #: B161 || Abstract #: 192

"Highly sensitive detection of fucosylated glycans with a novel click chemistry probe"; [Naoyuki Taniguchi](#)¹, Yasuhiko Kizuka¹, Sho Funayama², Hidehiko Shogomori², Miyako Nakano³, Kazuki Nakajima², Tsui-Ling Hsu⁴, Hsiu-Yu Lee⁴, Chi-Huey Wong⁴

¹Disease Glycomics Team, RIKEN, Japan; ²Department of Disease Glycomics (Seikagaku Corporation), Osaka University, Japan; ³Graduate School of Advanced Sciences of Matter, Hiroshima University, Japan; ⁴Genomics Research Center, Academia Sinica, Taiwan

Poster #: B162 || Abstract #: 193

"Homogenous detection of glycosyltransferase activities with universal bioluminescent assays"; [Hicham Zegzouti](#), Laurie Engel, Jacquelyn Hennek, Juliano Alves, Gediminas Vidugiris, Said A. Goueli
Promega Corporation, R&D department, Madison WI, USA.

Poster #: B163 || Abstract #: 194

“Cellular O-glycome Reporter/Amplification to explore O-glycans of living cells”; [Matthew R. Kudelka](#)^{1,2}, Aristotelis Antonopoulos³, Yingchun Wang², Duc M. Duong², Xuezheng Song², Nicholas T. Seyfried², Anne Dell³, Stuart M. Haslam³, Richard D. Cummings¹, Tongzhong Ju²

¹Department of Surgery, Beth Israel Deaconess Medical Center, Harvard Medical School; ²Department of Biochemistry, Emory University School of Medicine; ³Department of Life Sciences, Imperial College London

Poster #: B164 || Abstract #: 195

“Carbohydrate microarray as a new technique to rapidly detect Sallmonella”; [Jing Hu](#)¹, Beilei Zhang², Xiaoli Wang², Jian Yin²

¹Wuxi Medical School, Jiangnan University; ²Key Laboratory of Carbohydrate Chemistry and Biotechnology Ministry of Education, School of Biotechnology, Jiangnan University

Poster #: B165 || Abstract #: 196

“Semantic Web Technologies for Integrating Glycan-related Databases in GlyYouCan”; [Kiyoko F. Aoki-Kinoshita](#)^{1,2}, Nobuyuki P. Aoki¹, Akihiro Fujita¹, Noriaki Fujita², Masaaki Matsubara³, Shujiro Okuda⁴, Toshihide Shikanai², Daisuke Shinmachi¹, Elena Solovieva², Yoshinori Suzuki², Shinichiro Tsuchiya¹, Issaku Yamada³, Hisashi Narimatsu²

¹Faculty of Science and Engineering, Soka University; ²Research Center for Medical Glycoscience, AIST; ³The Noguchi Institute; ⁴Niigata University Graduate School of Medical and Dental Sciences

Poster #: B166 || Abstract #: 197

“Detection of post-translational modification of cancer biomarkers via proximity ligation assay”; [Felipe M. de Oliveira](#)¹, Stefan Mereiter², Nina Persson³, Ola Blixt³, Celso A. Reis², Masood Kamali-Moghaddam¹

¹Department of Immunology, Genetics and Pathology, Uppsala University; ²I3S – Instituto de Investigação e Inovação em Saúde and IPATIMUP - Institute of Molecular Pathology and Immunology of the University of Porto; ³Department of Chemistry, University of Copenhagen

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“Systematic Quantification of Human Cell Surface Glycoprotein Dynamics”; [Ronghu Wu](#)

Department of Chemistry and Biochemistry, Georgia Institute of Technology

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“GRITS Toolbox - A freely available software system for processing and archiving of glycomics data”; [René Ranzinger](#)

Brent Weatherly, Sena Arpinar, Shah Nawaz Khan, Mindy Porterfield, Michael Tiemeyer, William S. York
Complex Carbohydrate Research Center, University of Georgia, Athens, GA, USA

Poster #: B169 || Abstract #: 200

“Detection of Antibody Inhibition of Influenza H5N1 Binding to a Sialoglycan Receptor Using Surface Plasmon Resonance (SPR) and its Use as a Neutralizing Antibody Screening Assay”; [Malgorzata G. Norton](#)¹, Alexey Khalkenkov¹, Tracy L. Kamikawa¹, Thomas Kort², Peter Pushko², Michael C. Kennedy¹, Dorothy E. Scott¹

¹U.S. Food and Drug Administration, Center for Biologics Evaluation and Research, Office of Blood Research and Review, Division of Hematology Research and Review, Laboratory of Plasma Derivatives, Silver Spring, MD; ²Medigen Inc., Frederick, MD

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“Novel Designer Microarray Approach to Pinpoint Epithelial O-Glycans as Ligands: Application to Rotaviruses”; [Zhen Li](#)¹, Chao Gao¹, Yan Liu¹, Yibing Zhang¹, Yang Liu², Xi Jiang², Wengang Chai¹, Ten Feizi¹

¹Glycosciences Laboratory, Department of Medicine, Imperial College London, UK; ²Division of Infectious Diseases, Cincinnati Children's Hospital Medical Center, USA

Poster #: B171 || Abstract #: 202

“Automated Analysis of Bacterial Peptidoglycan Structure”; [Marshall W. Bern](#)¹, Richard Beniston², Stephane Mesnage²

¹Protein Metrics, Inc.; ²University of Sheffield

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“Glycosyltransferase Bump-hole Engineering to Dissect O-GalNAc Glycosites in Living Cells”; [Benjamin Schumann](#)¹, Marjoke F. Debets¹, Lauren Wagner¹, Melissa A. Gray¹, Carolyn R. Bertozzi^{1,2}

¹Department of Chemistry, Stanford University, 380 Roth Way, Stanford, CA 94305, United States; ²Howard Hughes Medical Institute, Stanford University, 380 Roth Way, Stanford, CA 94305, United States

Poster #: B173 || Abstract #: 204

"A Toolkit for Interactive and Batch Analysis of Glycomics and Glycoproteomics Mass Spectrometry Data";

Joshua A. Klein¹, Kshitij Khatri², Luis Carvalho¹, Joseph Zaia^{2,1}

¹Program for Bioinformatics, Boston University; ²Department of Biochemistry, Boston University

Poster #: B174 || Abstract #: 205

"Towards automated identification of glycan branching patterns using multistage mass spectrometry with intelligent precursor selection"; Shiwei Sun¹, Chuncui Huang³, Yaojun Wang¹, Naming Liu³, Wengang Chai⁴, Fei Yang¹, Jingwei Zhang¹, Feng Gao¹, Runsheng Chen³, Yan Li³, Dongbo Bu¹

¹Institute of Computing Technology, Chinese Academy of Sciences; ²Institute of biophysics; ³Institute of Biophysics, Chinese Academy of Sciences; ⁴Glycosciences Laboratory, Department of Medicine, Imperial College London, London, U.K.

Poster #: B175 || Abstract #: 206

"Development of a tool for extracting common glycan patterns recognized by avian influenza A virus."; Ma-sae Hosoda¹, Kiyoko F. Aoki-Kinoshita¹

¹Department of Bioinformatics, Graduate School of Engineering, Soka University; ²Department of Bioinformatics, Graduate School of Engineering, Soka University

Poster #: B176 || Abstract #: 207

"Analytical Services and Trainings at the Complex Carbohydrate Research Center"; Sara Porfirio, Roberto Sonon, Christian Heiss, Artur Muszynski, Stephanie Archer-Hartmann, Bernhard Jaehrig, Zhirui Wang, Radnaa Naran, Ian Black, Dandan Zhou, Asif Shajahan, Justyna Dobruchowska, Qiushi Chen, Parastoo Azadi
Complex Carbohydrate Research Center (CCRC), UGA, Athens, GA

Poster #: B177 || Abstract #: 208

"Carbohydrate Structure Notation Directed Towards Interdisciplinary Cooperation"; Issaku Yamada, Mamoru Mizuno

The Noguchi Institute

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"The Utility of IdeZ Protease in Glycan Profiling of Therapeutic Antibodies"; Stephen Shi, Beth McLeod, Paula Magnelli, Alicia Bielik, Coleen McClung, Cristian Ruse, Ellen Guthrie

New England Biolabs

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"RAIDR- A Rapid Method for the Microextraction of O-Glycans"; Lucas Veillon¹, Ahmed Hussein^{4,1}, Byeong G. Cho¹, Yehia Mechref^{1,2,3}

¹Department of Chemistry and Biochemistry, Texas Tech University, Lubbock, Texas; ²School of Informatics and Computing, Indiana University, Bloomington, Indiana; ³School of Medicine, American University of Beirut, Beirut, Lebanon; ⁴Department of Biotechnology, Alexandria University, Alexandria, Egypt

Poster #: B180 || Abstract #: 211

"Characterizing Glycosylated Proteins and Their Interactions Using Sparse-Labeling NMR"; James H. Prestegard, Kelley W. Moremen, Qi Gao, Gordon R. Chalmers

Complex Carbohydrate Research Center, University of Georgia

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"NIST Interlaboratory Study on Glycosylation Analysis: Variety and Variability of Methods"; M. Lorna A. De Leoz, David L. Duester, Stephen E. Stein

National Institute of Standards and Technology (NIST)

Poster #: B182 || Abstract #: 213

"Cholera Toxin subunit B binding to heterogeneous gangliosides on cell mimicking surfaces"; Hung-Jen Wu, Pratik Krishnan, Akshi Singla, Nolan C. Worstell, Joshua D. Weatherston, Chin-An Lee

Department of Chemical Engineering, Texas A&M University

Poster #: B183 || Abstract #: 214

"Characterizing glycoproteins using EndoH/PNGaseF in combination with high-resolution accurate-mass

(HRAM) mass spectrometry"; Peng Zhao¹, Tongqi Zhou³, Li Ou³, Wenhan Yu², Peter Kwong³, Galit Alter², Michael Tiemeyer¹, Lance Wells¹

¹Complex Carbohydrate Research Center, University of Georgia, Athens, GA; ²Ragon Institute of MGH, MIT, and Harvard, Cambridge, MA; ³Vaccine Research Center, NIH, Bethesda, MD

Poster #: B184 || Abstract #: 215

"Bacteriophage receptor binding proteins as carbohydrate specific diagnostics and therapeutics"; Bernadette Beadle¹, David J. Simpson¹, Christine M. Szymanski^{1,2}

¹Department of Biological Sciences, University of Alberta, Edmonton, AB, Canada; ²Complex Carbohydrate Research Center and Department of Microbiology, University of Georgia, Athens, GA, USA

Poster #: B185 || Abstract #: 216

"Domain specific N-glycan profiling of a Fc-fusion antibody"; Natalie Louis, Kathrin Lindner, Burkhard Fleckenstein, Martin Blüggel

Protagen Protein Services GmbH

Poster #: B186 || Abstract #: 217

"Methods for determining ganglioside distributions in lipid rafts"; Kristina Mlinac-Jerkovic^{1,2}, Katarina Ilic¹, Vladimir Damjanovic², Svyetlana Kalanj-Bognar^{1,2}, Ronald L. Schnaar³, Marija Heffer⁴

¹Croatian Institute for Brain Research, School of Medicine, University of Zagreb, Croatia; ²Department of Chemistry and Biochemistry, School of Medicine, University of Zagreb, Croatia; ³Departments of Pharmacology and Neuroscience, School of Medicine, Johns Hopkins University, USA; ⁴Department of Medical Biology and Genetics, Faculty of Medicine, University of Osijek, Croatia

Poster #: B187 || Abstract #: 218

"A rapid sample preparation and high throughput analysis of N-glycans by magnetic bead technology and capillary electrophoresis on Applied Biosystems™ DNA sequencers"; Natalee Gautam, Jenkuei Liu, Shaheer Khan, Bharti Solanki-Nand, Baburaj Kunnummal, Peter A. Bell

Pharmaceutical Analytics Group, Bioproduction Division- Thermo Fisher Scientific

Poster #: B188 || Abstract #: 219

"Synthesis of rare sugar conjugated glycolipids by combination of chemical reaction and enzymatic reaction";

Keisuke Hirata¹, Takashi Uchida^{1,2}, Yoshikata Nakajima^{1,2}, Seiki Iwai¹, Toru Mizuki^{1,2}

¹Graduate School of Interdisciplinary New Science, Toyo University 2100 Kujirai, Saitama, Japan; ²Bio-Nano Electronics Research Centre, Toyo University 2100 Kujirai, Saitama, Japan

Poster #: B189 || Abstract #: 220

"Developing Smart Anti-Glycan Reagents Using an Ancient Immune System"; Tanya R. McKittrick¹, Charles S.

Rosenberg², Jamie Heimburg-Molinaro¹, David F. Smith³, Brantley R. Herrin², Max D. Cooper², Richard D. Cummings¹

¹Department of Surgery, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA; ²Department of Pathology, Emory University School of Medicine, Atlanta GA; ³Department of Biochemistry, Emory University School of Medicine, Atlanta GA

Poster #: B190 || Abstract #: 221

"Glycopolymers with tunable lectin-binding properties based on self-assembling glycopeptides"; Antonietta Restuccia, Gregory A. Hudalla

J. Crayton Pruitt Family Department of Biomedical Engineering, University of Florida

Poster #: B191 || Abstract #: 222

"Self-assembled lectin-binding glycopolymers for immunomodulation"; Gregory Hudalla, Antonietta Restuccia, Margaret Fettis

University of Florida

Poster #: B192 || Abstract #: 223

"Oligosaccharide Microarrays with Neoglycolipid Probes Prepared from Synthetic Amino-Terminating and Naturally-Derived Amino Acid-Terminating Oligosaccharides"; Chunxia Li¹, Yibing Zhang², Angelina S. Palma^{2,3}, Pengtao Zhang¹, Chao Gao², Ten Feizi², Wengang Chai²

¹School of Medicine and Pharmacy, Ocean University of China, Qingdao, China; ²Glycosciences Laboratory, Department of Medicine, Imperial College London, London, U.K.; ³UCIBIO-REQUIMTE, Department of Chemistry, Faculty of Science and

Technology, NOVA University of Lisbon, Portugal

Poster #: B193 || Abstract #: 224

"Predicting N-glycan processing based on enzyme-glycan accessibility"; [Robert J. Woods](#)

Complex Carbohydrate Research Center (CCRC), University of Georgia

Poster #: B194 || Abstract #: 225

"Glycomimetic Approach to Structural Modification of Lysine Residues in Therapeutic Peptides"; [ABIGAEL C. SONGOK](#)¹, Pradip Panta², William T. Doerrler², Megan A. Macnaughtan¹, Carol M. Taylor¹

¹Department of Chemistry, Louisiana State University, Baton Rouge, Louisiana 70803, United States; ²Department of Biological Sciences, Louisiana State University, Baton Rouge, Louisiana 70803, United States

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"Using a Modification Site Database To Improve Glycopeptide Identification"; [Robert J. Chalkley](#), Peter R. Baker

Department of Pharmaceutical Chemistry, University of California San Francisco

Poster #: B196 || Abstract #: 227

"Recognition Tunneling Nanopores for Sequencing of Glycosaminoglycans"; [Jong One Im](#)¹, Peiming Zhang¹, Stuart Lindsay^{1,2,3}, Xu Wang²

¹Biodesign Institute; ²School of Molecular Science; ³Department of Physics, Arizona State University, Tempe

Poster #: B197 || Abstract #: 228

"Development of a 5-Minute Deglycosylation Method and Instant Labeling Dye for High-throughput N-Glycan Analysis by Mass Spectrometry"; [Aled Jones](#), Michael Kimzey, John Yan, Vaishali Sharma, Andres Guerrero,

Alexander Gyenes, Justin Hyche, Emily Dale, Ted Haxo, Sergey Vlasenko

ProZyme, Inc

Poster #: B198 || Abstract #: 229

"An Integrated System for High-throughput, User-friendly N-Glycan Analysis Using Rapid Separation by Capillary Electrophoresis"; [Aled Jones](#), Michael Kimzey, Andres Guerrero, Zoltan Szabo, Shirley Ng, Alexander Gyenes,

John Yan, Justin Hyche, Emily Dale, Ted Haxo, Sergey Vlasenko

ProZyme, Inc

Poster #: B199 || Abstract #: 230

"High-Throughput Milk Oligosaccharide Analysis Using a Rapid Cartridge-Based Capillary Electrophoresis Instrument"; [Andres Guerrero](#)¹, Jasmine Davis^{1,2}, Elisha Goonatileke², Jaime Salcedo³, Michael Kimzey¹, Ted Haxo¹,

Daniela Barile³, Carlito Lebrilla²

¹ProZyme, Inc; ²Department of Chemistry, University of California, Davis; ³Department of Food Science and Technology, University of California, Davis

Poster #: B200 || Abstract #: 231

"Simultaneous glycosyl composition analysis of polysaccharides of varying stability and solubility by derivatization with methyl groups"; [Ian Black](#), Christian Heiss, Parastoo Azadi

University of Georgia, Complex Carbohydrate Research Center

Poster #: B201 || Abstract #: 232

"An evolutionary systems approach to investigate sequence-structure-function relationships in Glycosyltransferases"; [Rahil Taujale](#)^{1,2}, Arthur Edison^{1,2}, Natarajan Kannan¹

¹Institute of Bioinformatics, University of Georgia; ²Complex Carbohydrate Research Center (CCRC), University of Georgia

Poster #: B202 || Abstract #: 233

"GLYCAM16: A major update to the GLYCAM biomolecular force field"; [Xiaocong Wang](#), Robert J. Woods

¹Complex Carbohydrate Research Center, University of Georgia

Poster #: B203 || Abstract #: 234

"High-throughput characterization of N-linked glycosyltransferase peptide and sugar specificities enabled by cell-free protein synthesis and SAMDI mass spectrometry"; [Weston Kightlinger](#)¹, Liang Lin², José-Marc Techner², Jessica C. Stark¹, Milan Mrksich², Michael C. Jewett¹

¹Department of Chemical and Biological Engineering, Northwestern University; ²Department of Biomedical Engineering,

Poster #: B204 || Abstract #: 235

“Evolutionary analysis for O-GlcNAcylated proteins by clustering method”; [Jun Tanaka](#), Masaaki Fujii, Hisao Kojima, Masahiro Ito

Graduate school of life sciences, Ritsumeikan University

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“Comparing Detector Response for 2-Aminobenzamide Labeled N-Glycans”; [Jeffrey Rohrer](#), Sachin Patil

Thermo Fisher Scientific

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“SweetNET: A bioinformatics workflow for glycopeptide MS/MS spectral analysis”; [Waqas Nasir](#)¹, Alejandro G. Toledo¹, Fredrik Noborn¹, Jonas Nilsson¹, Mingxun Wang², Nuno Bandeira², Göran Larson¹

¹*Department of Clinical Chemistry and Transfusion Medicine, Institute of Biomedicine, Sahlgrenska Academy at the University of Gothenburg, Sweden;* ²*Department of Computer Science and Engineering, Center for Computational Mass Spectrometry, CSE, and Skaggs School of Pharmacy and Pharmaceutical Sciences, University of California, San Diego, CA, United States*

Poster #: B207 || Abstract #: 238

“STRUCTURAL CHARACTERIZATION OF A HIGH MOLECULAR WEIGHT SULFATED GALACTAN OBTAINED FROM THE TUNIC OF THE ASCIDIAN *Microcosmus exasperatus*”; [Diana C. Restrepo Espinosa](#)¹, Yony Román², Jhonny Colorado Ríos³, Thales R. Cipriani², Alejandro Martínez¹, Marcello Iacomini², Mauro S. G. Pavão⁴

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Poster #: B208 || Abstract #: 239

“Elucidation of the mechanism of capsular polysaccharide recognition by *Campylobacter jejuni* bacteriophages”; [Clay S. Crippen](#)¹, Jessica C. Sacher^{1,2}, Christine M. Szymanski^{1,2}

¹*Complex Carbohydrate Research Center and Department of Microbiology, University of Georgia, Athens, Georgia;* ²*Department of Biological Sciences, University of Alberta, Edmonton, Canada*

Poster #: B209 || Abstract #: 240

“Dissecting glycan diversity across animal species by mass spectrometry”; [Kazuhiro Aoki](#)¹, Alvin Camus², James Beasley³, Tracey Tuberville³, Douglas Peterson⁴, Carl Bergman¹, Michael Tiemeyer¹

¹*Complex Carbohydrate Research Center, University of Georgia;* ²*Department of Pathology, UGA College of Veterinary Medicine;* ³*Savannah River Ecology Laboratory, University of Georgia;* ⁴*Warnell School of Forestry and Natural Resources, University of Georgia*

Poster #: B210 || Abstract #: 241

“Performance Evaluation of Orbitrap Fusion Lumos And Orbitrap Fusion For Glycopeptide Analysis”; [Julian Saba](#)¹, Sergei Snovidia², Christa Feasley³, Nina Soltero⁴

¹*Thermo Fisher Scientific, Mississauga, ON, Canada;* ²*Thermo Fisher Scientific, Rockford, IL, USA;* ³*Thermo Fisher Scientific, West Palm Beach, FL, USA;* ⁴*Thermo Fisher Scientific, San Jose, CA, USA*

Poster #: B211 || Abstract #: 242

“Quantum mechanical studies of glycans using fragment molecular orbital method”; [Naoya Matsuo](#)¹, Sundaram Arulmozhiraja^{1,2}, Shogo Nakano⁴, Sohei Ito⁴, Hiroaki Tokiwa^{1,2,3}

¹*Department of Chemistry, Rikkyo University;* ²*Research Center for Smart Molecules, Rikkyo University;* ³*AMED-CREST;* ⁴*Department of Food Sciences, University of Shizuoka*

Poster #: B212 || Abstract #: 243

“Complete Protein Deglycosylation Using a New Mass Spectrometry-Compatible Protein Deglycosylation Mix”; [Alicia Bielik](#), Paula Magnelli, Stephen Shi, Cristian Ruse, Alex Luebbbers, Beth McLeod, Ellen Guthrie

New England Biolabs

Poster #: B213 || Abstract #: 244

"In-depth site-specific N- and O-Glycosylation analysis of human C1-Inhibitor reveals extensive mucin-type O-glycosylation"; [Kathrin Stavenhagen](#)^{1,2}, Mehmet H. Kayili^{2,3,4}, Stephanie Holst¹, Carolien A.M. Koeleman¹, Ruchira Engel^{5,6}, Diana Wouters^{5,6}, Sacha Zeerleder^{5,6}, Bekir Salih³, Manfred Wuhrer^{1,2}

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Poster #: B214 || Abstract #: 245

"Enabling Tools for Protist Pathogen Glycobiology"; [H. Travis Ichikawa](#)^{1,4}, Juan Bustamante^{2,4}, M. Osman Sheikh^{3,4}, Elisabet Gas-Pascual^{1,4}, Lance Wells^{3,4}, Rick Tarleton^{2,4}, Christopher M. West^{1,4}

¹Dept. of Biochemistry & Molecular Biology; ²Center for Tropical and Emerging Global Diseases; ³Complex Carbohydrate Research Center; ⁴University of Georgia, Athens Georgia 30602 USA

Poster #: B215 || Abstract #: 246

"A High Throughput and High Resolution Glycan Analysis Platform on Applied Biosystems Multi-Capillary CE"; [Bharti Solanki-Nand](#), Jenkuei Liu, Shaheer Khan, Baburaj Kunnummal, Peter Bell
Thermo Fisher Scientific

Poster #: B216 || Abstract #: 247

"Revolutionary Streamlined and Rapid N-Glycan Preparation Directly from IgG in Cell Culture"; [Yoshi Miura](#)¹, Taichi Aihara¹, Anju M. Dang¹, Masaaki Toyoda²

¹S-BIO, Sumitomo Bakelite, NH 03051; ²S-BIO, Sumitomo Bakelite Co., Ltd., Kobe, Japan

Poster #: B217 || Abstract #: 248

"New Tool to Study Mucin-Type O-glycosylation Using a Bump-Hole Strategy: Exploring an Orthogonal Polypeptide GalNAc-Transferase T2 and UDP-Sugar Pair"; [Junwon Choi](#)¹, Lauren J. S. Wagner¹, Carolyn R. Bertozzi^{1,2}

¹Department of Chemistry, Stanford University; ²Howard Hughes Medical Institute, Stanford University

Poster #: B218 || Abstract #: 249

"Comprehensive analysis of protein glycosylation from prostate cancer cells using automated methods to release glycans and glycosite-containing peptides"; [David J. Clark](#), Naseruddin Hoti, Shisheng Sun, Hui Zhang

Department of Pathology, Johns Hopkins University School of Medicine, Baltimore, MD, USA

Poster #: B219 || Abstract #: 250

"Glycan Microarrays and Glycomics Services through the National Center for Functional Glycomics and the Harvard Medical School Center for Glycosciences"; [Jamie Heimburg-Molinaro](#), Sylvain Lehoux, Sanjay Agravat,

Robert Kardish, Tanya McKittrick, Elliot Chaikof, Lijun Sun, Richard D. Cummings
Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA

Poster #: B220 || Abstract #: 251

"Direct Characterization of the Maize Starch Synthase IIa Product Shows Maltodextrin Elongation Occurs at the Non-Reducing End"; [Daniel J. Falconer](#), Mark E. Larson, Alan M. Myers, Adam W. Barb

Roy J. Carver Department of Biochemistry, Biophysics and Molecular Biology, Iowa State University, Ames, Iowa 50011

Poster #: B221 || Abstract #: 252

"A New Method for Determining Polysialic acid Chain Length"; [Donald J. Bernstein](#), Michael Kulik, Alison Nairn, Steve Dalton, James M. Pierce

Department of Biochemistry and Molecular Biology, University of Georgia

Poster #: B222 || Abstract #: 253

"Site-directed glycosylation of peptide/protein with homogeneous O-linked eukaryotic N-glycans"; [Zhiqiang Wu](#)², Kuan Jiang^{1,2}, Hailiang Zhu², Cheng Ma², Zaikuan Yu², Lei Li², Wanyi Guan^{2,3}, Yunpeng Liu², He Zhu², Yanyi Chen², Shanshan Li², Jing Li^{1,2}, Jiansong Cheng¹, Lianwen Zhang¹, Peng George Wang^{1,2}

¹State Key Laboratory of Medicinal Chemical Biology, College of Pharmacy and Tianjin Key Laboratory of Molecular Drug Research, Nankai University, Tianjin, China.; ²Department of Chemistry, Georgia State University, Atlanta, USA.; ³College of Life Science, Hebei Normal University, Shijiazhuang, China.

Poster #: B223 || Abstract #: 254

"Unraveling the complex regulation of glycosylation using a systems approach"; [Nathan E. Lewis](#)^{1,2}, Philipp N. Spahn^{1,2}

¹University of California, San Diego; ²Novo Nordisk Foundation Center for Biosustainability at UC San Diego

Poster #: B224 || Abstract #: 255

"Novel Citronellyl-Based Photoprobes Designed to Identify ER Proteins Interacting with Dolichyl Phosphate and Dolichol-Linked Saccharide Intermediates in Yeast and Mammalian Cells"; [Jeffrey S. Rush](#)¹, Thangaiah Subramanian¹, Karunai Leela Subramanian¹, Fredrick O. Onono¹, Charles J. Waechter¹, H. Peter Spielmann^{1,2,3}

¹Department of Molecular and Cellular Biochemistry, University of Kentucky College of Medicine, Markey Cancer Center;

²Kentucky Center for Structural Biology; ³Department of Chemistry, University of Kentucky, Lexington, Kentucky 40536, USA

Session 9 | Glycans and glycan binding proteins in immunity

Poster #: B225 || Abstract #: 256

"Human milk oligosaccharides early in life modulate and program intestinal microbiota and immunity in an autoimmune mice model."; [Bernd Stahl](#)¹, Ling Xiao², Arjan P. Vos¹, Angeline Nato², Jacqueline Bastiaans¹, Thea Leusink-Muis², Johan Garssen^{1,2}, Belinda van't Land^{1,3}, Gert Folkerts²

¹Nutricia Research, Utrecht, The Netherlands; ²Division of Pharmacology, Department of Pharmaceutical Sciences, Utrecht University, The Netherlands; ³Department of Pediatric Immunology, University Medical Center, The Wilhelmina Children's Hospital, Utrecht, The Netherlands

Poster #: B226 || Abstract #: 257

"Dissecting the Unique Features of Neutrophil Glycobiology in Inflammation and Infection using Glycoanalytics"; [Ian Loke](#)¹, Vignesh Venkatakrisnan², Nicolle H. Packer¹, Morten Thaysen-Andersen¹

¹Dept. Chemistry and Biomolecular Sciences, Macquarie University, Sydney, Australia; ²Inst. Medical Chemistry and Cell Biology, Sahlgrenska Academy, University of Gothenburg, Sweden

Poster #: B227 || Abstract #: 258

"Sialylation is indispensable for establishment of fetal-maternal immune tolerance"; [Markus Abeln](#), Anja Münster-Kühnel, Rita Gerardy-Schahn, Birgit Weinhold
Medical School Hannover

Poster #: B228 || Abstract #: 259

"Identification, regulation and possible functions of newly identified polysialic acid carriers in microglia and macrophages"; [Herbert Hildebrandt](#)¹, Sebastian Werneburg¹, Hauke Thiesler¹, Falk FR Buettner¹, Herta Steinkellner², Harald Neumann³, Martina Mühlenhoff¹

¹Institute for Cellular Chemistry, Hannover Medical School, Hannover, Germany; ²Department of Applied Genetics and Cell Biology, University of Natural Resources and Life Sciences, Vienna, Austria; ³Institute of Reconstructive Neurobiology, University of Bonn, Bonn, Germany

Poster #: B229 || Abstract #: 260

"Core-1 O-glycosylation is essential for B cell development and homing"; [Junwei Zeng](#)¹, Yingchun Wang², Jianmei Wang², Tongzhong Ju², Richard D. Cummings¹

¹Department of Surgery, Harvard Medical School Beth Israel Deaconess Medical Center; ²Department of Biochemistry, Emory University School of Medicine

Poster #: B230 || Abstract #: 261

"Surface expression of B Cell Maturation Antigen is regulated by its own single N-glycan"; [Han-Wen Huang](#), Kuo-I Lin, Chi-Huey Wong

Genomics Research Center, Academia Sinica, Taipei, Taiwan

Poster #: B231 || Abstract #: 262

"Extensive glycosylation of Anti-Citrullinated Protein Antibodies variable domains in rheumatoid arthritis"; [Lise Hafkenscheid](#)¹, Hans U. Scherer^{1,3}, Tom W.J. Huizinga^{1,3}, Manfred Wuhler^{1,4}, Yoann Rombouts^{2,5}, Rene E.M. Toes^{1,3}

¹Leiden University Medical Center; ²Université de Toulouse; ³Department of Rheumatology; ⁴Center for Proteomics and Metabolomics; ⁵Institut de Pharmacologie et de Biologie Structurale

Poster #: B232 || Abstract #: 263

"Protein O-GlcNAcylation is crucial for B cell activation"; Kuo-I Lin¹, Jung-Lin Wu¹, Pan-Hung Hsu², Takashi Angata³

¹Genomics Research Center, Academia Sinica, Taipei 115, Taiwan; ²Department of Life Science, National Taiwan Ocean University, Keelung, 202, Taiwan; ³Institute of Biological Chemistry, Academia Sinica, Taipei 115, Taiwan

Poster #: B233 || Abstract #: 264

"Identification of Siglec ligands using proximity labeling method"; Lanyi Chang¹, Yi-Ju Chen², Chan-Yo Fan³, Albert Ventura¹, Chun-Cheng Lin³, Yu-Ju Chen², Takashi Angata^{1,4}

¹Institute of Biological Chemistry, Academia Sinica; ²Institute of Chemistry, Academia Sinica; ³Department of Chemistry, National Tsing Hua University; ⁴Institute of Biochemical Sciences, National Taiwan University

Poster #: B234 || Abstract #: 265

"Molecular Mechanisms for Carbohydrate Presentation to CD4+ T cells by MHCII Pathway"; Paeton L. Wantuch, Dustin R. Middleton, Lina Sun, Fikri Y. Avci
University of Georgia

Poster #: B235 || Abstract #: 266

"The multifunctional human lectin galectin-3 is a glycosaminoglycan-binding protein"; Tarun Dam, Melanie Talaga, Ni Fan, Ashli Fueri, Robert Brown, Purnima Bandyopadhyay
Mechanistic Glycobiology, Department of Chemistry, Michigan Technological University

Poster #: B236 || Abstract #: 267

"Identification and purification of novel glycan-binding cytotoxic hemolysins that interact with cholesterol"; Ni Fan¹, Robert Brown¹, Melanie Talaga¹, Christina Welch¹, Ashli Fueri¹, Kyle Driscoll², Kevin Lawry¹, Alexander Vizurraga¹, Ramandeep Rekhi¹, Purnima Bandyopadhyay¹, Tarun Dam¹

¹Mechanistic Glycobiology, Department of Chemistry, Michigan Technological University; ²Biological Sciences, Michigan Technological University

Poster #: B237 || Abstract #: 268

"B cell independent sialylation of IgG"; Mark B. Jones¹, Douglas M. Oswald¹, Smita Joshi², Sidney W. Whiteheart², Ron Orlando³, Brian A. Cobb¹

¹Case Western Reserve University; ²University of Kentucky; ³University of Georgia

Poster #: B238 || Abstract #: 269

"Platelet releasate fuels circulatory ST6Gal1 activity to modulate plasma glycoprotein sialylation"; Douglas M. Oswald¹, Mark B. Jones¹, Smita Joshi², Sidney W. Whiteheart², Ron Orlando³, Brian A. Cobb¹

¹Case Western Reserve University; ²University of Kentucky; ³University of Georgia

Poster #: B239 || Abstract #: 270

"Survey of receptor interactions with a novel array of mycobacterial glycans"; Maureen E. Taylor¹, Ruixiang Zheng², Sabine A. F. Jégouzo¹, Maximus J. Rex¹, Todd L. Lowary², Kurt Drickamer¹

¹Department of Life Sciences, Imperial College London; ²Department of Chemistry, University of Alberta

Poster #: B240 || Abstract #: 271

"Analogues of mycobacterial glycolipids binding to the macrophage receptor mincle"; Kurt Drickamer¹, Hadar Feinberg², Neela D. S. Rambaruth¹, Sabine A. F. Jégouzo¹, Kristian M. Jacobsen³, Rasmus Djurhuus³, Thomas B. Poulsen³, William I. Weis², Maureen E. Taylor¹

¹Department of Life Sciences, Imperial College London; ²Departments of Structural Biology and Molecular & Cellular Physiology, Stanford University School of Medicine; ³Department of Chemistry, Aarhus University

Poster #: B241 || Abstract #: 272

"GLYCOMICS OF CHRONIC OBSTRUCTIVE PULMONARY DISEASE LUNG TISSUE"; Tadahiro Kumagai¹, Zhou Zhu², Patty Lee², Michael Tiemeyer¹

¹Complex Carbohydrate Research Center, University of Georgia; ²Yale University School of Medicine

Poster #: B242 || Abstract #: 273

"ST3Gal1 truncates O-glycans and augments galectin-3 binding to CD45 in human B cells"; Nicholas Giovannone^{1,4}, Jenna Geddes-Sweeney^{1,4}, Jennifer Liang¹, Aristotelis Antonopoulos², Stephen M. Pochebit^{3,4}, Neil Bhattacharyya^{5,6}, Steven R. Barthel¹, Hans R. Widlund¹, Stuart M. Haslam², Charles J. Dimitroff^{1,4}

¹Department of Dermatology, Brigham and Women's Hospital, Boston, MA, USA; ²Department of Life Sciences, Imperial College London, London, United Kingdom; ³Department of Pathology, Brigham and Women's Hospital, MA, USA; ⁴Harvard Medical School, Boston, MA, USA; ⁵Department of Surgery, Division of Otolaryngology, Brigham and Women's Hospital, Boston, MA, USA; ⁶Department of Otolaryngology, Harvard Medical School, Boston, MA, USA

Poster #: B243 || Abstract #: 274

"Characterization of IgG glycosylation in rheumatoid arthritis patients by MALDI-TOF-MSn and Capillary Electrophoresis"; Chuncui Huang¹, Tiancheng Zhan², Yaming Liu¹, Hongmei Wu^{1,3}, Yan Li^{1,4}

¹Institute of Biophysics, Chinese Academy of Sciences; ²Key laboratory of Carcinogenesis and Translational Research (Ministry of Education), Department of Colorectal Surgery, Peking University Cancer Hospital & Institute; ³GuangDong Bio-Healthtech Advanced; ⁴University of Chinese Academy of Sciences

Poster #: B244 || Abstract #: 275

"Different Airway Ligands for Human and Mouse Eosinophilic Siglecs"; Ryan N. Porell¹, Anabel Gonzalez-Gil¹, Steve M. Fernandes¹, Katarina Vajn¹, Huifeng Yu¹, Kazuhiro Aoki², Simone Kurz², Michael Tiemeyer², Ronald L. Schnaar¹

¹Department of Pharmacology and Molecular Sciences, Johns Hopkins University School of Medicine, Baltimore, MD; ²University of Georgia, Complex Carbohydrate Research Center, Athens, GA

Poster #: B245 || Abstract #: 276

"Ligands for siglecs in human airway exudates: comparison of Siglec-8, Siglec-9, Siglec E, and Siglec-F binding patterns"; Steve M. Fernandes¹, Anabel Gonzalez-Gil¹, Ryan N. Porell¹, Kazuhiro Aoki², Michael Tiemeyer², Ronald L. Schnaar¹

¹Department of Pharmacology and Molecular Sciences, Johns Hopkins University School of Medicine, Baltimore, MD; ²University of Georgia, Complex Carbohydrate Research Center, Athens, GA

Poster #: B246 || Abstract #: 277

"Galectin-8 stimulates a protective immune response in a viral infection model"; Oscar Campetella¹, Julieta Carabelli¹, Cecilia A Prato¹, Valeria Quattrocchi², Alejandra D'Antuono³, Patricia Zamorano², María V. Tribulatti¹

¹Universidad Nacional de San Martín / Instituto de Investigaciones Biotecnológicas; ²Instituto de Virología (INTA-Castelar); ³Instituto de Ciencia y Tecnología Dr. Cesar Milstein. Buenos Aires, Argentina

Poster #: B247 || Abstract #: 278

"GSnP-6, analogue of PSGL-1, inhibits P-selectin in vitro and in vivo"; Mohammed YR Sardar^{1,2}, Venkata R. Krishnamurthy^{1,2}, Simon Park^{1,2}, Appi Mandhapati^{1,2}, Walter J. Wever^{1,2}, Xuezheng Song³, Xiacong Wang⁴, Vasilios Morikis⁵, Scot I Simon⁵, Robert J. Woods^{4,6}, Richard D. Cummings³, Elliot L. Chaikof^{1,2}

¹Department of Surgery, Center for Drug Discovery and Translational Research, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA; ²Wyss Institute of Biologically Inspired Engineering, Harvard University, Boston, MA; ³Department of Biochemistry, Emory University, Atlanta, GA; ⁴Complex Carbohydrate Research Center, University of Georgia, Athens, GA; ⁵Department of Biomedical Engineering, University of California Davis, Davis, CA; ⁶School of Chemistry, National University of Ireland, Galway, University Road, Galway, Ireland

Poster #: B248 || Abstract #: 279

"The Immunoglobulin G1 N-glycan Composition Affects Binding to each Low Affinity Fc γ Receptor"; Ganesh P. Subedi, Adam W. Barb

Roy J. Carver Department of Biochemistry, Biophysics and Molecular Biology, Iowa State University, Ames, Iowa 50011

Poster #: B249 || Abstract #: 280

"New methods for assessments of clustered O-glycosylation and for determining the role of ST6GalNAc-II in the formation of galactose-deficient IgA1 in IgA nephropathy, an autoimmune disease"; Tyler J. Stewart^{1,2}, Kazuo Takahashi³, Hitoshi Suzuki⁴, Stacy D. Hall¹, Rhubell Brown¹, Zina Moldoveanu¹, Milan Raska^{5,1}, Bruce A. Julian^{6,5}, Jan Novak¹, Matthew B. Renfrow²

¹Department of Microbiology, University of Alabama at Birmingham; ²Department of Biochemistry and Molecular Genetics, University of Alabama at Birmingham; ³Department of Nephrology, Fujita Health University School of Medicine; ⁴Department of Internal Medicine, Juntendo University Faculty of Medicine; ⁵Department of Immunology, Faculty of Medicine

Poster #: B250 || Abstract #: 281

"Identification of the binding roles of terminal and internal glycan epitopes using enzymatically synthesized N-glycans containing tandem epitopes"; Wanyi Guan^{1,2}, Zhigang Wu¹, Yunpeng Liu¹, Cheng Ma¹, Lei Li¹, Jing Bai², Lauren Byrd-Leotis³, Yi Lasanajak⁴, Yuxi Guo¹, Liuqing Wen¹, He Zhu¹, Jing Song¹, Yanhong Li⁵, David A. Steinhauer³, David F. Smith⁴, Baohua Zhao², Xi Chen⁵, Peng George Wang¹

¹Department of Chemistry and Center of Diagnostics & Therapeutics, Georgia State University, Atlanta, USA; ²College of Life Science, Hebei Normal University, Shijiazhuang, China; ³Departments of Microbiology and Immunology, Emory University School of Medicine, Atlanta, USA; ⁴Department of Biochemistry and Emory Comprehensive Glycomics Core, Emory University School of Medicine, Atlanta, USA; ⁵Department of Chemistry, University of California, Davis, USA

Poster #: B251 || Abstract #: 282

"A Comprehensive N-glycan Microarray Reveals Glycan-Protein Binding Details"; Lei Li¹, Angie Calderon¹, Jian Zhang², Peng G. Wang¹

¹Department of Chemistry, Georgia State University, Atlanta, GA 30303; ²Z Biotech LLC, Aurora, CO 80045

Poster #: B252 || Abstract #: 283

"Human Intelectin-1, a member of the X-type lectin family, binds specific microbial glycans"; Jonathan Viola¹, Jin Kyu Lee¹, Ryan McBride², David Smith³, Richard Cummings⁴, James Paulson², Kelley Moremen¹, Michael Pierce¹

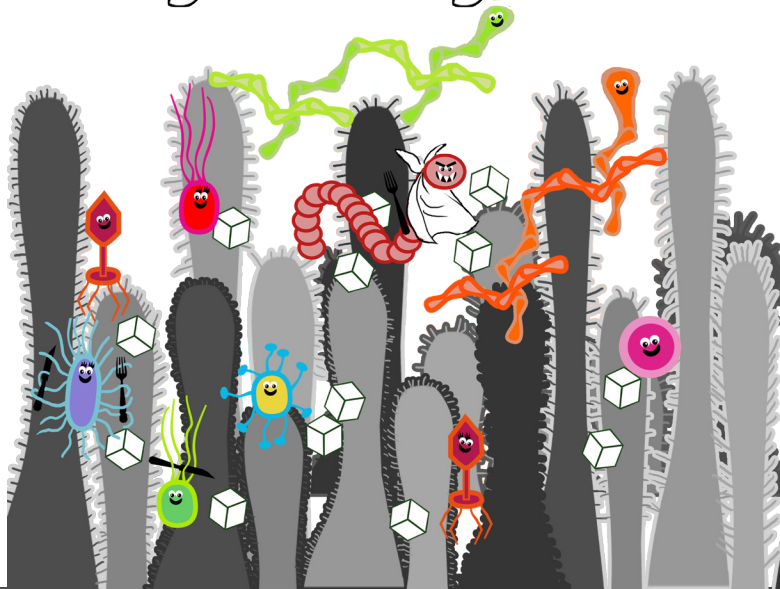
¹University of Georgia, Athens, GA; ²Scripps Research Institute, La Jolla, CA; ³Emory University School of Medicine, Atlanta, GA; ⁴Harvard Medical School, Cambridge, MA

Poster #: B254 || Abstract #: 284

"Biochemical Characterization of Family GT47 Glycosyl Transferases Involved in Xylan Biosynthesis"; Peter Smith¹, Abigail Agyeman¹, Maria Peña¹, Malcolm O'Neill¹, Jeong Yeh Yang¹, Breeanna Urbanowicz¹, Kelley Moremen¹, and William York¹

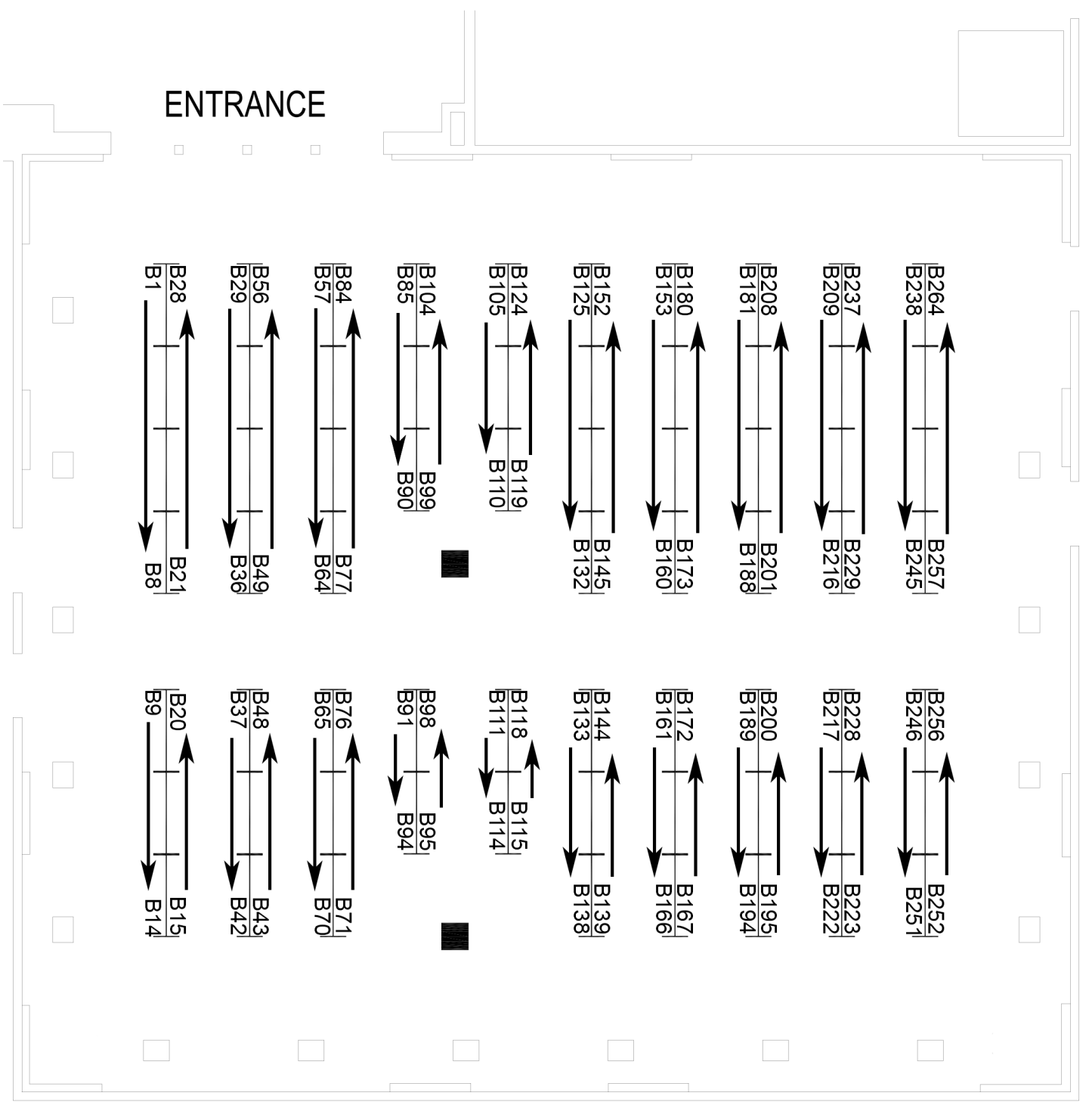
¹Complex Carbohydrate Research Center, 315 Riverbend Road, Athens, GA, 30602.

got sugar?



This year, the theme of the Society for Glycobiology Annual Meeting is Glycoscience communities. We are grateful to Kofi Garbrah for the T-shirt design shown. The T-shirts will be awarded to all the poster prize winners and speakers selected from the abstract submissions. There will be additional T-shirts available for purchase at the registration table.

Poster Layout Map



Megan Aarnio | University of Georgia
Karen Abbott | University of Arkansas for Medical Sciences
Markus Abeln | Medical school Hannover
Markus Aebi | ETH Zürich
Praveen Agrawal | New York University Medical College
Tomoya Akama | Kansai Medical University
Takashi Angata | Academia Sinica
Peggi Angel | Medical University of South Carolina
Aristotelis Antonopoulos | Imperial College London
Kazuhiro Aoki | University of Georgia CCRC
Kiyoko Aoki-Kinoshita | Soka University
Fikri Avci | University of Georgia
Parastoo Azadi | University of Georgia CCRC
Maryam Azimzadeh Irani | Bioinformatics Institute
Peter Aziz | University of California, Santa Barbara
Ieva Bagdonaitė | University of Copenhagen
Hans Bakker | Hannover Medical School
Adam Barb | Iowa State University
Mariana Barboza | University of California, Davis
Linda Baum | University of California, Los Angeles School of Medicine
Bernadette Beadle | University of Alberta
Susan Bellis | University of Alabama at Birmingham
Steven Berardinelli | University of Georgia
Kirk Bergstrom | Oklahoma Medical Research Foundation
Marshall Bern | Protein Metrics, Inc.
Donald Bernstein | University of Georgia
Gaurang Bhide | University of Illinois at Chicago
Alicia Bielik | New England Biolabs, Inc.
Olatomiwa Bifarin | University of Georgia CCRC
Ian Black | University of Georgia
David Bolam | Newcastle University
Andrew Boland | University of Georgia
Michelle Bond | National Institute of Health
Kristina Borst | Hannover Medical School
Michael Boyce | Duke University School of Medicine
Sally Boyd | University of Georgia
Curtis Brewer | Albert Einstein College of Medicine
Justina Briliute | Newcastle University
Inka Brockhausen | Queen's University
Nathan Brown | AbbVie
Lauren Byrd-Leotis | Emory University
Matthew Campbell | Macquarie University
Oscar Campetella | Universidad Nacional de San Martin
Alan Cartmell | Newcastle university
Arturo Casadevall | Johns Hopkins Bloomberg School of Public Health
Sandra Cascio | University of Pittsburgh
Wengang Chai | Imperial College London
Robert Chalkley | University of California, San Francisco
Ishita Chandel | Texas A&M University
Digantkumar Chapla | University of Georgia CCRC
Yu-Ching Chen
Pi Wan Cheng | University of Nebraska Medical Center
Natalia Cherepanova | University of Massachusetts Medical School
Luc Chevrier | Elicityl
Jin Won Cho | Yonsei University
Junwon Choi | Stanford University
Brady Clark | Sussex Research
David Clark | The Johns Hopkins University
Brian Cobb | Case Western Reserve University
Darrell Cockburn | University of Michigan
Karen Colley | University of Illinois College of Medicine
Eoin Cosgrave | Seattle Genetics
Brett Crawford | BioMarin Pharmaceuticals
Clay Crippen | University of Georgia
Lucy Crouch | Newcastle University
Richard Cummings | Harvard Medical School
Michael Curtin | Promega Corporation
Fiona Cuskin | Newcastle University
Christopher Cutler | Beth Israel Deaconess Medical Hospital/Harvard
Tarun Dam | Michigan Technological University
Cristina De Castro | University of Napoli
M. Lorna De Leoz | National Institute of Standards and Technology
Felipe De Oliveira | Uppsala University
PAUL DeAngelis | University of Oklahoma
Anne Dell | Imperial College
Charles Dimitroff | Brigham and Women's Hospital
Hayley Dingerdissen | The George Washington University
Justyna Dobruchowska | University of Georgia CCRC
Allison Doerr | Springer Nature
Daniel Dransfield | Siamab Therapeutics
Kurt Drickamer | Imperial College London
Justin Duma | University of Georgia
Alexander Eletsy | University of Georgia CCRC
Marilynn Etzler | University of California, Davis
Tanguy Eveno | Griffith University
Daniel Falconer | Iowa State University
Ni Fan | Michigan Technological University
Ten Feizi | Imperial College
Mario Feldman | University of Alberta
Charles Fermaintt | University of Texas Southwestern
Steve Fernandes | Johns Hopkins Medical Institution
Darón Freedberg | Center for Biologics Evaluation and Research/FDA
Hudson Freeze | SBP Medical Discovery Institute
Jana Fühling | Hannover Medical School
Masaoki Fujii | Ritsumeikan University
Yoko Fujita-Yamaguchi | City of Hope
Michiko Fukuda | National Institute of Advanced Industrial Science and Technology (AIST)
Alexandra Fulton | Oxford University Press
Jorge Galan | Yale University
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Elisabet Gas-Pascual | The University of Georgia
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Michael Gibson | QA-Bio, LLC
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Michel Gilbert | National Research Council Canada
Jeffrey Gildersleeve | National Institutes of Health
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Ethan Goddard-Borger | Walter and Eliza Hall Institute
Anabel Gonzalez-Gil | Johns Hopkins University
Jeffrey Gordon | Center for Genome Sciences and Systems Biology
Jennifer Groves | The Johns Hopkins University School of Medicine
Minhui Guan | Mississippi State University
Wanyi Guan | Georgia State University
Huabei Guo | University of Georgia CCRC
Brian Haab | Van Andel Research Institute
Lise Hafkenschied | Leiden University Medical Center
Stephanie Halmo | University of Georgia
Robert Haltiwanger | University of Georgia
Melinda Hanes | Beth Israel Deaconess Medical Center
Audra Hargett | University of Alabama
Gerald Hart | John Hopkins University School of Med
Stuart Haslam | Imperial College London
Benjamin Haslund-Gourley | University of California, Santa Barbara
Marija Heffer | Josip Juraj Strossmayer University of Osijek
Jamie Heimbürg-Molinari | Beth Israel Deaconess Medical Center, Harvard Med
Douglas Heithoff | University of California, Santa Barbara
Thierry Hennet | University of Zurich
Gaetan Herbomel | National Institutes of Health NIDCR
Herbert Hildebrandt | Hannover Medical School
Keisuke Hirata | Toyo University
Carolin Hoppe | Hannover Medical School
Risa Horiuchi | Graduate School of Life Sciences
Hitomi Hoshino | University of Fukui
Masae Hosoda | Soka University
Vishwanath Reddy Hothpet | University of Nebraska Medical Center
Brooke Howell | Texas A&M University
Peter Hsueh | Van Andel Institute
Jing Hu | Jiangnan University
Chuncui Huang | Institute of Biophysics
Han-Wen Huang | Academia Sinica
Xiaohua Huang | Pacific Northwest Research Institute
Kathya Huante | State University of Morelos
Gregory Hudalla | University of Florida
Justin Hyche | ProZyme, Inc.
Hiroshi Ichikawa | The University of Georgia
Yuki Ichikawa | IMRA America, Inc.
Jong One Im | Arizona State University
Lucas Jae | The Netherlands Cancer Institute
Pamela James | Vector Laboratoires
Donald L. Jarvis | University of Wyoming
Angie Jinks | Thermo Fisher Scientific
Mark Jones | Case Western Reserve University
Soumya Joseph | University of Iowa
Nathalie Juge | Institute of Food Research
Nourine Kamili | Emory University
Nobuku Kawasaki | Ritsumeikan University Research Center- Glycobiotech
Toshisuki Kawasaki | Ritsumeikan University
Laura Kiessling | University of Wisconsin-Madison
Weston Kightlinger | Northwestern University
Joshua Klein | Boston University
Barbora Knoppova | University of Alabama at Birmingham
Motohiro Kobayashi | Faculty of Medical Sciences, University of Fukui
Nicole Koropatkin | University of Michigan Medical School
Soumya Krishnamurthy | UT Southwestern Medical Center
Matthew Kudelka | Emory University
Tadahiro Kumagai | University of Georgia ccr
Akira Kurosaka | Kyoto Sangyo University
Janet Larkin | Natlial Institutes of Health
Dimitrios Latousakis | Institute of Food Research
Joseph T.Y. Lau | Roswell Park Cancer Institute
Gordon Lauc | University of Zagreb
Reiko T. Lee | Johns Hopkins University
Yuan Lee | Johns Hopkins University
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Maria Leguizamon | Universidad Nacional de San Martin
Sylvain Lehoux | Beth Israel Deaconess Medical Hospital/Harvard
Mark Lehrman | UT-Southwestern Medical Center
Nathan Lewis | University of California, San Diego
Chi-Shan Li | Academia Sinica
Chunxia Li | Ocean University of China

Jianming Li | Shanghai Institutes of Biological Sciences
 Lei Li | Mississippi State University
 Lei Li | Georgia State University
 Wei Li | Dalian Ocean University
 Yan Li | Institute of Biophysics
 Zhen Li | Imperial College London
 Zi Li | University of Georgia CCRC
 Kuo-I Lin | Genomics Research Center, Academia Sinica
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 David Live | University of Georgia CCRC
 Kaspar Locher | ETH Zürich
 Rachel LoPilato | University of Georgia
 Natalie Louis | Protagen Protein Services
 Elisabeth Lowe | Newcastle University
 Zhongpeng Lu | University of Arkansas for Medical Sciences
 Alex Luebbbers | New England Biolabs, Inc.
 Kelvin Luther | GlycoBac, LLC
 Hideaki Mabashi-Asazuma | University of Wyoming
 Ana Maria Magalhaes | IPATIMUP
 John Magnani | GlycoMimetics, Inc.
 Lara Mahal | New York University
 Charles Manhardt | Roswell Park Cancer Institute
 Jamey Marth | Center for Nanomedicine
 Marissa Martinez | The Johns Hopkins School of Medicine
 Masaaki Matsubara
 Yasuyuki Matsumoto | Beth Israel Deaconess Medical Center
 Juliane Mayr
 Tanya McKittrick | Beth Israel Deaconess Medical Center
 Christopher Meadows | University of Wyoming
 Sanjib Meitei | PREMIER Biosoft
 Stefan Mereiter | IPATIMUP
 Dustin Middleton | University of Georgia
 Harvey Miller | Selectin Biosciences Inc
 Yoshiaki Miura | Sumitomo Bakelite Co., Ltd.
 Nobumitsu Miyanishi | Toyo University
 Kristina Mlinac-Jerkovic | University of Zagreb School of Medicine
 Yasu Morita | University of Massachusetts Amherst
 Juan Mucci | Universidad de San Martín
 Toni Mueller | University of Alabama at Birmingham
 Jose Munoz | Newcastle University
 Allen Murray | Glycan Technologies, Inc.
 Alison Nairn | University of Georgia CCRC
 Naosuke Nakamura | Kyoto Sangyo University
 Waqas Nasir | Gothenburg University
 Sarah Needs | The Open University
 Bobby Ng | Sanford Burnham Prebys Medical Discovery Institute
 Aleksandra Nita-Lazar | National Institutes of Health, NIAID
 Motohiro Nonaka | AIST
 Malgorzata Norton | Center for Biologics Evaluation and Research/FDA
 Harald Nothaft | University of Alberta
 Thomas A. Oeltmann | Vanderbilt University
 Roisin O'Flaherty | National Institute for Bioprocessing Research and Training
 Mitsutaka Ogawa | Nagoya University
 Stéphanie Olivier-Van Stichelen | National Institute of Health/NIDDK
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 Takashi Ota | TCI America
 Ahmet Ozdilek | University of Georgia
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 Angelina Palma | UCIBIO | FCT-NOVA
 Vladislav Panin | Texas A&M University
 Robert Patry | University of Georgia
 Earnest James Paul Daniel | Case Western Reserve University
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 James Prestegard | University of Georgia CCRC
 Sabarinath PS | Institute for Stem Cell Biology and Regenerative Medicine (InStem)
 Patrick Punch | University at Buffalo
 Said Rabbani | University of Basel
 Prakash Radhakrishnan | University of Nebraska Medical Center
 Rekha Raghunathan | Boston University
 Rene Ranzinger | University of Georgia CCRC
 Celso Reis | Institute of Molecular Pathology and Immunology of
 Diana Restepo Espinosa | Universidad de Antioquia
 Antonietta Restuccia | University of Florida
 Emma Reungoat | Claude Bernard University Lyon 1 (UCBL)
 Bruce Rogers | Carbosynth LLC
 Jeffrey Rohrer | Thermo Fisher Scientific
 Katelyn Rosenbalm | University of Georgia
 Jeffrey Rush | University of Kentucky College of Medicine
 Julian Saba | Thermo Fisher Scientific
 Robert Sabatini | University of Georgia
 Jessica Sacher | University of Alberta
 Robert Sackstein | Harvard Medical School
 Nadine Samara | National Institutes of Health NIDCR
 Silvia Sanz Sender | ISGlobal and University of Florida
 Mohammed Sardar | BIDMC-Harvard Medical School
 Henrik Scheller | Lawrence Berkeley National Laboratory

Ronald Schnaar | The Johns Hopkins University
 Marie-Laure Schneider | INNOPSYS
 Benjamin Schumann | Stanford University
 Nathan Schurman | Pacific Northwest Research Institute
 Ute Schuster | Hannover Medical School
 Hilary Scott | Texas A&M University
 Anirudh Sethi | UT Southwestern Medical Center
 Manveen Sethi | Boston University School of Medicine
 Aleksandra Shcherbakova | Hannover Medical School
 Mohammed Sheikh | University of Georgia CCRC
 Xiofeng Shi | New England Biolabs, Inc.
 Shiteshu Shrimal | Univ of Massachusetts medical school
 Shoib Siddiqui | University of California, San Diego
 Danish Singh | University of Georgia
 Peter Smith | University of Georgia CCRC
 Abigail Songok | Louisiana State University
 Melissa St. Amand | Schafer Corporation
 Bernd Stahl | Danone Nutricia Research
 Kathrin Stavenhagen | Leids Universitair Medisch Centrum
 Mindy Stavert | Baylor College of Medicine
 Richard Steet | University of Georgia CCRC
 Tyler Stewart | University of Alabama at Birmingham
 Lars Stöckl | GlycoTope
 Shiwei Sun | Institute of Computing Technology
 Xiaodong Sun | Beth Israel Deaconess Medical Center
 Tadashi Suzuki | RIKEN
 Jenna Sweeney | Brigham and Women's Hospital/Harvard
 Christine Szymanski | University of Georgia
 Hideyuki Takeuchi | University of Georgia CCRC
 Melanie Talaga | College of St. Scholastica
 Mitali Tambe | SBP Medical Discovery Institute
 Jun Tanaka | Ritsumeikan University
 Naoyuki Taniguchi | RIKEN Global Research Cluster
 Rahil Tajale | University of Georgia CCRC
 Brian Taylor | Vector Laboratories
 Maureen Taylor | Imperial College London
 Jose-Marc Techner | Northwestern University
 Kelly Ten Hagen | National Institutes of Health
 Samnang Tep | Amgen
 Morten Thaysen-Andersen | Macquarie University
 Cody Thomas | University of Georgia
 Michael Tiemeyer | University of Georgia CCRC
 Hiroaki Tokiwa | Rikkyo University
 Michela Tonetti | University of Genova
 Kenji Uchimura | Nagoya University School of Medicine
 Michael Vaill | University of California, San Diego
 Ajit Varki | University of California-San Diego
 Lucas Veillon | Texas Tech University
 Immacolata Venditto | Newcastle University
 Yaron Vinik | Weizmann Institute of Science
 Jonathan Viola | University of Georgia
 Charles Waechter | University of Kentucky
 Takumi Wakisaka
 Xiu-Feng Wan | Mississippi State University
 Hans Wandall | University of Copenhagen
 Amberlyn Wands | UT Southwestern Medical Center
 Xiaocong Wang | University of Georgia CCRC
 Xu Wang | Arizona State University
 Paeton Wantuch | University of Georgia
 Willem Wassenaar | Wellesley Therapeutics, Inc.
 Lance Wells | University of Georgia CCRC
 Feng Wen | Mississippi State University
 Lori West | University of Alberta/CNTRP
 Ulrika Westerlind | Leibniz Institute for Analytical Sciences ISAS
 Michael Wetter | Limmatech Biologicc AG
 Iain Wilson | University of Bodenkultur
 Robert Woods | University of Georgia CCRC
 Hung-Jen Wu | Texas A&M University
 Ronghu Wu | Georgia Institute of Technology
 Zhigang Wu | Georgia State University
 Lijun Xia | Oklahoma Medical Research Foundation
 Yong Xiang | University of Georgia CCRC
 Xianzhong Xu | University of Georgia
 Issaku Yamada | The Noguchi Institute
 Yu Yamaguchi | Sanford-Burnham Medical Research Institute
 Nan Yan | UT Southwestern Medical Center
 Won Ho Yang | Sanford Burnham Prebys Medical Discovery Institute
 William York | University of Georgia CCRC
 Seokho Yu | University of Georgia CCRC
 Hyun Gi Yun | California Institute of Technology
 Natasha Zachara | Johns Hopkins University
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 Junwei Zeng | Beth Israel Deaconess Medical Center
 Mao Zhang | University of Arkansas for Medical Sciences
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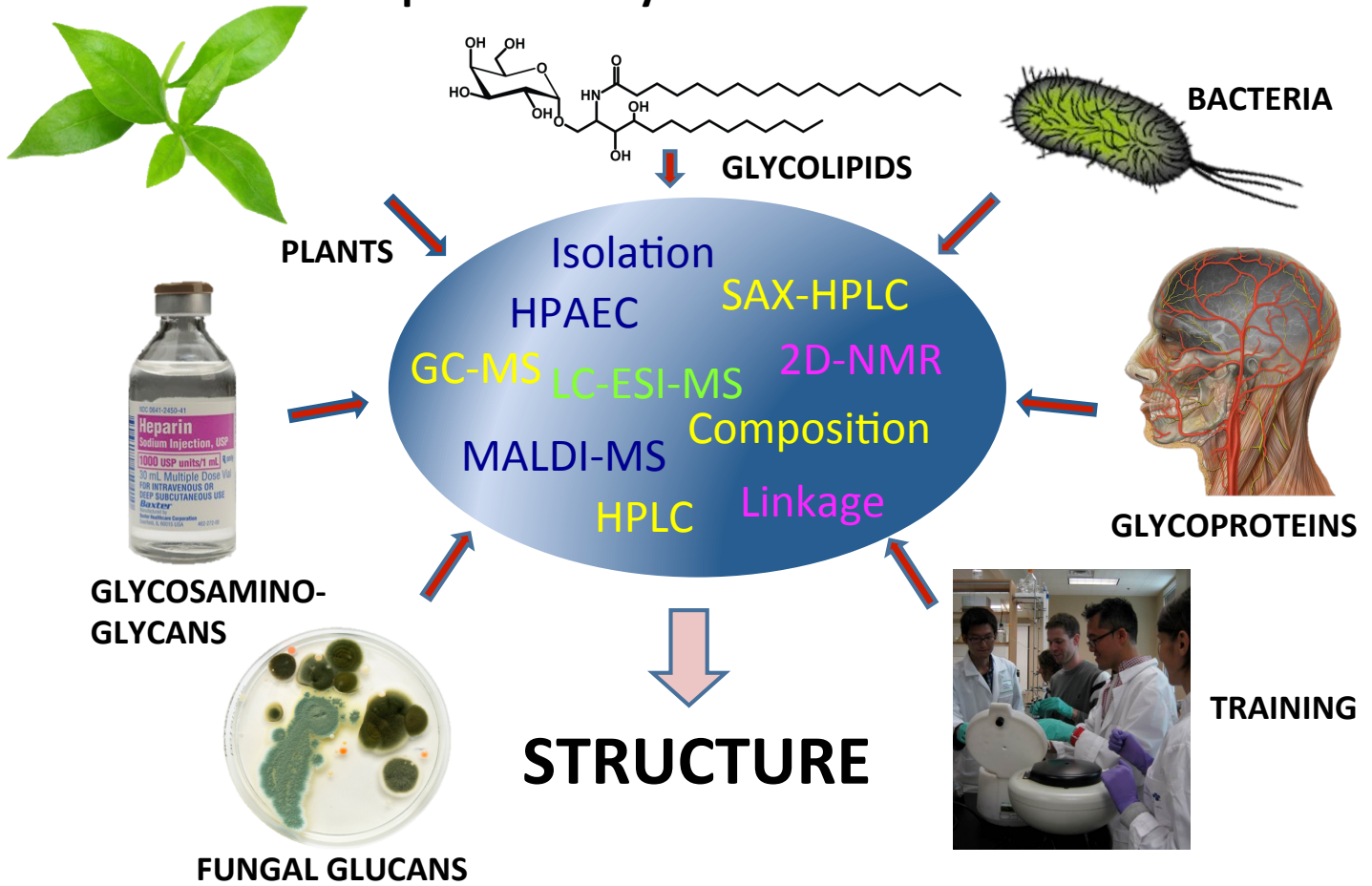
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2017 Society for Glycobiology Meeting
November 5-8, 2017
The Hilton Portland & Executive Tower
Portland, Oregon USA

Theme: Glycobiology-Inside and Outside the Box:
Collaborations Across Disciplines

Meeting Chair:

Dr. Karen J. Colley
(University of Illinois, Chicago)

Featured Speakers:

Dr. Jeffrey Esko (University of California, San Diego) and Dr. Maura Poli (University of Brescia, Brescia, Italy)

Dr. Gerald Hart (Johns Hopkins Medicine) and Dr. Olof Lagerlöf (Karolinska Institute)

Dr. Michael Tiemeyer (University of Georgia/ Complex Carbohydrate Research Center) and Dr. Kevin Strauss (Clinic for Special Children, Lancaster, PA)

Sessions:

- Glycans and metabolic regulation
- Glycolipids in health and disease
- Biosynthesis and structure of glycans, their binding proteins and glycosylation enzymes
- Glycans in immunity and infection
- Prokaryotic glycobiology
- Glycobiology of development
- Glycoengineering and glycan related therapeutics
- Glycan related diseases and disorders



Save The Date

Saturday, November 19

7:00AM-6:00PM

Registration

The District Registration Counters

8:00AM - 12:00PM

Satellite 1: Glycoprotein Technologies

Magazine Room

8:00AM - 12:00PM

Satellite 2: Glyco-Bioinformatics

Canal Room

10:00AM - 12:00PM

Board of Directors Meeting (invitees only)

Commerce Room

1:00PM - 1:15PM

Conference Opening Remarks

Hilton Exhibition Center (HEC) A

1:15PM - 4:15PM

Session 1: CFG theme - Using model systems to understand biological roles of glycans

Hilton Exhibition Center (HEC) A

6:00PM - 7:30PM

Session 2: Opening session (Innovator and Meyer awards)

Hilton Exhibition Center (HEC) A

7:30PM - 9:30PM

Welcome Reception & Exhibits

St. Charles Ballroom

Sunday, November 20

7:00AM-4:00PM

Registration

The District Registration Counters

7:30AM - 8:30AM

Continental Breakfast

St. Charles Ballroom

8:30AM - 10:00AM

Session 3: Glycan foraging by vertebrates and microbes

St. James Ballroom

10:00AM - 10:30AM

Coffee Break

St. Charles Ballroom

10:30AM - 12:00PM

Session 4: Host-pathogen interactions

St. James Ballroom

12:00PM - 1:30PM

Lunch on your own

12:00PM - 1:30PM

Glycobiology Editorial Board Meeting (Invitees only)

Jefferson Ballroom

1:30PM - 3:30PM

Poster Session I and Exhibits

St. Charles Ballroom

Coffee break provided

1:30PM - 3:30PM

Glyco-Bioinformatics Hands-on Session

Jackson Room

Monday, November 21

3:30PM - 5:00PM

Session 5: Prokaryote versus eukaryote glycobiology: similarities and differences

St. James Ballroom

7:30AM - 3:00PM

Registration

The District Registration Counters

7:30AM - 8:30AM

Continental Breakfast

St. Charles Ballroom

8:30AM - 10:00AM

Session 6: Glycans in development and genetic disorders

St. James Ballroom

10:00 AM - 10:30AM

Coffee Break

St. Charles Ballroom

10:30AM - 12:00PM

Session 7: Relevance of carbohydrates in disease, diagnosis, prevention and treatment

St. James Ballroom

12:00PM - 1:30PM

Lunch on your own

1:30PM - 3:30PM

Poster Session II and Exhibits

St. Charles Ballroom

Coffee break provided

3:30PM - 4:15PM

SFG Business Meeting (All attendees are encouraged to attend and prizes will be available)

St. James Ballroom

4:15PM - 6:00PM

Awards Ceremony

St. James Ballroom

6:00PM - 7:00PM

Break

7:00PM - 10:00PM

Banquet

Audubon Aquarium of the Americas - 1 Canal St, New Orleans, LA 70130 (5 minute walk from hotel)

Nominal fee. Extra tickets for guests may be ordered.

Tuesday, November 22

8:00AM - 10:00AM

Registration

The District Registration Counters

7:30AM - 8:30AM

Continental Breakfast

St. Charles Ballroom

8:30AM - 10:00AM

Session 8: New tools and their applications

St. James Ballroom

10:00AM - 10:30AM

Coffee Break

St. Charles Ballroom

10:30AM - 12:00PM

Session 9: Glycans and glycan binding proteins in immunity

St. James Ballroom

12:00PM - 12:10PM

Closing Remarks

PROGRAM AT A GLANCE