

JOINT MEETING OF THE
Society for Glycobiology
American Society for Matrix Biology



November 11-14, 2012 • Sheraton Hotel and Marina • San Diego, CA

Meeting Program



www.asmbisfg2012.org



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Society for Glycobiology
American Society for Matrix Biology



Nov. 11-14, 2012 • Sheraton Hotel and Marina • San Diego, CA

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JOINT MEETING OF THE
Society for Glycobiology & American Society for Matrix Biology

Dear Attendees,

It is with great pleasure that we welcome you to the first joint meeting of the American Society for Matrix Biology and the Society for Glycobiology. The joint Program Committee, chaired by Hudson Freeze (President, SFG) and Jeff Davidson (ASMB President-elect) has done a stellar job in putting together an outstanding set of speakers and sessions that cover our overlapping interests in extracellular matrix proteins, trafficking and secretion, protein modifications, and extracellular protein and carbohydrate functions. In addition, the program includes topics of specific interest to glyco- or matrix biologists. We are certain that you will find this meeting to be scientifically productive and fulfilling as well as fun.

Both societies recognize the importance of our junior scientist members and the depth of their contributions to the success of this meeting. Therefore, we honor them through selections for oral presentations, poster travel awards, and ASMB Minority Scholarships. Tom Barker is the Junior Investigator awardee for ASMB and ISMB has selected three outstanding young scientists for oral presentations. We are pleased to honor Billy Hudson as the ASMB Senior Investigator awardee, Richard Hynes as the ISMB Distinguished Investigator, Kurt Drickamer winner of the Karl Meyer Award, and Werner Reutter recipient of the Rosalind Kornfeld Award in special awards sessions on Monday evening. This year's scientific program is enhanced by inclusion of four Guest Symposia. ASMB hosts the Tissue Engineering and Regenerative Medicine International Society (TERMIS) and the Wound Healing Society (WHS). SFG again welcomes the Consortium for Functional Glycomics with their Participating Investigator Meeting and the analytical satellite meeting on Advances in Glycoprotein Production, Characterization and Modification. These symposia will be held on Sunday, preceding the official start of the meeting. By reaching out to kindred societies, we are expanding the breath and value of what this meeting provides to our members.

We value our sponsors and our partnerships with the ISMB and the NIH without whom this program would not have been possible. We are grateful for the efforts of our Fundraising Committee and of the SFG and ASMB Officers, SFG Board of Directors, and ASMB Council. We especially thank Jen Holland, Silvy Song and Kendra LaDuca of FASEB's Society Management Services team whose dedication, spirit, and organizational prowess have been key to planning and execution of this meeting.

We are very excited about this meeting and look forward to seeing everyone at the sessions, award presentations, and receptions. This is an excellent opportunity to reconnect with old colleagues and forge new relationships. Thank you again for your participation and enjoy the meeting.



Jean E. Schwarzbauer
President, American Society for Matrix Biology



Hudson Freeze
President, Society for Glycobiology

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Silvy Song, Business Manager, FASEB

Invited Speakers and Chairs

The ASMB/SFG Joint Meeting organizers wish to thank all of our invited speakers and chairs who have greatly enriched our extensive program with their valuable participation.

Main Conference:

- **Kristi Anseth**, University of Colorado at Boulder
- **Tom Barker**, Georgia Institute of Technology
- **Linda Baum**, University of California, Los Angeles
- **Carolyn Bertozzi**, University of California, Berkeley
- **Christopher Chen**, University of Pennsylvania
- **Angela Christiano**, Columbia University Medical Center
- **Sessions Cole**, Washington University in St. Louis
- **Richard Cummings**, Emory University
- **Steve Dalton**, University of Georgia
- **Elaine Davis**, McGill University
- **Ann Dell**, Imperial College, London
- **Adam Engler**, University of California, San Diego
- **Hudson Freeze**, Sanford-Burnham Medical Research Institute
- **Andres Garcia**, Georgia Institute of Technology
- **Ceci Giacelli**, University of Washington
- **Robert Haltiwanger**, Stony Brook University
- **Gerald Hart**, Johns Hopkins School of Medicine
- **Theirry Hennet**, University of Zurich
- **Lora Hooper**, University of Texas, Southwestern
- **Linda Hsieh-Wilson**, Caltech/Howard Hughes Medical Institute
- **Billy Hudson**, Vanderbilt University
- **Richard Hynes**, Massachusetts Institute of Technology, Howard Hughes Medical Institute
- **Jeffery Kelly**, The Scripps Research Institute
- **Jennifer Lippincott-Schwartz**, NICHD
- **Kelley Moremen**, University of Georgia
- **Hiroshi Nakato**, University of Minnesota
- **Paul Noble**, Duke University
- **Mauricio Pacifici**, Thomas Jefferson University
- **Jim Paulson**, The Scripps Research Institute
- **Michael Pierce**, University of Georgia
- **Taina Pihlajaniemi**, University of Oulu
- **Ambra Pozzi**, Vanderbilt University
- **Raman Ramachandran**, Children's Hospital of Wisconsin
- **David Roberts**, NIH, NCI, CCR
- **Steve Rosen**, University of California, San Francisco
- **Linda Sandell**, Washington University Medical School
- **Ron Schnaar**, John Hopkins School of Medicine
- **Yoji Shimizu**, University of Minnesota
- **Pamela Stanley**, Albert Einstein College of Medicine
- **Kelly TenHagen**, NIH
- **Lance Wells**, University of Georgia
- **Yu Yamaguchi**, Sanford Burnham Medical Research Institute
- **Hiromi Yanigasawa**, University of Texas Southwestern Medical Center
- **Marian Young**, NIH
- **Jennifer Zeitzer**, FASEB Office of Public Affairs
- **Roy Zent**, Vanderbilt Medical Center

SFG Awards

Student or Post-Doctoral Fellow Travel Awards

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 will be given by the Society for Glycobiology to scientists who have, over their professional lifetimes, made significant contributions with important impact on the field. Consideration of candidates may occur annually, but the award will be given only in years during which a deserving candidate is nominated and identified. All glycobiologists are eligible, but recipients of the Karl Meyer Award will not be considered until 10 years after having received that award.

The Society for Glycobiology Awards Committee will choose the recipient of the Rosalind Kornfeld Award. Nominations will follow the same format and have the same deadline as nominations for the Karl Meyer award, but nominees need not be notified in advance. Candidates should be present or former members of the Society for Glycobiology. The Rosalind Kornfeld Award winner will receive the same cash prize as for the Karl Meyer Award, and will be offered an opportunity to deliver an oral presentation (up to 30 minutes in length) at the Society for Glycobiology meeting held in the year of the award.

Karl Meyer 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.”

ASMB Awards

Senior Investigator Award

The Senior Investigator award is presented to an established researcher for outstanding, continued contributions to the field. To be considered for this prestigious award, the nominee must be a current ASMB member, be active in matrix-related research, and be well recognized for making important scientific contributions to matrix biology. The awardee is invited to speak at one of the Plenary Sessions during the biennial meeting and is presented with a plaque, an honorarium, and complimentary conference registration. Nominations are called for from the membership prior to the biennial meeting and chosen by election of the ASMB council and officers.

Junior Investigator Award

This award is presented to a newly established, independent investigator who has already made a high-impact finding (or findings) and who shows much promise for continued accomplishments. To be considered for this prestigious award, the nominee must meet the criteria as set forth in the NIH policies and be a current ASMB member and hold an entry-level faculty appointment (e.g., Instructor, Assistant Professor, or equivalent) at an accredited institution or be an entry-level scientist in industry. Nominees for the Junior Investigator Awardee are put forth by a sponsor and must include the CV of the nominee, a letter of support by the sponsor, and at least one other letter of support. The nominating packages are evaluated by and chosen by election of the ASMB council and officers. The awardee is invited to speak at one of the Plenary Sessions during the biennial meeting and is presented with a plaque, an honorarium, and complimentary conference registration.

Travel Awards:

Selected Talks

Six (6) Travel Awards will be given to outstanding abstracts selected for oral or poster presentation in one of the thematic concurrent sessions at the ASMB biennial meeting. To be considered for one of these awards, the candidates must be a trainee (i.e., a student or postdoctoral fellow) and an active ASMB member. In addition, the candidates need to indicate their interest in applying for the award and their preference that their abstract be considered for an oral presentation by checking the appropriate boxes on the abstract submission

form. Candidates must submit a CV and letter of recommendation (advisor or other senior investigator) during the abstract submission process. The abstracts are reviewed by the program and awards committee before the meeting and those chosen will then be informed. Each awardee is presented with a certificate and an honorarium and will be recognized at the meeting.

Poster Presentations

Four (4) Travel Awards are selected onsite at each biennial meeting by a panel of judges who review the presented posters. The award is open to students and postdoctoral fellows who indicate at the time of their abstract submission that they wish to apply for the award. Candidates must submit a CV and letter of recommendation (advisor or other senior investigator) during the abstract submission process. These awards are limited to active ASMB members. The award is presented onsite at the biennial meeting and is accompanied by a certificate and an honorarium.

The Journal of Biological Chemistry Herb Tabor Young Investigator Award

The JBC/Herbert Tabor Young Investigator Awards honor Tabor's invaluable contributions to the journal and to science as a whole. The awards also recognize the innovators and achievers in new generations of researchers who exemplify Tabor's values of creativity and scientific excellence.

The JBC associate editors select promising young researchers at scientific symposia and meetings throughout the year. Students, postdoctoral researchers, and faculty members who've not yet received tenure are eligible. The award includes a plaque and a \$1,500 prize.

ISMB Awards

The ISMB will award three Travel Grants to attend the 2012 ASMB/SFG meeting. Applications are invited from international young scientists to present their work at the meeting.

FASEB Awards

MARC Poster/Platform (Oral) Presenter Travel Awards

Each award provides funding for one underrepresented minority graduate/ undergraduate student, post-baccalaureate or postdoctoral fellow who is 1st author and has been selected to give an oral or poster presentation.

Award Winners

ASMB Senior Investigator Award

- **Billy Hudson**, Vanderbilt University

ASMB Junior Investigator Award

- **Thomas Barker**, Georgia Institute of Technology

ASMB Travel Awards

Concurrent sessions:

- **Lisa Ang**, University of British Columbia
- **Kurt Zimmerman**, University of Alabama at Birmingham
- **Purva Singh**, Princeton University
- **Marion Jeanne**, University of California, San Francisco

Posters

- **Ryan Petrie**, National Institutes of Health
- **Sandeep Khatri**, University of Pittsburgh
- **On-site (4 awards to be determined)**

TABOR

- **Alexandra Naba**, MIT - Koch Institute for Integrative Cancer Research

One Award TBA

ISMB Distinguished Investigator Award

- **Richard Hynes**, Massachusetts Institute of Technology

ISMB Travel Awards

- **Vanessa López-Alpuche**, University of Oulu, Oulu, Finland
- **Alessandro Malara**, University of Pavia, Pavia, Italy
- **Wei Xin**, University of Cologne, Cologne, Germany

SFG Rosalind Kornfeld Award

- **Werner Reutter**, Charité - Universitätsmedizin Berlin

SFG Karl Meyer Award

- **Kurt Drickamer**, Imperial College

FASEB MARC Poster Award

- **Deborah Leon**, Boston University School of Medicine
- **Kristina Aguilera**, UT Southwestern Medical Center

SFG Travel Award Winners

- **Samar Abdulkhalek**, Queens University
- **Akhil Kumar Agarwal**, ACTREC
- **Farah Alghamdi**, Queens University
- **Liaqat Ali**, University of Gothenburg
- **Frederica Alisson da Silva**, Instituto de Biofísica Carlos Chagas Filho, Brazil
- **Margaret Baker**, University of Hawaii at Manoa
- **Frank Batista**, Albert Einstein College of Medicine
- **Charles DeRossi**, Heidelberg University Hospital, Germany
- **Sabrina Etzold**, Institute of Food Research, UK
- **Gagandeep Gahlay**, University of Wyoming
- **Christoph Geisler**, University of Wyoming
- **Octavia Goodwin**, Louisiana State University
- **Liang Han**, Boston University
- **Takumi Kiwamoto**, Johns Hopkins University
- **Albert Lee**, Johns Hopkins University
- **Yuh-Jin Liang**, University of Washington
- **Renpeng Liu**, Emory University
- **Alison Mahan**, Ragon Institute of MGH, MIT and Harvard
- **Megan L. Mickum**, Emory University
- **Aaron Petrey**, University of Georgia
- **Amit Ranjan**, ACTREC
- **Achinoam Ravet**, Ben-Gurion University
- **Leslie Revoredo**, Case Western University
- **Lucia Renee Ruhaak**, University of California, Davis
- **Yasuhiro Sakai**, Shinshu University
- **Kausar Samli**, University of Georgia
- **Matthew Schultz**, University of Alabama at Birmingham
- **David Scott**, University of Alabama at Birmingham
- **Chun Shao**, Louisiana State University
- **Sandra Thiemann**, University of California, Los Angeles
- **Lucas Veillon**, University of Georgia
- **Marion Waltamath**, Complex Carbohydrate Research Center, University of Georgia
- **Hua-Xing Wei**, Albert Einstein College of Medicine
- **Paul Robin Wratil**, Charité Universitätsmedizin Berlin
- **Joseph Zapater**, University of Illinois at Chicago
- **Hui Zhou**, Harvard Medical School

General Information

Registration Hours

The meeting registration desk is located in the Grande Foyer of the Sheraton San Diego Hotel and Marina next to the Grande Ballroom. Name badges and conference materials can be picked up at this location. The desk will be staffed during the following hours.

- Sunday November 11th.....8:00 AM – 7:30 PM
- Monday November 12th.....7:00 AM – 5:00 PM
- Tuesday November 13th.....7:00 AM – 5:00 PM

Registration

Registration fees include the Opening Reception on Sunday night, refreshment breaks, continental breakfast Monday, Tuesday, and Wednesday, Poster Session I/II lunches, scientific sessions, and one program book. Registration fees exclude hotel costs. On-site registration will be accepted with payment via checks and credit cards.

Catering

Included in registration fees are the following catered events:

- Sunday night reception (Hot and cold hors d'oeuvres with a California flavor, desserts, plus 1 ticket for Beer/Wine/Soda and Cash Bar)
- Monday, Tuesday, and Wednesday Breakfast (Classic continental fare, Coffee/Tea)
- Monday and Tuesday Poster Session Boxed Lunch (various sandwich combinations, side, dessert and a drink)
- AM and PM coffee breaks

Internet Access

Internet access is complimentary in the guest rooms for those staying onsite at the Sheraton San Diego Hotel and Marina within the meeting block. Complimentary access is also provided by the conference for attendees in the foyers, meeting spaces and common areas of the hotel including the Cyber Café (Marina 6).

- **Use password: asmbsfg2012.**

Speaker Ready Room and Cyber Café

Use the Cyber Cafe during open hours to view abstracts online, check your email, meet with small groups to discuss areas of interest, have a mini-job fair and meet with prospective employers (see message and job board near the registration desk), or just sit and meet other conference attendees!

Presenters are asked to load their talks at least 2 hours prior to their sessions by visiting the speaker ready room (Marina 6). For loading or if you would like to practice your presentation, please visit the speaker ready room in the Marina 6 during registration hours. If you require any assistance, please contact one of the AV Technicians. Please arrive in the session room at least 15 minutes prior to your start time. Wednesday morning presenters need to upload talks by Tuesday evening. There are no Speaker Ready Room hours on Wednesday.

Open hours:

- Sunday November 11th..... 8:00 AM – 6:00 PM
- Monday November 12th.....7:00 AM – 5:00 PM
- Tuesday November 13th.....7:00 AM – 5:00 PM

Airport and Transportation

The San Diego International Airport (SAN) is approximately 1.61 km/1.0 miles from the hotel. The Sheraton San Diego Hotel and Marina offers a complimentary shuttle running every 20 minutes between the hours of 5am and 12am. Outside of these hours guests may request a pickup by phoning the hotel directly. These shuttle vans are white with baby blue accents and run from the Marina Hotel, Bay and the airport terminals. Taxis are also readily available at the airport and cost around \$6.

Parking

The hotel offers valet service: \$30 and pay self parking: \$22.

JOINT MEETING OF THE
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Poster Set-up/Poster Sessions

Poster boards will be set-up in the Nautilus III, IV and V. Please post and remove your posters as described in your acceptance letters. The organizers are not responsible for any materials posted. Posters will be presented in two sessions. Both sessions will include lunch provided to all attendees.

- **Poster Session I:** Monday, 11/12/2012, 12:00 – 2:00 PM
- **Poster Session II:** Tuesday, 11/13/2012, 12:00 – 2:00 PM

Abstracts

Abstracts are available for online viewing on the website, complete with searching and PDF printing options. Log into your registration on the website to access.

Exhibition

Please take time to visit the exhibit displays in the Grande Ballroom A during the breaks and poster sessions. See the exhibitor listing for detailed information regarding our sponsoring companies.

Exhibits Schedule:

- Sunday November 11th..... 12:00 PM – 7:00 PM
- Monday November 12th.....7:30 AM – 5:30 PM
- Tuesday November 13th.....7:30 AM – 6:00 PM
- Wednesday November 14th7:30 AM – 12:00 PM

Accompanying Persons

Guests are welcome to enjoy the city during the conference hours. The hotel provides babysitting services if required. See the hotel concierge for information.

Membership

All members are encouraged and invited to attend the Member Business Meetings on Tuesday, November 13 from 2:00 – 2:30 PM. ASMB will meet in the Grande Ballroom C and SFG will meet in Grande Ballroom B. The advice and guidance of both memberships on current society issues are welcome in these “open forum” meetings. If you are not currently a member, applications are available at the Registration Desk.

Special Needs

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

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.

Annual Meeting for the **Society for Glycobiology**

November 17-20, 2013 | St. Petersburg, FL



Renaissance Vinoy Resort & Golf Club
501 5th Avenue NE, St. Petersburg, Fla.



For More Information:
<http://glycobiology.org/index.php>

Exhibitor Listing

Table 1

V-Labs *(bronze level sponsor)*

423 North Theard Street
Covington, LA 70433

www.v-labs.com

e: v-labs@v-labs.com

p: (985) 893-0533

Table 2

Thermo Fisher Scientific *(bronze level sponsor)*

355 River Oaks Parkway
San Jose, CA 95134

www.thermofisher.com

p: (408) 965-6000

Table 3

ProZyme, Inc. *(bronze level sponsor)*

3832 Bay Center Pl.
Hayward, CA 94545

www.prozyme.com

e: info@prozyme.com

p: (510) 638-6900

Table 4

EyLabs *(bronze level sponsor)*

107 N. Amphlett Blvd
San Mateo, CA 94401

www.eylabs.com

p: (650) 342 3296

Table 5

Axxora *(bronze level sponsor)*

6181 Cornerstone Court East
San Diego, CA 92121

www.axxora.com

e: axxora-usa@axxora.com

p: (858) 550-8830

Table 6

R&D Systems *(silver level sponsor)*

614 McKinley Place NE
Minneapolis, MN 55413

www.rndsystems.com

e: info@RnDSystems.com

p: (612) 379-2956

Table 7

Healthpoint Biotherapeutics *(silver level sponsor)*

3909 Hulen St.
Fort Worth, TX 76107

www.healthpointbio.com

p: (817) 900-4000

Table 8

Cedarlane Laboratories, Inc. *(silver level sponsor)*

1210 Turrentine Street
Burlington, NC 27215

www.cedarlanelabs.com

e: service@cedarlanelabs.com

p: (336) 513-5135

Table 9

EMD Millipore *(silver level sponsor)*

290 Concord Rd
Billerica, MA 01821

www.emdmillipore.com

e: emdinfo@merckgroup.com

p: (800) 854-3417

Table 10

Oxford University Press

2001 Evans Rd.
Cary, NC 27513

www.oxfordjournals.org

p: (919) 677-0977

Table 11

3D Biomatrix (*bronze level sponsor*)

1600 Huron Parkway
Building 520, 2nd Floor
Ann Arbor, MI 48109
www.3dbiomatrix.com
e: support@3dbiomatrix.com
p: (734) 272-4688

Table 12

International Society for Matrix Biology

(*partner*)

www.ismb.org

Table 13

FASEB MARC (Minority Access to Research Careers) (*bronze PLUS level sponsor*)

9650 Rockville Pike
Bethesda, MD 20814
www.faseb.org/marc
e: marc@faseb.org
p: (301) 634-7020

Table 14

Cook Biotech (*gold level sponsor*)

1425 Innovation Place
West Lafayette, IN 47906
www.cookbiotech.com
p: (765) 497-3355

Table 15

New England BioLabs (*gold level sponsor*)

240 County Road
Ipswich, MA 01938
www.neb.com
e: info@neb.com
p: 1-800-632-5227

Table 16

Sumitomo Bakelite Co., Ltd. (*gold level sponsor*)

5-8 Higashi-Shinagawa 2-chome
Shinagawa-ku, Tokyo 140-0002
www.sumibe.co.jp/english
p: +81-3-5462-4111

Table 17

QA-Bio (*bronze level sponsor*)

128 Vista Monte
Palm Desert, CA 92260
www.qa-bio.com
e: info@QA-Bio.com
p: (760) 568-3657



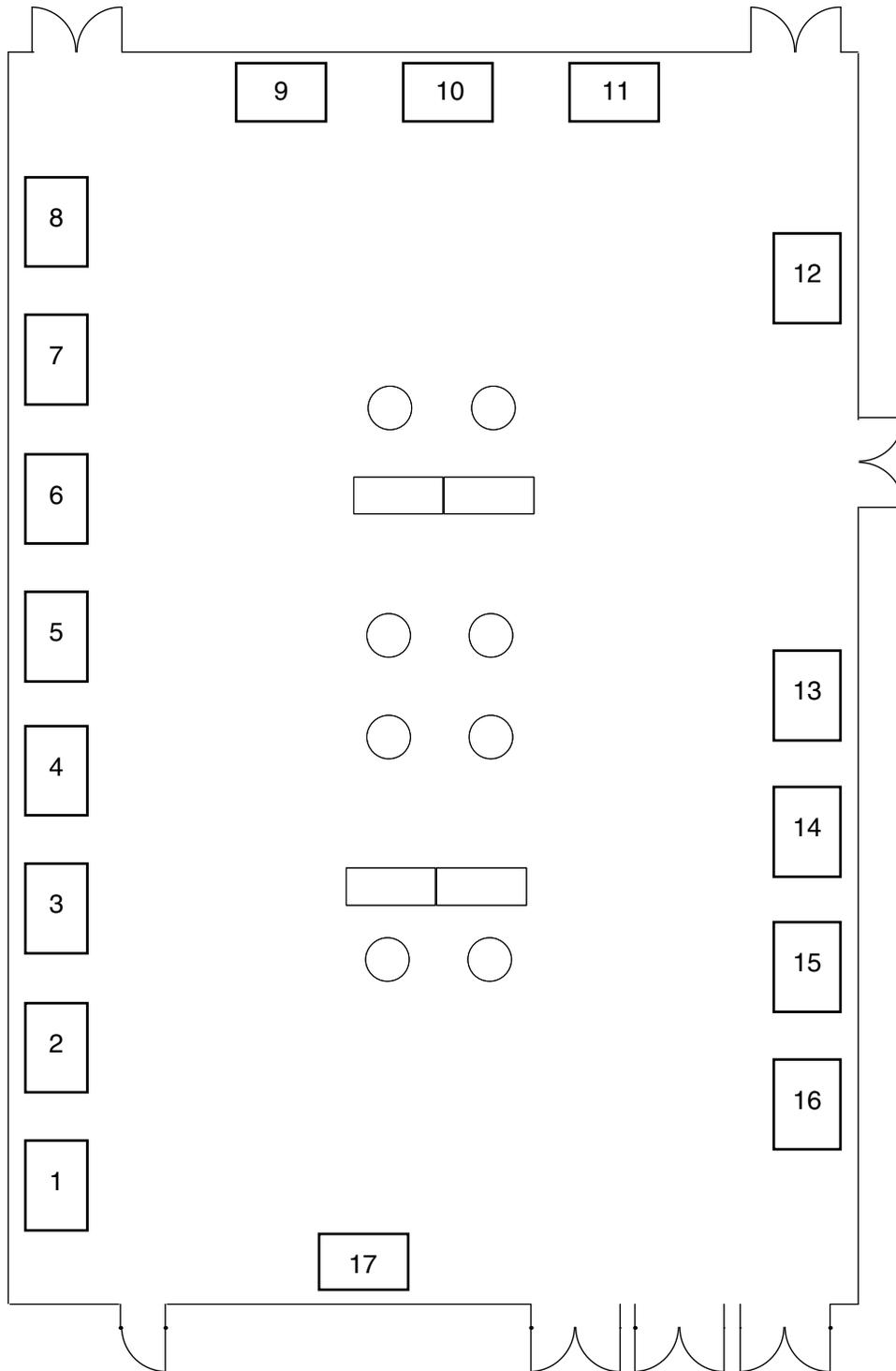
American Society for Matrix Biology

Visit our website in 2013 for details on the next ASMB meeting to be held in the fall of 2014. Location to be announced!

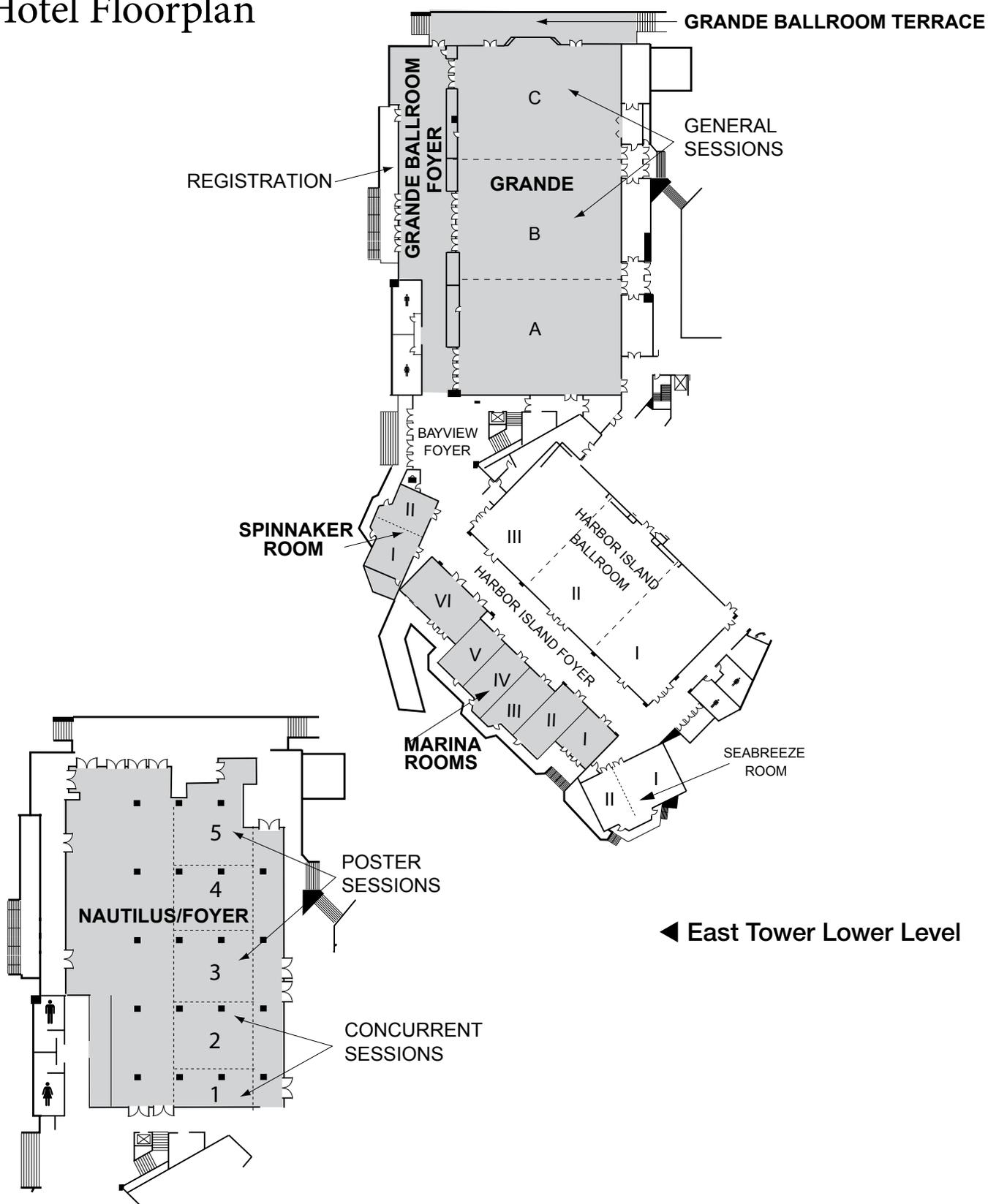
Go to asmb.net for more information

Exhibit Hall Floorplan

Grande Ballroom A



Hotel Floorplan



Social Events

Opening Reception

Sunday, November 11 from 6:00 – 7:00pm. This event will mark the opening of the conference, at the Sheraton San Diego Hotel and Marina in the Grande Foyer and Grande Ballroom A. Hot and cold hors d'oeuvres with a California flavor, desserts, plus 1 ticket for Beer/Wine/Soda and Cash Bar Please come and join your fellow attendees to celebrate the official opening of the program.

Banquet *(ticket required)*

Tuesday, November 13 from 7:00 – 10:00pm. This event will be held in the Grande Ballroom C. of the Sheraton San Diego Hotel and Marina. Attendees are encouraged to purchase a ticket and come to enjoy music, entertainment, food and conversation with fellow professionals.

Other Meetings

Sunday, November 11

ASMB Council Meeting *(by invitation only)*

- 8:00am – 12:00pm
- Marina 5

SFG Council Meeting *(by invitation only)*

- 3:00pm – 5:00pm
- Marina 5

Monday, November 12

Glycobiology Editorial Board Meeting Lunch *(by invitation only)*

- 12:00pm – 1:30pm
- Spinnaker I/II

Matrix Biology Editorial Board Meeting Lunch *(by invitation only)*

- 12:00pm – 1:30pm
- Marina 5

Tuesday, November 13

National Academy of Sciences Lunch – Future of Glycoscience *(pre-registration required)*

- 12:00pm – 1:00pm
- Spinnaker I/II

ASMB Business Meeting – open to all ASMB members

- 2:00pm – 2:30pm
- Grande Ballroom B

SFG Business Meeting – open to all SFG members

- 2:00pm – 2:30pm
- Grande Ballroom C



FASEB

Federation of American Societies
for Experimental Biology

Proudly celebrating 100 years of service to the biological and biomedical sciences community

Stand Up for Science!

We Support Scientists By:

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- Advancing policies that facilitate research and reduce regulatory burden
- Improving the environment for science training and education

FASEB, the voice of biological and biomedical researchers, represents 26 scientific societies and over 100,000 scientists and engineers.

Join our e-Action Alert

Help us communicate with Congress on key research issues by visiting www.faseb.org/StandUp to join our e-Action list and keep up with the latest policy news.

FASEB thanks SFG and its members for their support

If you're not a member of SFG, join now. Benefits include reduced fees for scientific meetings, conferences, and journals; access to professional development and career resources; and opportunities to contribute to science policy, advocacy, and public education.



Join SFG at www.glycobiology.org

Scientific Program

Sunday, November 11th

8:00 am – 7:30 pm Registration

Location: Grande Foyer

8:00 am – 6:00 pm Speaker Ready Room / Cyber Café

Location: Marina 6

8:00am – 12:00 pm

ASMB Council Meeting

(by invitation only)

Location: Marina 5

8:30am – 1:30 pm

SFG Guest Symposium I

Advances in Glycoprotein Production,
Characterization and Modification

Location: Nautilus II

Pre-Registration required.

Co-Chairs: Qun Zhou (Genzyme), John Briggs (Genentech),
and Sam Tep (Biogenidec)

Speakers: Xiaoying Jin, Matthew DeLisa, Parastoo Azadi,
Lori Yang, Damian Houde, Steffen Goletz, John Cipollo, Edith
Chang, Stephen Cohen, Lynn Gennaro

8:30am – 5:30 pm

ASMB Guest Symposium I

Wound Healing Society: Quantifying Heterogeneity
and Modeling Complexity in the Injury Response.
Implications for Therapeutics Development

Location: Nautilus I

Pre-Registration Required.

Organized by: Andrew Baird, UCSD

Quantifying Heterogeneity and Modeling Complexity in the Injury
Response. Implications for Therapeutics Development.

Topics include:

1. Epithelial and Endothelial Barriers in Injury, Response and Resolution.
2. Afferent and Efferent Neuronal Pathways Signaling Injury Responsiveness.
3. Systemic Contributions to Responsiveness Predict Repair.
4. Tissue-Dependent Heterogeneity in the Response to Infection and Immunity.
5. Distinguishing Stem Cell Niches in Tissues and Bone Marrow.
6. Mathematical Modeling to Predict Response and Resolution.

12:00 – 5:30 pm

SFG Guest Symposium II

Consortium for Functional Glycomics Participating
Investigator Meeting and Symposium

Location: Grande Ballroom B

Pre-Registration required

Organized by: James Prestegard, University of Georgia, and
Daron Freedberg (NIH-FDA)

Speakers: Jeffery Esko, University of California - San Diego,
Paul DeAngelis, University of Oklahoma Health Sciences
Center, Cynthia Larive, University of California -Riverside,
Joe Zaia, Boston University, Brian Cobb, Case Western
Reserve University, Laura Kiessling, University of Wisconsin
– Madison, Geert-Jan Boons, University of Georgia - CCRC,
Daron Freedberg, NIH-FDA.

12:00 – 7:00 pm

Exhibits

Location: Grande Ballroom A

1:00 – 4:00 pm

ASMB Guest Symposium II

TERMIS: Tissue Engineering & Regenerative
Medicine International Society

Location: Grande Ballroom C

Organized by: Anthony Ratcliffe, Synthesome, Inc and
Karen Christman, University of California San Diego

Matrix for Vascular and Lung Regeneration
Laura E. Niklason, Yale University

Extracellular Matrix Scaffolds for Airway Repair
Thomas W. Gilbert, University of Pittsburgh

**Injectable Extracellular Matrix Based Hydrogels
for Treating Cardiovascular Disease**
Karen L. Christman, University of California San Diego

**The Extracellular Matrix in Biomaterials Design
and Tissue Engineering**
Jennifer H. Elisseeff, Johns Hopkins University

3:00-5:00 pm

SFG Board Meeting

(by invitation only)

Location: Marina 5

JOINT MEETING OF THE
Society for Glycobiology & American Society for Matrix Biology

6:00 – 7:00 pm

Opening Reception

Location: Grande Foyer and Grande Ballroom A

7:00 – 8:00 pm

ASMB and SFG Society Welcome

Location: Grande Ballroom B & C

Chairs: Hudson Freeze and Jean Schwarzbauer

Keynote Lecture

Chairs: Hudson Freeze and Jeff Davidson

Bioorthogonal Chemistry for Glycoprofiling and Beyond

Carolyn Bertozzi, University of California, Berkeley

Monday, November 12th

7:00 am – 5:00 pm Registration

Location: Grande Foyer

7:30 – 8:30 am Continental Breakfast

Location: Grande Foyer and Grande Ballroom A

7:30 – 8:30 am

Career Mentoring Breakfast

(*pre-registration required)

Location: Marina 5

Career Mentoring Breakfasts will provide students, postdoctoral scientists, and professionals an opportunity to discuss topics relevant to career development, planning, and transitions with experienced and committed mentors in a relaxed, small group setting.

7:30 am – 5:30 pm Exhibits

Location: Grande Ballroom A

7:00 am – 5:00 pm Speaker Ready Room / Cyber Café

Location: Marina 6

8:30 – 10:00 am

Plenary I: Stem and Progenitor Cells, Genetic Therapy and Regenerative Medicine

Location: Grande Ballroom B & C

Chair: Linda Sandell, Washington University Medical School

8:30 am

Glycobiology of Human Pluripotent Stem Cells

Steve Dalton, University of Georgia

1 9:00 am

Siglec-Sialoglycan Binding Regulates Cell-Cell Interactions

Ronald Schnaar, Johns Hopkins School of Medicine

9:30 am

Stem Cell Therapies in Epidermolysis Bullosa

Angela Christiano, Columbia University Medical Center

10:00 – 10:30 am Coffee Break

Location: Grande Foyer and Grande Ballroom A

10:30 – 12:00 pm

Plenary II: Biomaterials and Matrix Engineering

Location: Grande Ballroom B & C

Chair: Adam Engler, University of California, San Diego

10:30 am

Hydrogels as Synthetic Extracellular Matrices

Kristi Anseth, University of Colorado at Boulder

11:00 am

Mechanical Regulation of Cell Adhesion and Function

Christopher Chen, University of Pennsylvania

11:30 am

Biofunctional Hydrogels: ECM-mimetic Materials for Tissue Repair

Andres Garcia, Georgia Institute of Technology

12:00 – 2:00 pm

Poster Session I / Lunch

Location: Nautilus III, IV, V

12:00 – 1:30 pm

Matrix Biology Editorial Board Meeting Lunch

(by invitation only)

Location: Marina 5

12:00 – 1:30 pm

Glycobiology Editorial Board Meeting Lunch

(by invitation only)

Location: Spinnaker I/II

2:00 – 3:30 pm

Concurrent Sessions 1 - 4

CSI: Matrix and Carbohydrate Immunology

Location: Grande Ballroom C

Chair: Jim Paulson

- 2 2:00 pm
Siglecs in B cell Tolerance
Jim Paulson, The Scripps Research Institute

Selected Talks

- 3 2:30 pm
SFG Travel Award Winner:
Glycosylation of IgG by B cells is Regulated by Immune Stimuli
Alison Mahan, Ragon Institute of MGH, MIT and Harvard
- 4 2:50 pm
Identification of Endogenous Lung Proteins Bearing Glycan Counter-receptors for Mouse Siglec-F
Toshihiko Kato, Complex Carbohydrate Research Center, University of Georgia
- 5 3:10 pm
Listeria Monocytogenes Subverts 2-O-sulfated HS Domains in Syndecan-1 to Promote Its Infection
Rafael Aquino, Children's Hospital, Harvard Medical School

CS2: Matricellular Proteins

Location: Nautilus I

Chair: David Roberts

- 6 2:00 pm
Thrombospondin-1 Signaling Through CD47 Regulates Cell and Tissue Radiosensitivity Via Autophagy
David Roberts, NIH, NCI, CCR

Selected Talks

- 7 2:30 pm
The Search For Proteins Bound to C-mannosylated TSR-derived Peptides Involved in the Regulation of TGF- β Signaling in Cultured Fibroblasts
Yoshito Ihara, Wakayama Medical University
- 8 2:50 pm
Collagen Signaling Promotes Hypoxia Induced Tumor Progression in Murine Models of Pancreatic Cancer
Lee Rivera, UT Southwestern Medical Center
- 9 3:10 pm
Matrix-associated Glycoprotein 2 (MAGP2) Binds TGF β Superfamily Ligands and MAGP2 Loss-of-function Has Pleiotropic Effects in Vivo
Michelle D. Combs, Washington University School of Medicine

CS3: Receptors, Signaling, and Cytoplasmic Glycosylation

Location: Grande Ballroom B

Co-Chairs: Ambra Pozzi and Gerald Hart

- 2:00 pm
Role of Collagen Binding Receptor in Renal Fibrosis.
Ambra Pozzi, Vanderbilt University

Selected Talks

- 10 2:30 pm
SFG Travel Award Winner:
O-GlcNAc Regulated Arginine Methylation: A New Paradigm in Survival Signaling
Albert Lee, The Johns Hopkins University
- 11 2:50 pm
Combating Adaptation to Stretch Conditioning Through Prolonged Activation of Extracellular Signal-Regulated Kinase
Justin Weinbaum, University of Minnesota
- 12 3:10 pm
Recognition of Hyaluronan By Siglec-9 Blunts Neutrophil Activation: Molecular Mimicry by Group A Streptococcus
Ismael Secundino-Vélazquez, Glycobiology Research and Training Center, University of California, San Diego

CS4: Vascular Biology, Elastic Fibers, and Related Diseases

Location: Nautilus II

Chair: Cecilia Giachelli

- 2:00 pm
Vascular Matrix Calcification
Cecilia Giachelli, University of Washington

Selected Talks

- 13 2:30 pm
ASMB Travel Award Winner:
COL4A1 and COL4A2 Mutations Cause Abnormal Angiogenesis and Genetically Modifiable Cerebrovascular Diseases
Marion Jeanne, University of California, San Francisco (UCSF)
- 14 2:50 pm
Expression of V3 Versican in Arterial Smooth Muscle Cells Reprograms Cell Phenotypes by Modulating TGF- β - and EGF-induced Signaling Pathways
Inkyung Kang, Benaroya Research Institute
- 15 3:10 pm
Extracellular Regulation of BMP Signaling by Fibrillin Microfibrils
Alexander Wohl, University of Cologne, Germany

3:30 – 4:00 pm Coffee Break

Location: Grande Foyer and Grande Ballroom A

4:00 – 5:30 pm

Concurrent Sessions 5-8

**CS5: Carbohydrate and Matrix Metabolism
in Disease States**

Location: Grande Ballroom C

Chair: Marian Young

4:00 pm

**Key Roles of Proteoglycans and Their Partners in
Skeletal Homeostasis and Disease**
Marian Young, NIH, NIDCR

Selected Talks

16 4:30 pm

**Patient Fibroblast Alpha-Dystroglycan Glycosylation
Studies: A Versatile Tool for Identification of Novel
Muscular Dystrophy Disease Genes**
Tobias Willer, Howard Hughes Medical Institute, University of Iowa

17 4:50 pm

**Glycomic Analysis of Cell Lineages Derived From
Salt-and-Pepper Syndrome iPS Cells**
Kazuhiro Aoki, Complex Carbohydrate Research Center,
University of Georgia

18 5:10 pm

**An Absence of ADAMTS5 Significantly Reduces
Degenerative Changes in Dystrophic Skeletal Muscle**
Chantal Coles, Murdoch Childrens Research Institute

CS6: Basement Membranes

Location: Nautilus I

Chair: Taina Pihlajaniemi

4:00 pm

**Collagen XIII – A Novel Neuromuscular
Junction Component**
Taina Pihlajaniemi, University of Oulu

Selected Talks

19 4:30 pm

**Prolyl 3-hydroxylation of Type IV Collagen is
Obligatory to Avoid Early Embryonic Lethality in Mice**
Elena Pokidysheva, Shriners Hospital for Children

20 4:50 pm

**Fibrillin-1 Deficiency in Cardiac Basement Membrane
Zone Causes Myopathy in Marfan Syndrome**
Jason Cook, Mount Sinai School of Medicine

21 5:10 pm

**Feasibility of Repairing GBM Defects in
Alport Syndrome**
Jeffrey Miner, Washington University School of Medicine

CS7: Genetics and Gene Expression

Location: Grande Ballroom B

Chair: Kelley Moremen

4:00 pm

**Regulation and Recombinant Production of
Mammalian Glycosylation Enzymes**
Kelley Moremen, University of Georgia

Selected Talks

22 4:30 pm

Nervous System-Specific Sialylation in Drosophila
Hilary Scott, Texas A&M University

23 4:50 pm

**Epigenetic Silencing of Cosmc in Leukocytes
Expressing Tn Antigen**
Rongjuan Mi, Emory University School of Medicine

24 5:10 pm

**Macrophage Proteoglycans: Decrease in Sulfation
Results in Accentuated Atherosclerosis**
Philip L.S.M. Gordts, University of California, San Diego

CS8: Mechanobiology and Biomedical Engineering

Location: Nautilus II

Chair: Thomas Barker

4:00 pm

**ASMB Junior Investigator Awardee:
Mechanochemical Signaling of the ECM**
Thomas Barker, Georgia Institute of Technology

Selected Talks

25 4:30 pm

**Matrix Elasticity and Cell Geometry Regulate Beta-
catenin Signalling in Mesenchymal Stem Cells**
Silvia Goldoni, Imperial College London

26 4:50 pm

**Evaluating Fibronectin Conformation Based on
Biochemical and Mechanical Cues**
Brant Hubbard, Boston University

27 5:10 pm

**Myoepithelial Cells Mediate the Balance Between
Cytoskeletal Tension and Extracellular Stiffness During
Mouse Submandibular Salivary Gland Development**
Sarah Peters, University at Albany, SUNY

6:00 – 7:30 pm

SFG Award Lectures

Location: Grande Ballroom C

Chair: Hudson Freeze

6:15 pm

Rosalind Kornfeld Award:

Some Face Lifting of NANA

Introduction: Carolyn Bertozzi

Werner Reutter, Charité - Universitätsmedizin Berlin

6:45 pm

Karl Meyer Award:

Recognizing Sugars

Introduction: Richard Cummings

Kurt Drickamer, Imperial College

6:00 – 8:00 pm

ASMB Award Lectures

Location: Grande Ballroom B

Chairs: Jean Schwarzbauer and David Hulmes

Join us for the presentation of the ASMB Junior and Senior Investigator awards and lecture presentations by the ASMB Senior and ISMB Distinguished Investigator Awardees.

6:00 pm

ASMB Senior Investigator Award:

Collagen IV Glycoprotein: An Essential Innovation at the Dawn of Tissue Evolution

Billy Hudson, Vanderbilt University

6:45 pm

ISMB Distinguished Investigator Award:

Decoding the Matrix

Sponsored by The International Society of Matrix Biology (ISMB)

Richard Hynes, Massachusetts Institute of Technology

ISMB Travel Awards

28 Collagen XVIII Regulates Hair Follicle Cycling and Growth of Skin Tumors

Vanessa López-Alpuche, University of Oulu, Oulu, Finland

29 Fibronectin, Laminin and Type IV Collagen are Key Components of the Sinusoids-associated Megakaryocyte Niche Within Bone Marrow

Alessandro Malara, University of Pavia, Pavia, Italy

30 Collagen II Plays an Important Role in the Differentiation of Chondrocytes Via Regulating the Ihh/PTHrP Axis

Wei Xin, University of Cologne, Cologne, Germany

Tuesday, November 13th

7:00 am – 5:00 pm Registration

Location: Grande Foyer

7:30 am – 8:30 am Continental Breakfast

Location: Grande Foyer and Grande Ballroom A

7:30 – 8:30 am

Career Mentoring Breakfast

(*pre-registration required)

Location: Marina 5

Career Mentoring Breakfasts will provide students, postdoctoral scientists, and professionals an opportunity to discuss topics relevant to career development, planning, and transitions with experienced and committed mentors in a relaxed, small group setting.

7:30 am – 6:00 pm Exhibits

Location: Grande Ballroom A

7:00 am – 5:00 pm Speaker Ready Room / Cyber Café

Location: Marina 6

8:30 – 10:00 am

Plenary III: Biosynthesis, Secretion and Assembly

Location: Grande Ballroom B & C

Chair: Robert Haltiwanger, Stony Brook University

8:30 am

Stabilizing Proteins by N-Glycosylating Their Reverse Turns is Also a Prescription for Increased N-Glycosylation Efficiency

Jeffery Kelly, The Scripps Research Institute

9:00 am

Imaging the Secretory Pathway and its Dynamics

Jennifer Lippincott-Schwartz, NICHD

9:30 am

Collagen Glycosylation

Theirry Henet, University of Zurich

10:00 – 10:30 am Coffee Break

Location: Grande Foyer and Grande Ballroom A

10:30 am – 12:00 pm

Plenary IV: Immunology and Inflammation

Location: Grande Ballroom B & C

Chair: Michael Hawkeye Pierce, University of Georgia

10:30 am

The Lymphocyte Homing Cascade Updated

Steve Rosen, University of California, San Francisco

11:00 am

Integrins and the Immune Response

Yoji Shimizu, University of Minnesota

31 11:30 am

Regulation of Leukocyte Migration Through Galectin-Glycan Interactions

Linda Baum, UCLA

12:00 – 2:00 pm

Poster Session II/ Lunch

Location: Nautilus III, IV, V

12:00 – 1:00 pm

National Academy of Sciences Luncheon –
Future of Glycoscience

(*Pre-registration required)

Location: Spinnaker

2:00 – 2:30 pm

ASMB Business Meeting

Location: Grande Ballroom C

Chair: Jean Schwarzbauer

2:00 – 2:30 pm

SFG Business Meeting

Location: Grande Ballroom B

Chair: Hudson Freeze

2:30 – 4:00 pm

Concurrent Sessions 9-12

CS9: Stem/Progenitor Cells and Their Environment

Location: Grande Ballroom C

Chair: Hiroshi Nakato

2:30 pm

**Heparan Sulfate Proteoglycans in Gradients
and Niche**

Hiroshi Nakato, University of Minnesota

Selected Talks

32 3:00 pm

**ST6Gal-I Sialyltransferase is Highly Upregulated in
Epithelial Cancers, and Correlates With Stemness in
Both Normal and Cancer Stem Cell Populations**

Amanda F. Swindall, University of Alabama at Birmingham

33 3:20 pm

**Substrate Stiffness Dependent Vinculin Activation
Modulates Mechanosensitive Stem Cell Differentiation**

Andrew Holle, UC San Diego

34 3:40 pm

**Epithelial Stem Cell and ECM Dynamics in *C.
elegans* Molting Cycles**

Alison Frand, University of California, Los Angeles

**CS10: Biosynthesis, Protein Folding, Secretion,
and Matrix Assembly**

Location: Nautilus I

Chair: Lance Wells

2:30 pm

Remodeling of Glycans on Mammalian Cells

Lance Wells, University of Georgia

Selected Talks

35 3:00 pm

**Structural Basis of Procollagen Trimerization and
Regulation of C-terminal Processing**

Jean-Marie Bourhis, CNRS/University of Lyon 1, Lyon, France;
University Joseph Fourier/EMBL/CNRS, Grenoble, France

36 3:20 pm

**Glycosyltransferase-specific Golgi Targeting
Mechanisms**

Armen Petrosyan, University of Nebraska Medical Center

37 3:40 pm

ASMB Travel Award Winner:

**Fibronectin Matrix Assembly Promotes
Mesenchymal Cell Condensation During
Chondrogenic Differentiation**

Purva Singh, Princeton University

CS11: Cancer Microenvironment

Location: Grande Ballroom B

Chair: Richard Cummings

38 2:30 pm

**Altered O-Glycan Expression in Tumor
Glycoproteins: Genetics and Consequences**

Richard Cummings, Emory University

Selected Talks

39 3:00 pm

**Heparanase Promotes Myeloma Bone Disease
by Regulating the Bone Microenvironment**

Yang Yang, University of Alabama at Birmingham

40 3:20 pm

**Basement Membrane Localized Tumor Cells are
Protected From HER2-targeted Therapy in Vivo**

Jason Zoeller, Harvard Medical School

41 3:40 pm

Tabor Award Winner:

**The Extracellular Matrix: Proteomic Signatures
of Breast Cancer Progression and Metastasis**

Alexandra Naba, MIT - Koch Institute for Integrative
Cancer Research

CS12: Glycomics/Chemical Biology I: Function

Location: Nautilus II

Chair: Linda Hsieh-Wilson

2:30 pm

Chemoenzymatic Tools for Glycan Detection and Their Applications to Biology

Linda Hsieh-Wilson, Caltech/Howard Hughes Medical Institute

Selected Talks

42 3:00 pm

Competition Between Core-2 GlcNAc Transferase and ST6GalNAc Transferase Regulates the Synthesis of the Leukocyte Selectin-ligand on P-selectin Glycoprotein Ligand-1

Sriram Neelamegham, State University of New York

43 3:20 pm

Glycoengineering at the Surface of Living Cell

Nicolai Bovin, Shemyakin Institute of Bioorganic Chemistry RAS, Moscow, Russia

44 3:40 pm

SFG Travel Award Winner:

Engineering Carbohydrate Recognizing Biosensors via Computational Modeling and Directed Evolution

Kausar N. Samli, The University of Georgia

4:00 – 4:30 pm Coffee Break

Location: Grande Foyer and Grande Ballroom A

4:30 – 6:00 pm

Concurrent Sessions 13-16

CS13: Development

Location: Grande Ballroom C

Chair: Maurizio Pacifici

4:30 pm

Matrix Macromolecules in Limb Synovial Joint Development and Function

Maurizio Pacifici, Thomas Jefferson University

Selected Talks

46 5:00 pm

Adamsl2 Modulates the Ratio of Fibrillin-1 to Fibrillin-2 in Tissue Microfibrils in a Mouse Model for Human Geleophysic Dysplasia

Dirk Hubmacher, Lerner Research Institute, Cleveland Clinic Foundation

47 5:20 pm

SFG Travel Award Winner:

Altered Activity and Localization of Cathepsin K Underlies the Cartilage Defects in a Zebrafish Model of Mucopolidosis II

Aaron Petrey, University of Georgia

48 5:40 pm

Glycan Glucuronylation is Essential for Female Fertility in *Drosophila Melanogaster*

Marion Marshall, Complex Carbohydrate Research Center, University of Georgia

CS14: Fibrosis, Proteolysis, and Tissue Repair

Location: Nautilus I

Chair: Paul Noble

4:30 pm

Regulation of Pulmonary Fibrosis by Hyaluronan Synthase 2

Paul Noble, Duke University

Selected Talks

49 5:00 pm

ASMB Travel Award Winner:

Granzyme B-mediated Loss of Decorin Increases Collagen Fibril Irregularity and Susceptibility to Aortic Rupture in a Mouse Model of Abdominal Aortic Aneurysm

Lisa Ang, University of British Columbia

50 5:20 pm

ASMB Travel Award Winner:

Calreticulin is Required for TGF-beta Stimulation of Extracellular Matrix

Kurt Zimmerman, University of Alabama at Birmingham

51 5:40 pm

Restoring Laminin Polymerization by Transgenic Expression of α LNNd in Skeletal Muscle Improves Muscle Integrity of Laminin- α 2-deficient Mice

Stephanie Crosson, Robert Wood Johnson Medical School

CS15: Glycomics/Chemical Biology II:

Analytical Methods

Location: Grande Ballroom B

Chair: Anne Dell

4:30 pm

Glycomics and Glycoproteomics:

Status Quo and Quo Vadis

Anne Dell, Imperial College

Selected Talks

52 5:00 pm

SFG Travel Award Winner:

Detailed Structural Investigation of Beta-glucans from Yeast Cell Walls by Electron-transfer Dissociation

Liang Han, Boston University

- 53 5:20 pm
SFG Travel Award Winner:
MS Based Insight In Glycobiology: Tyrosine Kinase Inhibitors Alter the Cell Surface Glycosylation Patterns of Lung Cancer Cell Lines
L. Renee Ruhaak, University of California, Davis
- 54 5:40 pm
Il-6 Induction By Lipoteichoic Acids of the Immuno-Protective Lactococcus Lactis G121 is Tlr2 Independent
Kathleen Fischer, Division of Structural Biochemistry-Research Center Borstel

CS16: Host-Pathogen Interactions

Location: Nautilus II

Chair: Lora Hooper

4:30 pm
Lectin-Mediated Defense of the Intestinal Epithelial Surface
Lora Hooper, UT Southwestern

Selected Talks

- 55 5:00 pm
Mucosal Immunity Mediated by Antibody-mucin Crosslinking
Samuel Lai, University of North Carolina, Chapel Hill
- 56 5:20 pm
A New Model for T Cell Dependent Immune Activation by Glycoconjugate Vaccines
Fikri Y. Avci, Harvard Medical School
- 57 5:40 pm
Group B Streptococcus Uses Sialic Acid Mimicry to Subvert Host Innate Immune Responses Through Engagement of Inhibitory Leukocyte Receptor Siglec-E
Yung-Chi Chang, Glycobiology Research and Training Center, University of California, San Diego

7:00-10:00 pm Banquet (ticketed event)

Location: Grande Ballroom C

Wednesday, November 14th

7:00 am – 12:00 pm Registration

Location: Grande Foyer

7:30 – 8:30 am Continental Breakfast

Location: Grande Foyer and Grande Ballroom A

7:30 – 8:30 am

Special Guest Lecture: Jennifer Zeitzer,
Director of Legislative Relations

FASEB Office of Public Affairs

Biomedical Research:

A Perspective from Washington, DC

Location: Grande Ballroom B & C

7:30am – 12:00 pm Exhibits

Location: Grande Ballroom A

8:30 – 10:00 am

Plenary V: Rare Glycosylation and Matrix Diseases

Location: Grande Ballroom B & C

Chair: Elaine Davis, McGill University

8:30 am

The Physiological Function of Heparan Sulfate: Insights that can be Gained from the Study of Multiple Hereditary Exostoses

Yu Yamaguchi, Sanford Burnham Medical Research Institute

9:00 am

Matrix-Cell Interactions and Ascending Aortic Aneurysms

Hiroshi Yanigasawa, Univ. of Texas Southwestern Medical Center

9:30 am

Exome Sequencing for Novel Disease Gene Discovery in Families with Rare Mendelian Phenotypes

Sessions Cole, Washington University, St. Louis

10:00-10:30 am Coffee Break

Location: Grande Foyer and Grande Ballroom C

10:30-12:00 pm

Plenary VI: Development and Morphogenesis

Location: Grande Ballroom B & C

Chair: Roy Zent, Vanderbilt Medical Center

45 10:30 am

Roles for Glycans in Mammalian Development and Spermatogenesis

Pamela Stanley, Albert Einstein College of Medicine

11:00 am

Protein Glycosylation in ECM Formation and Organogenesis

Kelly TenHagen, NIH

11:30 pm

The Role of MMP-17 Ortholog in Embryonic Zebrafish Development

Raman Ramachandran, Children's Hospital of Wisconsin

Poster Session I: Monday, November 12th, 12:00 - 2:00 pm

CS1: Matrix and Carbohydrate Immunology

Posterboard #: B01 | Abstract #: 58

ST6Gal-I Prevents Macrophage Apoptosis via Sialylation of TNFR1

Zhongyu Liu, Amanda Swindall, Matthew Schultz, Daniel Bullard, Susan Bellis
University of Alabama at Birmingham, Birmingham, AL, USA

Posterboard #: B02 | Abstract #: 60

Tonic for T-cells: Hyaluronan Promotes STAT5 Signaling in the Absence of IL-2

Paul Bollyky, Ben Falk, Melissa Pickett, Gerald Nepom, Thomas Wight
Benaroya Research Institute, WA, USA

Posterboard #: B03 | Abstract #: 62

Carbohydrate-specific Interaction of Mammalian Pancreatic α -amylases with Glycoproteins on Intestinal Mucosa Regulates Glucose Assimilation for Homeostasis

Kimie Date¹, Nana Kawasaki², Noritaka Hashii², Hiromi Sakagami¹, Haruko Ogawa¹
¹*Ochanomizu University*; ²*National Institute of Health Sciences*

Posterboard #: B04 | Abstract #: 64

Attenuation of Type 3 α 2,3 Sialyltransferase (St3gal3) is Associated with Enhancement of Eosinophilic Allergic Airway Inflammation in Mice

Takumi Kiwamoto, Mary Brummet, Sherry Hudson, Mary Motari, Ronald Schnaar, Zhou Zhu, Bruce Bochner
The Johns Hopkins University School of Medicine

Posterboard #: B05 | Abstract #: 66

FUT2 Genotypes of the Premature Infant is Associated with Distinct Microbiota

David S. Newburg¹, Zhuoteng Yu¹, Diana Taft², Anne Lagomarcino², Kurt R. Schibler², Dirk Givers³, Doyle Ward³, Ardythe L. Morrow²
¹*Boston College*; ²*Cincinnati Children's Hospital Medical Center*; ³*Broad Institute, Cambridge, MA*

Posterboard #: B06 | Abstract #: 68

Antigen Mimicry by Mimivirus Collagens

Nikunj Shah, Andreas Hülsmeier, Thierry Hennet
University of Zurich, Institute of Physiology, Zurich, Switzerland

Posterboard #: B07 | Abstract #: 70

Galectin-1 Differentially Regulates Migration of Immunogenic and Tolerogenic Dendritic Cells Across Lymphatic Endothelium

Sandra Thiemann, Jeanette Man, Linda Baum
University of California Los Angeles, CA, USA

CS2: Matricellular Proteins

Posterboard #: B08 | Abstract #: 72

SPARC as a Regulator of Collagen Signaling in Pancreatic Cancer

Kristina Y. Aguilera¹, Courtney D. Goldstein², Lee B. Rivera¹, Amy D. Bradshaw³, Rolf A. Brekken¹
¹*UT Southwestern Medical Center, TX, USA*; ²*Austin College, TX, USA*; ³*Medical University of South Carolina, SC, USA*

Posterboard #: B09 | Abstract #: 74

Localization of Growth Factor Binding Within the N-terminal Region of MAGP-1

Thomas Broekelmann, Michelle Combs, Clarissa Craft, Robert Mecham
Washington University Medical School in Saint Louis

Posterboard #: B10 | Abstract #: 76

Characterization of a recombinant HA binding protein: TSG6dHep-Fc

Lei Huang, Laurence Jadin, Qiping Zhao, Gina Wei, Ping Jiang, Michael Shepard
Halozyme Therapeutics Inc.

Posterboard #: B11 | Abstract #: 78

alpha-Dystroglycan O-Mannosylation Influences the Subsequent Addition of GalNAc by UDP-GalNAc Polypeptide N-Acetylgalactosaminyl-transferases

Duy Tran¹, Jae-Min Lim², Mian Liu², Stephanie Stalnaker², Lance Wells², Kelly Ten Hagen¹, Live David²
¹*NIDCR National Institutes of Health*; ²*CCRC University of Georgia*

Posterboard #: B12 | Abstract #: 80

Expression of Matrix Components in Liver Cells: Studies in Human Hepatocytes (HepG2) and Hepatic Stellate Cells (LX-2)

Steven Penm, Megan Lord, Robert O'Grady, John Whitelock
University of New South Wales, Kensington, NSW, Australia

Posterboard #: B13 | Abstract #: 82

Reduction of Mutant COMP ER Retention and Cell Death by Drug Therapy

Karen Posey¹, Françoise Coustry¹, Alka Veerisetty¹, Peiman Liu¹, Joseph Alcorn¹, Jacqueline Hecht^{1,2}
¹*University of Texas Medical School at Houston, TX, USA*; ²*Shriners Hospital for Children, Houston, TX, USA*

Posterboard #: B14 | Abstract #: 84

Increased Expression of Connective Tissue Growth Factor (CTGF/CCN2) Mediates Collective Cell Migration in Skin Epithelial Cells

Maryam G Rohani, Shula Harkavy, William C Parks
University of Washington

Posterboard #: B15 | Abstract #: 86

Expression of Pro And Mature Forms of Decorin and Biglycan in Costal Cartilage

Michael Stacey¹, Anthony Asmar¹, Olga Pakhomova¹, Robert Kelly Jr.²
¹Frank Reidy Research center for Bioelectrics; ²Children's Hospital of the King's Daughters

Posterboard #: B16 | Abstract #: 88

Biochemical and Biological Characterization of Fibulin-7

Jun Tsunozumi, Hiromi Yanagisawa
University of Texas Southwestern Medical Center, Department of Molecular Biology

Posterboard #: B17 | Abstract #: 90

Human Microfibril-Associated Protein 4 is Highly Expressed in the Heart and Systemic Levels are Increased with Acute Myocardial Infarction

Helle Wulf-Johansson¹, Lars Melholt Rasmussen², Ida Tornøe¹, Niels Marcussen³, Ole Nielsen⁴, Uffe Holmskov¹, Grith Lykke Sorensen¹
¹Sofie Lock Johansson, Anders Schlosser¹, *Institute of Molecular Medicine, Cardiovascular and Renal Research, Odense, Denmark;*
²Department of Clinical Biochemistry and Pharmacology, Odense University Hospital, Denmark; ³Department of Clinical Pathology, Odense Universitet Hospital, Odense, Denmark; ⁴Department of Pathology, Odense University Hospital, Odense, Denmark

CS3: Receptors, Signalig, and Cytoplasmic Glycosylation

Posterboard #: B18 | Abstract #: 30

Collagen II Plays an Important Role in the Differentiation of Chondrocytes via Regulating the Ihh/PTHrP Axis

Wei XIN, Mats Paulsson, Frank Zaucke
Center for Biochemistry, Medical Faculty, University of Cologne, Cologne, Germany

Posterboard #: B19 | Abstract #: 92

Neu1 Sialidase And Matrix Metalloproteinase-9 Cross-Talk in Alliance With Insulin Receptors is an Essential Molecular Signalling Platform for Insulin-Induced Receptor Activation

Farah Alghamdi, Myron Szewczuk
Queen's University, Kingston, Ontario, Canada

Posterboard #: B20 | Abstract #: 94

The Role of CD14 in the ArtinM activity of Inducing TLR2-dependent Inflammatory Response and IL-10 Production

Andre Fernandes, Nerry Cecilio, Maria Cristina Roque-Barreira
University of Sao Paulo

Posterboard #: B21 | Abstract #: 96

Optimized Expression of O-GlcNAcylated Proteins in E.coli

Octavia Goodwin, Megan Macnaughtan
Louisiana State University

Posterboard #: B22 | Abstract #: 98

Crosstalk Between O-GlcNacylation and Phosphorylation In Signaling & Transcription

Gerald Hart
Dept. of Biological Chemistry, Johns Hopkins University Medical School

Posterboard #: B23 | Abstract #: 100

C-type Llectin CLEC5A is Critical for the Pathogenesis of Flaviviral Infections

Shie-Liang Hsieh
Institute of Clinical Medicine, National Yang-Ming University

Posterboard #: B24 | Abstract #: 102

O-GlcNAc Participates in the Cellular Stress-response by a Time-dependent Manner

Emese Katai¹, Jozsef Pal², Tamas Nagy¹, Attila Miseta¹, Gabor L. Kovacs¹
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Posterboard #: B25 | Abstract #: 104

Silencing α 1,3-fucosyltransferases in human leukocytes reveals a role for FUT9 during E-selectin mediated cell adhesion

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Posterboard #: B26 | Abstract #: 106

Expression of Heparan Sulfate 6-O-sulfotransferase-1 is Stimulated by Adrenaline via SrcA-ERK Signaling Pathway in L-M Cells

Mitsutaka Nishida¹, Keitaro Nagami¹, Yoshihiro Kanamaru², Tomio Yabe²
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Posterboard #: B27 | Abstract #: 108

Characterization of the Specificity of CTD110.6, an O-GlcNAc Reactive Antibody, Under Conditions of Cellular Starvation and Stress

Russell Reeves, Albert Lee, Gerald Hart, Natasha Zachara
Department of Biological Chemistry, Johns Hopkins University School of Medicine

Posterboard #: B28 | Abstract #: 110

HS3ST2 Overexpression Increases Invasiveness of MDA-MB-231 Breast Cancer Cells via Upregulation of Protease Expression and MAPK Signaling

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¹Department of Gynecology and Obstetrics, University Hospital, Muenster, Germany; ²Department of Medical Biochemistry, University of Uppsala, Uppsala, Sweden; ³Department of Gynecology and Obstetrics, University Hospital, Muenster; ⁴Department of Anatomy, National University of Singapore, Singapore

CS4: Vascular Biology, Elastic Fibers, and Related Diseases

Posterboard #: B29 | Abstract #: 112

Aortic and Lung Disease in Homozygous Fbn1 GT-8 Mutant Mice

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Posterboard #: B30 | Abstract #: 114

Pathogenesis of Thick Skin in Weill-Marchesani Syndrome

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Posterboard #: B31 | Abstract #: 116

ADAMTS9 Regulates Aortic Vascular Smooth Muscle Cell Function

Yaoyao Du, Suneel S Apte
Lerner Research Institute

Posterboard #: B32 | Abstract #: 118

The Tumor Growth Inhibitory Effect of ADAMTS1 is Accompanied by the Inhibition of Tumor Angiogenesis

Satoshi Hirohata¹, Takashi Ohtsuki¹, Masanari Obika¹, Hiroko Ogawa¹, Shozo Kusachi², Yoshifumi Ninomiya¹
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Posterboard #: B33 | Abstract #: 120

Antagonistic Regulation of Transforming Growth Factor-Beta by Fibulin-4A and Fibulin-4B is Required for Cardiovascular And Musculoskeletal Development in Zebrafish

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Posterboard #: B34 | Abstract #: 122

Molecular Mechanisms of Anticoagulant Activity of Annexins A4 and A5 -Thrombin Sensitivity and Cell Surface Translocation-

Yumiko Kuranami, Shoko Takaya, Ayano Hagiuda, Kyoko Kojima-Aikawa
Ochanomizu University

Posterboard #: B35 | Abstract #: 124

Zipper-like Folding of the C-terminal Quarter Fragment of Type III Collagen Model polypeptides with Ehlers-Danlos Syndrome Mutations

Kazunori Mizuno¹, Sergei Boudko¹, Jürgen Engel², Hans Peter Bächinger¹
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Posterboard #: B36 | Abstract #: 126

The Role of β 1Integrin in Mediating Vascular Extracellular Matrix Integrity

Onika Noel, Kirsten Turlo, Luisa Iruela-Arispe
University of California, Los Angeles

Posterboard #: B37 | Abstract #: 128

Fibronectin and Heparan Sulfate in Microfibril Assembly and Homeostasis

Laetitia Sabatier¹, Amani Hassan¹, Christine Fagotto-Kaufmann¹, Takao Sakai², Dieter Reinhardt¹
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Posterboard #: B38 | Abstract #: 130

Identification of a High-mannose ICAM-1 Glycoform in Activated Endothelial Cells

David Scott, Rakesh Patel
University of Alabama at Birmingham, Birmingham, AL, USA

Posterboard #: B39 | Abstract #: 132

Role of Carbohydrate-Binding Domains of Human Annexin A5 in the Regulation of Blood Coagulability

Shoko Takaya, Satoko Nambu, Risako Takeda, Kyoko Kojima-Aikawa
The Natural/Applied Science Division, Graduate School of Humanities and Sciences, Ochanomizu University

Posterboard #: B40 | Abstract #: 134

Functional Effect of Dietary fiber from *Costaria Costata* Residue on Reducing Serum Lipids

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CS5: Carbohydrate and Matrix Metabolism in Disease States

Posterboard #: B41 | Abstract #: 136

Deciphering Alpha-dystroglycan Glycosylation in Cancer. More Than LARGE

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Posterboard #: B42 | Abstract #: 138

Heparin Blocks Autophagy in Hyperglycemic Dividing Mesangial Cells and Initiates Synthesis of a Monocyte-Adhesive Hyaluronan Matrix After Completing Cell Division

Aimin Wang, Vincent Hascall
Biomedical Engineering, Lerner Research Institute, Cleveland Clinic, OH

Posterboard #: B43 | Abstract #: 140

Characterization of the Mucin-type O-glycans in IgA1 from Patients with IgA Nephropathy and Healthy Individuals

Sylvain Lehoux¹, Rongjuan Mi¹, Rajindra Aryal¹, Yingchun Wang¹, Katrine T.B.G. Schjoldager², Henrick Clausen², Irma van Die³, Arlene B. Chapman¹, Richard D Cummings¹, Tongzhong Ju¹
¹Emory University School of Medicine; ²Copenhagen Center for Glycomics; ³VU University Medical Center

Posterboard #: B44 | Abstract #: 142

Antigen specific IgG Glycosylation is Strongly Influenced by Infection Status While Bulk IgGs Remain Constant

Alison Mahan, Todd Suscovich, Galit Alter
Ragon Institute of MGH, MIT and Harvard, Charlestown, MA, USA

Posterboard #: B45 | Abstract #: 144

New Approach to Detect Changes in Sialylation of the Matrix Glycoprotein Vitronectin, which Regulates Matrix Restructuring During Liver Regeneration

Haruko Ogawa, Kotone Sano, Naomi Sobukawa, Kimie Asanuma-Date
Ochanomizu University, Tokyo 112-8610, Japan

Posterboard #: B46 | Abstract #: 146

Identification of a Novel Protein-Protein Interaction Involved in A-Dystroglycan Glycosylation

Natasha Pereira, Helen Pu, Zhiwei Song
Bioprocessing Technology Institute, A*STAR, Centros, Singapore

Posterboard #: B47 | Abstract #: 148

Agonists of Heparan Sulfate Synthesis for the Treatment of Multiple Hereditary Exostoses

Emylie Seamen, Chelsea L. Nora, Risha Sinha, Jeffrey D. Esko
University of California, San Diego

Posterboard #: B48 | Abstract #: 150

Increase of O-glycosylated Oncofetal Fibronectin in High Glucose-Induced Epithelial-Mesenchymal Transition of Cultured Human Epithelial Cells

Frederico Alisson da Silva, Leonardo Freire de Lima, Luciana Penha, Miguel Lucena, Joana Laureano Donadio, Wagner Barbosa Dias, Adriane Todeschini
Universidade Federal do Rio de Janeiro

Posterboard #: B49 | Abstract #: 152

Heparan Sulfate Subdomains that are Degraded By Sulf Accumulate in Cerebral Amyloid SS Plaques of Alzheimer's Disease: Evidence From Mouse Models and Patients

Tomomi Hosono-Fukao¹, Shiori Ohtake-Niimi², Hitomi Hoshino¹, Tony Wyss-Coray³, Kenji Uchimura⁴
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Posterboard #: B50 | Abstract #: 154

Secondary Changes in Lysosomal Storage Diseases: Cytoskeleton, pH and Glycosidase Forms

Gherman Wiederschain
Boston College, Boston, MA 02467, USA

CS6: Basement Membranes

Posterboard #: B51 | Abstract #: 28

Collagen XVIII Regulates Hair Follicle Cycling and Growth of Skin Tumors

Vanessa López-Alpuche¹, Hanne-Kaisa Honkanen¹, Lotta Seppinen¹, Aino Kinnunen¹, Harri Elamaa¹, Markus Mäkinen², Lauri Eklund¹, Ritva Heljasvaara¹, Taina Pihlajaniemi¹

¹Department of Medical Biochemistry and Molecular Biology, Institute of Biomedicine, University of Oulu; ²Department of Pathology, University of Oulu

Posterboard #: B52 | Abstract #: 157

Allelic Differences Contribute to Variation in Ocular Dysgenesis, Myopathy and Neuronal Lamination Defects Caused By Col4a1 and Col4a2 Mutations

Debbie Kuo¹, Cassandre Labelle-Dumais¹, Mao Mao¹, Marion Jeanne¹, Berkeley Kauffman¹, Jennifer Allen¹, Jack Favor², Douglas Gould¹

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Posterboard #: B53 | Abstract #: 159

Xylosyltransferase and Glucuronyltransferase Activities of LARGE are Required For Dystroglycan Function

Takako Yoshida-Moriguchi, Kei-ichiro Inamori, Yuji Hara, Mary Anderson, Liping Yu, Kevin Campbell
The University of Iowa

Posterboard #: B54 | Abstract #: 161

RhoGTPase-mediated LIM Kinase Regulates Collagen Deposition and Cleft Formation During Mouse Submandibular Gland Branching Morphogenesis

Shayoni Ray, Joseph Fanti, Deirdre Nelson, Melinda Larsen
University at Albany, SUNY

CS7: Genetics and Gene Expression

Posterboard #: B55 | Abstract #: 163

Repository of Recombinant Expression Constructs for Mammalian Glycosylation Enzymes: Baculovirus Vectors for Glycosyltransferase and Glycoside Hydrolase Production in Insect Cells

Gagandeep Gahlay¹, Kelley Moremen², Jason Steel³, Joshua LaBaer², Donald Jarvis¹

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Posterboard #: B56 | Abstract #: 165

Screening of Glyco-Genes Involved in Myogenic Differentiation Of Murine Satellite Cells

Vincent Grassot, Fabrice Dupuy, Anne Da Silva, Abderrahman Maftah, Jean-Michel Petit
UMR1061 Génétique Animale

Posterboard #: B57 | Abstract #: 167

Generation of an Inducible Cartilage Specific Deleter Using Human Aggrecan Enhancer/Promoter That is Trackable in Vivo Using Luciferase

Leandro Lo Cascio¹, Ngee Han Lim², Andrea Layyous¹, Ke Liu¹, Hiroyuki Nakamura¹, Jeremy Saklatvala¹, George Bou-Gharios¹
¹Imperial College of London; ²Kennedy Institute of Rheumatology, University of Oxford

Posterboard #: B58 | Abstract #: 169

Mutation of the UDP-Galactose Transporter, SLC35A2, Causes a Novel Type of Congenital Disorder of Glycosylation

Bobby G. Ng¹, Kimiyo Raymond², Marc C. Patterson², Hudson H. Freeze¹
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Posterboard #: B59 | Abstract #: 171

Whole Exome Sequencing Identifies STT3A as a Novel CDG

Bobby G. Ng¹, Shiteshu Shrimal², Reid Gilmore², Hudson H. Freeze¹
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Posterboard #: B60 | Abstract #: 173

Epigenetic Activation Of Mouse Brain Ganglioside Synthase Genes

Yi-Tzang Tsai, Robert Yu
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CS8: Mechanobiology and Biomedical Engineering

Posterboard #: B61 | Abstract #: 174

Promoting Human Mesenchymal Stem Cell Growth on Silk-Based Biomaterial with Bound Recombinant Collagen Proteins

Bo An
Biomedical Engineering, Tufts University

Posterboard #: B62 | Abstract #: 176

Biomechanical Imaging: Mapping the Mechanical Properties of the Cell

Elizabeth Canovic¹, Tom Seidl¹, Assad Oberai², Paul Barbone¹, Dimitrije Stamenovic¹, Michael Smith¹
¹Boston University; ²Rensselaer Polytechnic Institute

Posterboard #: B63 | Abstract #: 178

Visualizing Molecular Forces Across Vinculin in Living Cells

Brenton Hoffman¹, Carsten Grashoff², Martin Schwartz¹
¹Duke University; ²Max Plank Institute of Biochemistry

Posterboard #: B64 | Abstract #: 180

The Importance of Sodium Bicarbonate/CO₂ Culture for Chondrocyte Proliferation in Monolayer

Aamer Khan, Aasma Khan, Robert Lee, Jill Urban
University of Oxford

Posterboard #: B65 | Abstract #: 182

3D Mapping of Complex Flow Fields in Biomaterials

Julia Mack, Khalid Youssef, Onika Noel, Michael Lake, Ashley Wu, Luisa Iruela-Arispe, Louis Bouchard
University of California – Los Angeles

Posterboard #: B66 | Abstract #: 184

Laminin Active Peptide-Polysaccharide Matrices for Tissue Engineering

Motoyoshi Nomizu, Yuji Yamada, Fumihiko Katagiri, Kentaro Hozumi, Yamato Kikkawa
Department of Clinical Biochemistry, Faculty of Pharmacy, Tokyo University of Pharmacy and Life Sciences, Tokyo, Japan

Posterboard #: B67 | Abstract #: 186

Actomyosin Cytoskeletal Organization Distinguishes Lobopodia from Lamellipodia

Ryan Petrie, Kenneth Yamada
Laboratory of Cell and Developmental Biology, NIDCR, National Institutes of Health

Posterboard #: B68 | Abstract #: 188

Long Term Traction Force Measurements for Composite Extracellular Matrix Patterns

Samuel Polio, Dimitrije Stamenovic, Michael Smith
Boston University

Posterboard #: B69 | Abstract #: 190

Deciphering Sulfation Code of Chondroitin Sulfate that Regulate Neuronal Directionality and Pathfinding

Vimal Swarup¹, Tony Hsiao¹, Jianxing Zhang², Glenn Prestwich², Vladimir Hlady¹, Balagurunathan Kuberan^{1,2}
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²Department of Medicinal Chemistry, University of Utah

Posterboard #: B70 | Abstract #: 192

Innovative Approaches to Study The Effect of Cell Geometry on Cell Behaviour Reveal a Role for Plasma Membrane Lipid Dynamics

Thomas von Erlach, Silvia Goldoni, Martin Hedegaard, Molly Stevens
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Posterboard #: B71 | Abstract #: 194

Extracellular Matrix Hydrogels Prepared from Porcine Dermis and Urinary Bladder: Structure, Mechanics, and In Vivo Remodeling

Matthew Wolf, Kerry Daly, Ellen Brennan-Pierce, Scott Johnson, Christopher Carruthers, Antonio D'Amore, Shailesh Nagarkar, Sachin Velankar, Stephen Badylak
University of Pittsburgh

Posterboard #: B72 | Abstract #: 196

Magnetically Attachable Stencils: Non-Destructive Analysis of Migration Reveals a Context-Dependent Contribution of the Underlying Matrix

William Ashby, John Wikswo, Andries Zijlstra
Vanderbilt University, Nashville, TN, USA

CS9: Stem/Progenitor Cells and Their Environment

Posterboard #: B73 | Abstract #: 29

Fibronectin, laminin and Type IV Collagen Are Key Components Of The Sinusoids-Associated Megakaryocyte Niche Within Bone Marrow

Alessandro Malara¹, Manuela Currao¹, Cristian Gruppi¹, Alessandra Balduini^{1,2}
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²Department of Biomedical Engineering, Tufts University

Posterboard #: B74 | Abstract #: 199

Matrix-based Regulation of Adipose-Derived Stem Cell Improves Myotube Formation and Reduces Lineage Plasticity

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Posterboard #: B75 | Abstract #: 201

Combinatorial Effects of RGD Signaling and Tunable Matrix Stiffness on the Differentiation of Human Primary Cells in a 3D Environment

Aurelien FORGET, Jon Christensen, Esther Kohler, V. Prasad Shastri
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Posterboard #: B76 | Abstract #: 203

Comparison of Human Pluripotent Stem Cells Cultured on Matrigel™ and Recombinant Human Vitronectin Using TeSR™-E8™ Low Protein Medium

Erik B. Hadley¹, Jessica C. Norberg¹, Mandy M. Chan¹, Matthew K. Wong¹, Alvin Ng¹, Heather Drew¹, Cindy Miller¹, Allen C. Eaves^{1,2}, Terry E. Thomas¹, Sharon A. Louis¹
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Posterboard #: B77 | Abstract #: 205

Therapeutic Angiogenesis of 3D Stem Cell Cluster Formed on FGF-immobilized Substrate

SangHeon Kim
Korea Institute of Science and Technology, Seoul, South Korea

Posterboard #: B78 | Abstract #: 207

Changes in Glycan-related Gene Transcripts Following Human Embryonic Stem Cell Differentiation into Cell Types Derived from Ectoderm, Mesoderm or Endoderm Lineages

Alison Nairn¹, Mitche dela Rosa¹, Laura Menendez², Michael Kulik², Stephen Dalton², Michael Pierce³, Kelley Moremen³
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Posterboard #: B79 | Abstract #: 209

Fibrillin-1 Assemblies Regulate Mesenchymal Stem Cell Performance

Silvia Smaldone, Jason Cook, Maria del Solar, Francesco Ramirez
Mount Sinai School of Medicine, New York, NY, USA

Posterboard #: B80 | Abstract #: 211

Identification of the Fucosylated Glycoproteins Potentially Involved in Pluripotency Regulation Using Lectin Pulldown-Coupled Proteomic Analysis

Yu-Chieh Wang¹, Karen Sabatini¹, Kelley Fracchia¹, Ileana Slavin¹, Xiaoyan Liao¹, HaTran¹, Trevor Leonardo¹, Suzanne Peterson¹, Louise Laurent², Jeanne Loring¹
¹The Scripps Research Institute, Center for Regenerative Medicine, Department of Chemical Physiology, La Jolla, California, USA; ²University of California-San Diego, Department of Reproductive Medicine, San Diego, California, USA

CS10: Biosynthesis, Protein Folding, Secretion, and Matrix Assembly

Posterboard #: B81 | Abstract #: 213

Heterotrimerization Domain of Collagen IX Determines Chain Stagger in Triple Helix

Sergei P. Boudko, Hans Peter Bächinger
Shriners Hospital for Children, Oregon Health and Science University, OR, USA

Posterboard #: B82 | Abstract #: 215

Distinct Functions for Bromide and Chloride During Basement Membrane Assembly

Christopher Cummings, Gautam Bhawe, Roberto Vanacore, Mohamed Rafi, Billy Hudson
Vanderbilt University

Posterboard #: B83 | Abstract #: 217

O-glycosylation in Spodoptera Frugiperda (Sf9) and Trichoplusia ni (Hi-5) Insect Cell Lines is Complex and Include Abundant Hexuronic Acid (Sf9 and Hi-5) and O-linked Phosphocholine (Sf9)

Stefan Gaunitz
Karolinska Institutet, Laboratory Medicine

Posterboard #: B84 | Abstract #: 219

Lysyl Oxidase and Transglutaminase Dependent Collagen Fibril Formation In Chicken Embryonic Cornea

Uwe Hansen, Lei Wang, Peter Bruckner
Department of Physiological Chemistry and Pathobiochemistry, University Hospital Muenster, Germany

Posterboard #: B85 | Abstract #: 221

Analysis of Endopeptidase Reactions Involved in ERAD

Akira Hosomi, Tadashi Suzuki
Glycometabolome Team, System Glycobiology Research Group, RIKEN Advanced Science, Saitama, Japan

Posterboard #: B86 | Abstract #: 223

Novel Insights into Diabetic Bone Complications

Roosbeh Khosravi, Katharine Sodek, Philip Trackman
Department of Periodontology & Oral Biology, Goldman School of Dental Medicine, Boston University

Posterboard #: B87 | Abstract #: 225

Identifying Bottlenecks in Efforts to Glycoengineer Insect Cells for Humanized N-glycan Processing

Hideaki Mabashi-Asazuma, Christoph Geisler, Donald L. Jarvis
Department of Molecular Biology, University of Wyoming, Laramie, WY

Posterboard #: B88 | Abstract #: 227

The Neisseria Meningitidis Serogroup X xcbA Gene Product Catalyses Synthesis of the Bacterial Capsular Polysaccharide

Karen Muindi, Willie Vann
United States Food and Drug Administration

Posterboard #: B89 | Abstract #: 229

Use of Experimentally Controlled Quaternary Structure Mutants to Probe Regulatory Modes of UDP-glucose Dehydrogenase

Annastasia Harris¹, Ashley Thelen¹, Erin Farmer¹, Katherine Easley¹, Kristy van Lammeren², Vincent Christoffels³, Jeroen Bakkers², Joseph Barycki¹, Melanie Simpson¹
¹University of Nebraska; ²Hubrecht Institute; ³University of Amsterdam

Posterboard #: B90 | Abstract #: 231

Fibrillin-2 Microfibril Assembly Depends on Fibronectin Fibrillogenesis and is Suppressed by ADAMTSL2

Lauren Wang¹, Douglas Annis², Deane Mosher², Dieter Reinhardt³, Robert Mechan⁴, Suneel Apte¹
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Posterboard #: B91 | Abstract #: 233

A Minimalist Fibril: a Collagen-Like Fibril Assembly of a Designed Triple Helix With Periodic Sequences for the Charged And The Hydrophobic Residues but No Hyp

Parminderjeet Kaur, Rebecca Strawn, Hiroshi Matsui, Yujia Xu
Hunter College -CUNY

CS11: Cancer Microenvironment

Posterboard #: B92 | Abstract #: 235

Tissue Homeostasis and Leukocyte Immune Responses in Animals are Regulated by Density Dependent Lectin-Glycan Interactions

Fred Brewer
Department of Molecular Pharmacology, Albert Einstein College of Medicine, Bronx, NY 10461

Posterboard #: B93 | Abstract #: 237

Altered O-Glycan Expression in Tumor Glycoproteins: Genetics and Consequences

Richard D Cummings, Yingchun Wang, Tongzhong Ju
Emory University School of Medicine, Atlanta, GA

Posterboard #: B94 | Abstract #: 239

Expression of β 1,3-N -acetylglucosaminyltransferase Genes in Human Cancer Cell Line SW620 and NCI-H23 Treated with Bosutinib, a Src Kinase Inhibitor

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Posterboard #: B95 | Abstract #: 241

Different Expression Profile of Glycosphingolipids in Human Breast Cancer Stem Cells vs. Non-cancer Stem Cells

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Posterboard #: B96 | Abstract #: 243

Heparan Sulfate Proteoglycans: Regulators of Oncogenic Signaling in Brain Cancer

Anna Wade, Aaron Robinson, Jane Engler, C. David James, Joanna Phillips
University of California San Francisco

Posterboard #: B97 | Abstract #: 245

Glycosylation of Laminin Receptor Integrin (A3 β 1) Regulate Their Association with Tetraspanin CD151 and Thus Motility/Invasion on Basement Membrane Component (Matrigel)

Amit Ranjan, Rajiv Kalraiya
Kalriya Lab, ACTREC, Tata Memorial Centre, Mumbai, India

Posterboard #: B98 | Abstract #: 247

Impact of Hyaluronan Turnover on Vesicle Trafficking and Exosome Biogenesis

Caitlin McAtee¹, Annastasia Harris¹, Naava Naslavsky², Steven Caplan², Melanie Simpson¹
¹University of Nebraska; ²University of Nebraska Medical Center

Posterboard #: B99 | Abstract #: 249

Integrin α 4 Mediates Neuroblastoma Dissemination

Shanique Young, Katelyn McCabe, Alena Bartekova, Dwayne Stupack
Moore's UCSD Cancer Center

CS12: Glycomics/Chemical Biology I: Function

Posterboard #: B102 | Abstract #: 255

The Lectin Domain of the ppGalNAc-T Glycosyltransferases Acts as a Switch, Further Controlling Glycopeptide Substrate Glycosylation in an N- or C- Direction

Leslie Revoredo, Thomas Gerken
Case Western Reserve University

Posterboard #: B103 | Abstract #: 257

Chemical Biology Approaches Reveal Insights into Mechanism of Heparan Sulfate Biosynthetic Enzyme Action

Sailaja Arungundram, Vy Tran, Karthik Raman, Thao Nguyen, Balagurunathan Kuberan
University of Utah

Posterboard #: B104 | Abstract #: 259

Quantifying Individual Glycoforms in Complex Glycomics Mixtures

Shujuan Tao¹, Barry Boyes², Ron Orlando¹
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²Advanced Materials Technology, Inc., and CCRC, University of Georgia

Posterboard #: B105 | Abstract #: 261

Improvements on the DMB-HPLC Method for Sensitive and Specific Detection and Quantitation of Bound and Free Nonulosonic Acids

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Posterboard #: B106 | Abstract #: 263

Evolution of Haptoglobin Glycoforms in Liver Disease Progression

Radoslav Goldman, Petr Pompach, Miloslav Sanda, Zuzana Brnakova, Jing Wu
Georgetown University, Washington, DC, USA

Posterboard #: B107 | Abstract #: 265

Development of Structurally-defined Heparan Sulfate/heparin Oligosaccharide Libraries Using 2D Chromatography and Mass Spectrometry Based Structural Determination

Yu Huang, Yang Mao, Chun Shao, Joseph Zaia
Boston University School of Medicine, Boston, MA, USA

Posterboard #: B108 | Abstract #: 267

Mass Spectrometry-Based Strategies For High Sensitivity Mapping of Glyco-Epitopes Involved in Mediating Cell-Cell Interactions

Kay-Hooi Khoo¹, Chu-Wei Kuo¹, Chu-Wen Cheng², Shin-Yi Yu¹, Ming-Yi Ho¹, Chi-Chi Chou¹
¹Institute of Biological Chemistry, Academia Sinica, Taiwan;
²Institute of Biochemical Sciences, National Taiwan University

Posterboard #: B109 | Abstract #: 269

An Easy way to Desulfonate 2 O-Sulfonate Heparin

Maria Longas¹, Tewodrose Aseffa², Veronica Castellanos²
¹Purdue University Calumet, Department of Chemistry;
²Purdue University Calumet, Department of Biology

Posterboard #: B110 | Abstract #: 271

Cross-talk Between SCFA-Hexosamine Analog-mediated Metabolic Flux and Intracellular Esterase Activity

Elaine Tan, Mohit Mathew, Christopher Saeui, Shivam Shah Shah, Lily Liu, Patawut Bovonratwet, Rahul Bhattacharya, Kevin Yarema
Department of Biomedical Engineering and the Translational Tissue Engineering Center, The Johns Hopkins University

Posterboard #: B111 | Abstract #: 273

The Urine Glycome as a Source of Biomarkers: GlycanMap[®] Analysis of Free Oligosaccharides and O-Linked Glycans[™]

Yoshiaki Miura, Shinya Kataoka, Thomas Stevenson, Hidehisa Asada
Ezose Sciences Inc.

Posterboard #: B112 | Abstract #: 275

'Designer' Oligosaccharide Microarrays to Decipher Ligands in Mammalian and Prokaryotic Glucan-Recognition Systems

Angelina S Palma^{1,2}, Yan Liu¹, Yibing Zhang¹, Hongtao Zhang¹, Ana S Luis³, Ana Luisa Carvalho², Harry J Gilbert⁴, Alisdair Boraston⁵, Carlos MGA Fontes³, Wengang Chai¹, Ten Feizi¹
¹Imperial College London, Hammersmith Campus, UK; ²REQUIMTE/CQFB, Universidade Nova de Lisboa, Caparica, Portugal; ³CIISA, Universidade Técnica de Lisboa, Alto da Ajuda, Portugal; ⁴University of Newcastle, Newcastle, UK; ⁵University of Victoria, British Columbia, Canada

Posterboard #: B113 | Abstract #: 277

High-Throughput N-Linked Glycan Analysis to Supports Cell line and Process Development

Shashi Prajapati, Kanvasri Jonnalagadda, Lam Raga Markely, Marty Sinacore, Thomas Ryll, Scott Estes
Biogenidec

Posterboard #: B114 | Abstract #: 279

Disrupting the Sugar-coat: Inhibition of Mucin-type O-glycosylation Through Metabolic Glycan Engineering

S-Gopalan SAMPATHKUMAR, Kavita Agarwal, Rachna Kaul, Monika Garg, S Asif, Syed Meheboob Ahmed, Saroj Kumar Jha
National Institute of Immunology (NII), Laboratory of Chemical Glycobiology (CGB), New Delhi, India

Posterboard #: B115 | Abstract #: 281

Analytical Services and Trainings at the Complex Carbohydrates Research Center

Roberto Sonon, Mayumi Ishihara, Zhirui Wang, Christian Heiss, Radnaa Naran, Ian Black, Tina Thomas, Lucas Veillon, Stephanie Archer-Hartman, Parastoo Azadi
Complex Carbohydrates Research Center, The University of Georgia

Posterboard #: B116 | Abstract #: 283

“Identification of an Endogenous *E. coli* Glycosidase with Activity Toward O- β -GlcNAc Modified Proteins

Maggie Thomasson, Octavia Goodwin, Michelle Sweeney, Megan Macnaughtan
Louisiana State University

Posterboard #: B117 | Abstract #: 285

Ultrahigh-throughput screening campaign to identify compounds enhancing glycosylation of alpha-dystroglycan

Zhifang Li¹, Kyle Madden¹, Becky Hood², Chen-Ting Ma², Haowen Zhou², Anne Bang², Eduard Sergienko², Michael Hedrick², Monika Milewski², Steve Vasile², Kevin Nguyen², Eigo Suyama², Thomas Chung², Qilong Lu¹, Xiaohua Wu¹
¹*Carolinas Medical Center*; ²*Sanford-Burnham Medical Research Institute*

Posterboard #: B118 | Abstract #: 287

GlycReSoft: A Software tool for Processing Glycomics and Glycopeptidomics LC/MS Profiling Data

Yan Tan¹, Evan Maxwell¹, Yuxiang Tan¹, Han Hu¹, Gary Benson¹, Konstantin Aizikov¹, Shannon Conley¹, Gregory Staples¹, Gordon Slysz², Richard Smith², Joseph Zaia¹
¹*Boston University*; ²*Pacific Northwest National Laboratory*

CS13: Development

Posterboard #: B119 | Abstract #: 289

Formation of an Enzyme Complex for Efficient Production of Keratan Sulfate Glycosaminoglycan

Tomoya O. Akama¹, Michiko N. Fukuda², Tomoyuki Nakamura¹
¹*Kansai Medical University*; ²*Sanford-Burnham Medical Research Institute*

Posterboard #: B120 | Abstract #: 291

Functional Significance of Vascular Endothelium-derived ADAMTS9 in Angiogenesis and Craniofacial Development

Johanne Dubail, Noriko Hattori, Courtney Nelson, Suneel Apte
Cleveland Clinic Lerner Research Institute

Posterboard #: B121 | Abstract #: 293

Evidence for an Effect of the Morphogen Retinoic Acid Through Stimulated MMP9 Expression on the Turnover of Collagen Type IX by Cultured Chondrocytes

Maximillian Rogers, Lammy Kim, David Eyre, Russell Fernandes
University of Washington, WA, USA

Posterboard #: B122 | Abstract #: 295

Developing Skeletal Muscle Activity Affects Abnormal Morphology of Lathyrotic Long Bone

Keitaro Isokawa¹, Maki Yuguchi¹, Yosuke Yamazaki¹, Shinji Usami², Rie Suzuki², Hirofumi Kanazawa²
¹*Division of Functional Morphology, Dental Research Center, Nihon University School of Dentistry, Tokyo, Japan*; ²*Department of Anatomy, Nihon University School of Dentistry, Tokyo, Japan*

Posterboard #: B123 | Abstract #: 297

Imbalance of Vcan Protein Expression Alters Collagen Deposition: Consequence for Heart Development

Claude Jourdan Le Saux¹, Monica A. Davis², Edward L. Krug², Corey H. Mjaatvedt²
¹*Dept. of Medicine/Division of Cardiology, UTHSCSA, TX, USA 78229*; ²*Dept. of Regenerative Medicine, Medical University of S. Carolina, Charleston, SC, USA 29464-8150*

Posterboard #: B124 | Abstract #: 299

Breaking Barriers: Role of Adamts9 in Early Embryonic Mouse Development

Sumeda A. Nandadasa, Courtney M. Nelson, Robert P. T. Somerville, Suneel S. Apte
Department of Biomedical Engineering, Lerner Research Institute, Cleveland Clinic Foundation, Cleveland, OH, USA

Posterboard #: B125 | Abstract #: 301

O-glycosylation Modulates Integrin and FGF Signaling by Influencing the Secretion of Basement Membrane Components

E Tian, Matthew Hoffman, Kelly Ten Hagen
NIDCR/NIH, Bethesda, MD, USA

Posterboard #: B126 | Abstract #: 303

Development of Dermal Matrix in Chick Limb Bud

Yosuke Yamazaki¹, Maki Yuguchi¹, Taku Toriumi¹, Hirofumi Kanazawa², Keitaro Isokawa¹
¹*Department of Anatomy Division of Functional Morphology, Dental Research Center, Nihon University School of Dentistry*; ²*Department of Anatomy, Nihon University School of Dentistry*

CS14: Fibrosis, Proteolysis, and Tissue Repair

Posterboard #: B127 | Abstract #: 304

Cardiac Ankyrin Repeat Protein (Carp/Ankrd1) Regulates Mmp13 Expression

Karina Almodovar¹, Minjae Kwon¹, Susan Samaras Ph.D.¹, Jeffrey M. Davidson Ph.D.²
¹*Department of Pathology, Microbiology and Immunology, Vanderbilt University, Nashville, TN*; ²*Department of Pathology, Microbiology and Immunology, Vanderbilt University, Nashville, TN and VA Tennessee Valley Healthcare System, Nashville, TN*

Posterboard #: B128 | Abstract #: 306

IL-10 Promotes a Regenerative Phenotype by Regulation of Hyaluronan Synthesis via a STAT3 Dependent Mechanism

Swathi Balaji, Alice Leung, Louis Le, Yashu Dhamija, Stephanie Lang, Charles Klanke, Timothy Crombleholme, Sundeep Keswani
Cincinnati Children's Hospital Medical Center, Cincinnati, OH, USA

Posterboard #: B129 | Abstract #: 308

Biosynthetic Hybrid Fibrin Matrices for Enhanced Wound Repair

Ashley Brown¹, Saranya Sathanathan¹, Riley Hannan¹, Sarah Stabenfeldt², Andrew Lyon¹, Thomas Barker¹
¹Georgia Institute of Technology; ²Arizona State University

Posterboard #: B130 | Abstract #: 310

Collagen Biosynthesis Balancing Act Between Ski and Scleraxis

Ryan H. Cunnington, R.A. Bagchi, J.J.L. Davies, K.L. Bathe, J. A. Marques, S.G. Rattan, J.T. Wigle, M.P. Czubryt, I.M.C. Dixon
University of Manitoba

Posterboard #: B131 | Abstract #: 312

Granzyme B Contributes to Impaired Wound Healing in Apolipoprotein E Deficient Mice

Paul Hiebert, Dan Wu, David Granville
University of British Columbia

Posterboard #: B132 | Abstract #: 314

Recombinant Human Collagens and Associated Reagents

Wei-Man Wang, Sara Larson, Hyun Park, Gary Johnson, Weiping Jiang
R&D Systems, Inc.

Posterboard #: B133 | Abstract #: 316

Chondroitin Sulfate-Mediated Stabilization of Hyaluronan-Rich Matrices

Megan Lord¹, Anthony Day², Peter Youssef³, Lisheng Zhuo⁴, Hideto Watanabe⁴, Bruce Caterson⁵, John Whitelock¹
¹The University of New South Wales, Kensington, NSW, Australia; ²University of Manchester, Manchester, United Kingdom; ³Royal Prince Alfred Hospital, Camperdown, NSW, Australia; ⁴Aichi Medical University, Nagakute, Aichi, Japan; ⁵Cardiff University, Cardiff, Wales, United Kingdom

Posterboard #: B134 | Abstract #: 318

Mast Cells Produce Novel Shorter Forms of Perlecan that Contain Functional Endorepellin: A Role in Angiogenesis and Wound Healing

Moonsun Jung¹, Megan Lord¹, Bill Cheng¹, J. Guy Lyons², Hatem Alkhouri³, J. Margaret Hughes³, Simon McCarthy⁴, Renato Iozzo⁵, John Whitelock¹
¹Graduate School of Biomedical Engineering, The University of New South Wales, Sydney, NSW 2052, Australia; ²Discipline of Dermatology, Bosch Institute, Sydney Cancer Centre, University of Sydney, NSW 2006, Australia; ³Faculty of Pharmacy, University of Sydney, NSW 2006, Australia; ⁴HemCon Medical Technologies,

Inc., Portland, OR, USA; ⁵Department of Pathology, Anatomy and Cell Biology and the Kimmel Cancer Center, Thomas Jefferson University, Philadelphia, USA

CS15: Glycomics/Chemical Biology II: Analytical Methods

Posterboard #: B135 | Abstract #: 319

Characterization of the Outer Wall Structure of the Hydrocarbon-producing Alga Botryococcus Braunii

Christian Heiss¹, Ian Black¹, Taylor Weiss², Robyn Roth³, Carrie Goodson³, Stanislav Vitha², Jannette Rusch³, Andreas Holzenburg², Timothy Devarenne², Ursula Goodenough³, Parastoo Azadi¹
¹University of Georgia; ²Texas A&M; ³Washington University School of Medicine

Posterboard #: B136 | Abstract #: 321

Insights on the Unique Glycosylation of the S-layer and Surface Glycoproteins of Methanosarcina Mazei

Deborah R. Leon¹, Rachel R. Ogorzalek Loo², Joseph A. Loo³, Cheng Lin¹, Xiang Yu¹, Robert P. Gunsalus³, Catherine E. Cotello¹
¹Boston University School of Medicine; ²University of California, Los Angeles; ³University of California, Los Angeles

Posterboard #: B137 | Abstract #: 323

Reduced ICAM-1 Expression in N-glycosylation-Deficient Cells is Associated with Impaired Inflammatory and Immune Responses

Ping HE, Geetha Srikrishna, Hudson Freeze
Sanford-Burnham Medical Research Institute, CA, USA

Posterboard #: B138 | Abstract #: 325

Lubricin, the Basis of Faulty Biolubrication and Immunological Consequences

Niclas Karlsson
University of Gothenburg

Posterboard #: B139 | Abstract #: 327

Acid Hydrolysis Of Maltooligosaccharides, Cellooligosaccharides and Glycogen

Allen Murray¹, Aida Metzenberg², Robert Nichols³
¹Glycozyme, Inc.; ²California State University, Northridge; ³Cotton Incorporated

Posterboard #: B140 | Abstract #: 329

Periductal Induction of Vascular Addressin on High Endothelial Venule-Like Vessels in Autoimmune Pancreatitis

Yasuhiro Sakai¹, Motohiro Kobayashi¹, Masafumi Maruyama², Nobuyoshi Hiraoka³, Ayumi Oya⁴, Shunsuke Kageyama¹, Eiji Tanaka², Jun Nakayama¹, Toshio Morohoshi⁵

¹Department of Molecular Pathology, Shinshu University Graduate School of Medicine, Matsumoto, Japan; ²Department of Medicine, Division of Hepatology and Gastroenterology, Shinshu University School of Medicine, Matsumoto, Japan; ³Pathology Division, National Cancer Center Research Institute, Tokyo, Japan; ⁴Department of Radiology, Shinshu University School of Medicine, Matsumoto, Japan; ⁵Department of Pathology, Showa University School of Medicine, Tokyo, Japan

Posterboard #: B141 | Abstract #: 331

Human Milk Glycosaminoglycans Inhibit HIV-1 Primary Isolates in Vitro Infection

Graciela Rosas-Alquicira¹, Itzia Acosta-Blanco¹, Sandra Ortega-Francisco¹, Luis Fuentes-Romero¹, David S. Newburg², Guillermo M. Ruiz-Palacios¹, Yang Mao³, Joseph Zaia³, Mónica Viveros-Rogel¹

¹Instituto Nacional de Ciencias Médicas y Nutrición Salvador Zubirán, Mexico City; ²Boston College, Chestnut Hill, MA; ³Boston University School of Medicine, Boston, MA

Posterboard #: B142 | Abstract #: 333

Overlapping Basic Sequences in the Polysialyltransferases, ST8Sia II and ST8Sia IV, are Required for the Polysialylation of NCAM, Neuropilin-2 and SynCAM 1

Joseph Zapater, Karen Colley
University of Illinois at Chicago College of Medicine

Posterboard #: B143 | Abstract #: 335

The Role of Galectin-3 In Macrophages During Listeria Monocytogenes Infection; Critical Role of Galectin-3 in Macrophage Caspase-1 Activation and Intracellular Listeria Survival

Daniel Hsu¹, I-Chun Weng², Huan-Yuan Chen³, Hung-Lin Chen², Larissa Larsen⁴, Fu-Tong Liu¹

¹IBMS, Academia Sinica, Taipei, Taiwan; ²Dermatology, UC Davis School of Medicine, Sacramento, CA; ³IBMS, Academia Sinica, Taipei, Taiwan; ⁴IBMS, Academia Sinica, Taipei, Taiwan ROC; ⁵UC Davis School of Medicine, Sacramento, CA; ⁶Dermatology, UC Davis School of Medicine, Sacramento, CA

CS16: Host-Pathogen Interactions

Posterboard #: B144 | Abstract #: 337

Identification and Characterization of Hyaluronan in Human Milk and Potential Functions in Innate Host Defense of Newborns

David Hill¹, Hyunjin Rho¹, Ripal Amin¹, Sean Kessler¹, Mary Cowman², Carol de la Motte¹

¹The Cleveland Clinic, Cleveland, OH, USA; ²Polytechnic Institute of New York University, Brooklyn, NY, USA

Posterboard #: B145 | Abstract #: 339

Adenovirus Infection Induces Changes in Glycosylation of Human Infected Cells

Kathya Gutiérrez Huante, Ramón González García Conde, Ivan Martínez Duncker
Morelos State Autonomous University-Human Glycobiology Laboratory

Posterboard #: B146 | Abstract #: 341

Helicobacter Pylori Cholesteryl α Glucosides Are Critical for Bacterial Growth and Activation of Invariant NKT Cells

Yuki Ito¹, Jose Luis Vela², Fumiko Matsumura³, Hitomi Hoshino⁴, Aaron Tyznik⁵, Heeseob Lee⁶, Enrico Girardi⁷, Dirk M. Zajonc⁸, Motohiro Kobayashi⁹, Xingfeng Bao¹⁰, Thomas Borén¹¹, Rongsheng Jin¹², Peter H. Seeberger¹³, Jun Nakayama¹⁴, Mitchell Kronenberg¹⁵, Minoru Fukuda¹⁶

¹Sci Res Ctr, Yamaguchi Univ, Ube, Japan; ²La Jolla Inst for Allergy & Immunol, La Jolla, CA; ³Sanford-Burnham Med Res Inst, La Jolla, CA; ⁴UC Merced, Merced, CA; ⁵La Jolla Inst for Allergy & Immunol, La Jolla, CA; ⁶Pusan Nat. Univ, Busan, Korea; ⁷La Jolla Inst for Allergy & Immunol, La Jolla, CA; ⁸La Jolla Inst for Allergy & Immunol, La Jolla, CA; ⁹Shinshu Univ Grad Sch of Med, Matsumoto, Japan; ¹⁰Sanford-Burnham Med Res Inst, La Jolla, CA; ¹¹Umeå Univ, Umeå, Sweden; ¹²Sanford-Burnham Med Res Inst, La Jolla, CA; ¹³Sanford-Burnham Med. Res Inst, La Jolla, CA; ¹⁴Shinshu Univ Grad School of Med., Matsumoto, Japan; ¹⁵La Jolla Inst for Allergy & Immunol, La Jolla, CA; ¹⁶Sanford-Burnham Med Res Inst, La Jolla, CA

Posterboard #: B147 | Abstract #: 343

Sialic Acid Catabolism by Gardnerella Vaginalis in Bacterial Vaginosis

Warren G. Lewis, Lloyd Robinson, Amanda Lewis
Washington University in St. Louis School of Medicine

Posterboard #: B148 | Abstract #: 345

Silent Structural Features of Trichomonas Vaginalis CPI-GC

B.N. Singh¹, G. R. Hayes¹, S. Sato², P. Azadi³, C. Heiss³, R.N. Fichorova⁴

¹SUNY Upstate Medical University, Syracuse, NY; ²Research Center for Infectious Diseases, Laval University, Quebec Canada; ³CCRC University of Georgia, Athens, GA; ⁴Brigham Womens Hospital and Harvard Medical School, Boston, MA

Posterboard #: B149 | Abstract #: 347

Roles of Active and Inactive Forms of the Group A Streptococcus Hyaluronidase (HylA) in Bacterial Interactions with Host Innate Immunity

Masaya Yamaguchi, Yuka Yamaguchi, Samira Dahesh, Ajit Varki, Victor Nizet
Glycobiology Research and Training Center, University of California, San Diego, CA, USA

Poster session II: Tuesday, November 13th, 12:00 - 2:00 pm

CS1: Matrix and Carbohydrate Immunology

Posterboard #: B171 | Abstract #: 59

Natural Occurrence of N-glycolyl-hexosamines in Chondroitin/Dermatan Sulfates in Mammalian Tissues, Derived from the Metabolism of N-glycolylneuraminic Acid

Anne K. Bergfeld, Sandra L. Diaz, Roger Lawrence, Oliver M.T. Pearce, Jeffrey D. Esko, Ajit Varki

Glycobiology Research and Training Center, Departments of Medicine and Cellular & Molecular Medicine, University of California, San Diego, La Jolla, CA 92093-0687, USA

Posterboard #: B172 | Abstract #: 61

Role of Galectin-3 in Exosome Biogenesis

Meng-Lin Chiang^{1,2}, Po-Cheng Chiang¹, Daniel Hsu¹, Fu-Tong Liu^{1,2}, Huan-Yuan Chen¹

¹*Institute of Biomedical Sciences, Academia Sinica, Taipei, Taiwan;*

²*Graduate Institute of Life Sciences, National Defense Medical Center, Taipei, Taiwan*

Posterboard #: B173 | Abstract #: 63

Soluble Polysialylated NCAM-110 Produced by Lung Epithelial Cells Acts as a Novel Player of Innate Immune System

Christina Ulm¹, Mona Saffarzadeh¹, Poornima Mahavadi², Hildegard Geyer¹, Sandra Müller¹, Linda Prem¹, Nils Bayer¹, Peter Simon¹, Farhan Sabor³, Ralf Middendorff³, Susanne Rinné⁴, Thomas Lütke⁵, Eva Böttcher-Friebertshäuser⁶, Rita Gerardy-Schahn⁶, Martina Mühlhoff⁶, Klaus T. Preissner¹, Andreas Günther², Rudolf Geyer¹, Sebastian P. Galuska¹

¹*Institute of Biochemistry, Faculty of Medicine, Justus-Liebig-*

University Giessen, Germany; ²*Department of Internal Medicine II, Faculty of Medicine, Justus-Liebig-University Giessen, Germany;*

³*Institute of Anatomy and Cell Biology, Faculty of Medicine, Justus-Liebig-University Giessen, Germany;* ⁴*Institute of Physiology, Philipps-University Marburg, Germany;* ⁵*Institute of Veterinary Physiology and Biochemistry, Justus-Liebig-University Giessen, Germany;* ⁶*Institute of Cellular Chemistry, Medical School, Hannover, Germany*

Posterboard #: B174 | Abstract #: 65

Characterization of the FLDNF Glycan Epitope in *Schistosoma Manonsi* and a Semi-synthetic Approach for Heterologous Expression

Megan L. Mickum¹, Nelum Dorabawila², Jamie Heimbarg-Molinaro¹, Yi Lasanajak¹, Msano Mandalasi², Xuezheng Song¹, David F. Smith¹, A. Kwame Nyame², Richard D. Cummings¹

¹*Department of Biochemistry, Emory University School of Medicine, Atlanta;* ²*Department of Natural Sciences, University of Maryland Eastern Shore, Princess Anne, MD*

Posterboard #: B175 | Abstract #: 67

Expression and Antigenicity of Tumor-associated Neu5Gc-containing O-glycans in Human Carcinomas

Vered Padler-Karavani¹, Liwen Deng², Andrea Garcia², Felix Karp², Natasha Naidu³, Biswa Choudhury³, Nissi Varki², Ajit Varki¹

¹*Department of Medicine and Cellular and Molecular Medicine University of California at San Diego, La Jolla, CA 92093, USA;*

²*Department of Pathology University of California at San Diego, La Jolla, CA 92093, USA;* ³*Glycotechnology Core Resource, University of California at San Diego, La Jolla, CA 92093, USA*

Posterboard #: B176 | Abstract #: 69

The Involvement Of Sialylation Mediated By St3gal-I Or St3gal-Iv In Pathogenesis Of Polymicrobial Infection

Fernando Spiller¹, Frederico Silva¹, José Previato¹, Lúcia Previato¹, Adriane Todeschini¹, Fernando Cunha²

¹*Federal University of Rio de Janeiro;* ²*University of Sao Paulo*

Posterboard #: B177 | Abstract #: 71

Comparison of Siglec-8 and Siglec-9 Specificities For Defined Glycans and Human Lung Counter-receptors

Huifeng Hu, Yadong Wei, Steve M Fernandes, Anabel Gonzales Gil, Ronald L Schnaar

Johns Hopkins University School of Medicine

CS2: Matricellular Proteins

Posterboard #: B178 | Abstract #: 73

Postnatal Analysis of the 200 and 125-150 kDa Thrombospondin-2 Immunoreactive Isoforms in Murine Skeletal Tissues

Andrea Alford, Anita Reddy
University of Michigan

Posterboard #: B179 | Abstract #: 75

Expression, biosynthetic control and function of LacdiNAc / phospho-LacdiNAc on ECM glycoproteins

Franz-Georg Hanisch, Isabelle Breloy, David Bonar
Institute of Biochemistry II, Medical Faculty, University of Cologne, Germany

Posterboard #: B180 | Abstract #: 77

BSA-loaded Extracellular Matrix Gel for Sustain Drug Delivery

Doo Yeon Kwon, So Mi Yoon, Da Yeon Kim, Hyo Won Seo, Jin Seon Kwon, Young Jick Kim, Jae Ho Kim, Moon Suk Kim
Department of Molecular Science and Technology, Ajou University, South Korea

Posterboard #: B181 | Abstract #: 79

Characterization of the Substrate Specificity of Mammalian Heparanase Using a Glycomic Approach

Yang Mao¹, Yu Huang¹, Zhengliang Wu², Joseph Zaia¹
¹Boston University School of Medicine; ²R&D Systems Inc.

Posterboard #: B182 | Abstract #: 81

Retention of D469del-COMP Causes Necroptotic Cell Death of PSACH Chondrocytes

Francoise Coustry¹, Karen Posey¹, Peiman Liu¹, Alka Veerisetty¹, Joseph Alcorn¹, Jacqueline Hecht^{1,2}
¹University of Texas Medical School at Houston, TX, USA;
²Shriners Hospital for Children, Houston, TX, USA

Posterboard #: B184 | Abstract #: 85

A Biodegradable, Injectable, Small Intestine Submucosa Hydrogel With an Adjustable Therapeutic Window

Sun Woo Sim, Da Yeon KIM, So Mi Yoon, Jae Ho KIM, Byoung Hyun Min, Moon Suk KIM
Department of Molecular Science and Technology, Ajou University, san 5, Suwon 443 749, Republic of Korea

Posterboard #: B185 | Abstract #: 87

BSA-FITC Loaded Small Intestine Submucosa Hydrogels for in Vivo Delivery

GuoZhe Tai, Da Yeon Kim, So Mi Yoon, Jin Seon Kwon, Hyo Won Seo, Jae Ho Kim, Byoung Hyun Min, Hai Bang Lee, Moon Suk Kim
Department of Molecular Science and Technology, Ajou University, Suwon 443-749, Republic of Korea

Posterboard #: B186 | Abstract #: 89

Purification and Bioactivity of Glycolipids from Fish Brain

Hang Lu, Qiukuan Wang, Li Zhang, Jianen Hu
College of Food Science and Engineering, Dalian Ocean University, Dalian 116023, People's Republic of China

CS3: Receptors, Signaling, and Cytoplasmic Glycosylation

Posterboard #: B187 | Abstract #: 91

Neu1 Sialidase and Matrix Metalloproteinase-9 (MMP-9) Crosstalk in Alliance with Neuromedin-B GPCR Receptor is Essential for Ligand-induced Intracellular TOLL-like Receptor-7 and -9 Activation and Cellular Signaling

Samar Abdulkhalek, Myron Szewczuk
Queen's University, Kingston, Ontario, Canada

Posterboard #: B188 | Abstract #: 93

The Immunomodulatory Activities Exerted By Recombinant Forms of ArtinM depends on the Protein Quaternary Structure

Nerry Cecilio¹, Douglas Luche¹, Fernanda Carvalho¹, Andre Fernandes¹, Yan Liu², Ten Feizi², Maria Helena Goldman¹, Maria Cristina Roque-Barreira¹
¹University of Sao Paulo; ²Imperial College London

Posterboard #: B189 | Abstract #: 95

Sperm Sialome and Sexual Selection

Fang Ma¹, Diana Wu², Julie Sroga², Leah Whigham³, Steven Lindheim², Pascal Gagneux¹
¹University of California San Diego; ²University of Cincinnati;
³USDA ARS Grand Forks Human Nutrition Research Center

Posterboard #: B190 | Abstract #: 97

The Caenorhabditis Elegans Innate Immune Response to S. Aureus is Modulated by O-GlcNAc Transferase

Michelle Bond¹, Salil Ghosh², Michael Krause¹, John Hanover¹
¹NIDDK, NIH; ²FDA

Posterboard #: B191 | Abstract #: 99

Reduced Renal Proteoglycans Results in Tubule Epithelium Changes and Proteinuria

Cristina Munteanu¹, Eduard Condac¹, Beatrix Ferencz¹, Robert Silasi-Mansat², Florea Lupu², Myron E Hinsdale^{1,3}
¹Oklahoma State University, Physiological Sciences, Stillwater, OK, USA; ²Program of Cardiovascular Biology Research, Oklahoma Medical Research Foundation, OK, USA; ³Department of Cell Biology, University of Oklahoma Health Sciences Center, Oklahoma City, OK, USA

Posterboard #: B193 | Abstract #: 103

Site Mapping of the O-GlcNAc Post-Translational Modification Using Affinity Chromatography and Mass Spectroscopy

Emily Maverick, Michelle Sweeney, Octavia Goodwin, Megan Macnaughtan
Louisiana State University

Posterboard #: B194 | Abstract #: 105

A novel fucosylated TLR-4 mediates fucose-dependent interkingdom communication between mutualist microbiota and mammalian gut

David S Newburg¹, Di Meng², Nanda Nanthakumar¹
¹Boston College; ²Massachusetts General Hospital; Harvard Medical School

Posterboard #: B195 | Abstract #: 107

The Subendothelial Matrix alters Flow-induced Nitric Oxide Production to Regulate NF-kB Activation

Arif Yurdagul Jr., Jie Chen, Steven Funk, Patrick Albert, Christopher Kevil, Wayne Orr
LSU Health Sciences Center-Shreveport

Posterboard #: B196 | Abstract #: 109

New Roles of Microneme GBPs in Toxoplasma Gondii Infection

Aline Sardinha-Silva¹, Carla D. Lopes¹, Luciana P. Ruas¹, Nicholas Gay², Igor C. Almeida³, Camila F. Pinzan¹, Maria Cristina Roque-Barreira¹
¹University of São Paulo; ²University of Cambridge;
³University of Texas at El Paso

Posterboard #: B197 | Abstract #: 111

Heparan Sulfate Dependent Oligomerization of RAGE is Essential for Signal Transduction

Ding Xu¹, Jeffrey Young¹, Walter Chazin², Jeffrey Esko¹
¹University of California, San Diego, CA, USA;
²Vanderbilt University, TN, USA

CS4: Vascular Biology, Elastic Fibers, and Related Diseases

Posterboard #: B198 | Abstract #: 113

Fibrillins Integrate BMP and Notch Signaling During Muscle Development

Eric Carlson, Noe Charbonneau, Lynn Sakai
Shriners Hospital for Children, Portland, Oregon 97239

Posterboard #: B199 | Abstract #: 115

Novel Insights into Fibrillin-1 and TGF β Contributions to Aortic Disease in Marfan Syndrome

Jason Cook¹, Luca Carta¹, Maria del Solar¹, Mark Lindsay², Harry Dietz², Francesco Ramirez¹
¹Mount Sinai School of Medicine, New York, NY, USA;
²Johns Hopkins University School of Medicine, Baltimore, MD, USA

Posterboard #: B200 | Abstract #: 117

Serum N-glycan Profiling Has Potential to Predict Cardiovascular Disease (CVD) event and Prognosis in Hemodialysis (HD) Patients

Shingo Hatakeyama¹, Yuki Tobisawa¹, Tohru Yoneyama¹, Maho Amano², Shin-Ichiro Nishimura², Chikara Ohyama³
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Posterboard #: B201 | Abstract #: 119

A Correlative Method for Imaging Identical Regions of Soft Tissue by Micro-CT, Light Microscopy, and Electron Microscopy: Evaluating Adipose Tissue in a Model System

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Posterboard #: B202 | Abstract #: 121

Cardiac Neural Crest Specific Vascular Smooth Muscle Cell Dysregulation Results in Regional Proteoglycan Misexpression and Biomechanical Dysfunction in a Mouse Model of Aortopathy

Varun Krishnamurthy¹, Janaka Wansapura¹, Ashlie Evans², Kelsey Maddy², Stefanie Biechler², Richard Goodwin², Daria Narmoneva², Robert Hinton¹
¹Cincinnati Children's Hospital Medical Center; ²University of Cincinnati

Posterboard #: B203 | Abstract #: 123

Aortic Disease in the Heterozygous GT-8 Mouse Model of Marfan Syndrome

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Posterboard #: B204 | Abstract #: 125

Latent TGF β Binding Protein 4 Converts Microfibrils to Elastic Fibers by Recruiting Fibulin-5

Tomoyuki Nakamura
Kansai Medical University, Osaka Prefecture, Japan

Posterboard #: B205 | Abstract #: 127

Core 1 O-glycosylation is Required for the Stability of Podoplanin on Lymphatic Endothelial Cells

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Posterboard #: B206 | Abstract #: 129

Cartilage Inhibits Angiogenesis via Type IIB Procollagen N-Propeptide

Zhepeng Wang, Jennifer Bryan, Linda Sandell
Washington University

Posterboard #: B207 | Abstract #: 131

Role of Endothelial N-Glycan Mannose Residues in Monocyte Recruitment During Atherogenesis

David Scott¹, Jie Chen², Balu Chacko¹, Robert Traylor Jr.², Wayne Orr², Rakesh Patel¹
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²LSU-HSC Shreveport, LA, USA

Posterboard #: B208 | Abstract #: 133

LTBP4 regulates Both the Magnitude and the Direction of TGF β Response

Chi-Ting Su, Christine Weckenmann, Elizabeth Lawrence, Zsolt Urban
Department of Human Genetics, University of Pittsburgh

Posterboard #: B209 | Abstract #: 135

Identification of Key Modulators Involved in the Initiation of Aortic Aneurysm in Fibulin-4 Deficient Mice

Yoshito Yamashiro, Jianbin Huang, Hamid Mirzaei, Hiromi Yanagisawa
UT Southwestern Medical Center, Department of Molecular Biology

CS5: Carbohydrate and Matrix Metabolism in Disease States

Posterboard #: B210 | Abstract #: 137

Investigations on New Strategies for Treating PMM2-CDG

Charles DeRossi¹, Christian Thiel¹, Mie Ichikawa², Vandana Sharma², Georg F. Hoffman¹, Hudson H. Freeze², Christian Körner¹

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Posterboard #: B211 | Abstract #: 139

Controlling the Source of Mannose in N-Glycans

Mie Ichikawa, David Scott, Marie-Estelle Losfeld, Hudson H. Freeze
Sanford Burnham Medical Research Institute

Posterboard #: B212 | Abstract #: 141

Advanced Age Glycosaminoglycans of β -Amyloid Astrocytes

Maria O. Longas¹, Stephanie A. Archer-Hartmann², Parastoo Azadi²
¹Purdue University Calumet, Department of Chemistry; ²University of Georgia, Complex Carbohydrate Research Center

Posterboard #: B213 | Abstract #: 143

Type 1 Diabetes: Involvement of Extracellular Matrix in Immune-Mediated Pancreatic Islet Destruction

Nadine Nagy, Gernot Kaber, Daniel J. Campbell, Thomas N. Wight
Benaroya Research Institute, Seattle, WA, USA

Posterboard #: B214 | Abstract #: 145

Sites of Glycosylation in Fibrillar Collagens, and Structure of Type II Collagen Revealed via X-ray Diffraction

Joseph Orgel, Rama Madhurapantula, Olga Antipova
Illinois Institute of Technology

Posterboard #: B215 | Abstract #: 147

Expression of the Sialyltransferase ST6Gal-I Contributes to Cisplatin Resistance in Tumor Cells

Matthew Schultz, Susan Bellis
University of Alabama at Birmingham, Birmingham, AL, USA

Posterboard #: B216 | Abstract #: 149

Mannose-fed Mice Are Resistant to Weight Gain on High Fat Diet

Vandana Sharma¹, Jonamani Nayak¹, Jamie Smolin¹, Emily M. King², Rochelle M. Holt², Elaine Ballingerand³, Purna Kashyap³, Justin L. Sonnenburg³, Julio E. Ayala², Hudson H. Freeze¹
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Posterboard #: B217 | Abstract #: 151

Increased Expression of Sortilin, an Alternate Sorting Receptor for Lysosomal Hydrolases, Reduces the Bioavailability of Latent TGF- β in Mucopolidosis II Cells

Jarrod Barnes, Jennifer Simpliciano, Heather Flanagan-Steet, Richard Steet
University of Georgia, GA, USA

Posterboard #: B218 | Abstract #: 153

Strategies For Analysis of Sialylated Glycocondugates in Cells By Various Analytical Techniques

Lucas Veillon¹, Mayumi Ishihara¹, Joseph T.Y. Lau², Mehrab Nasirikenari², Parastoo Azadi¹
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Posterboard #: B219 | Abstract #: 155

Detection of Prostate Cancer-associated N-glycan on Free PSA by Luminex Bead-based Immunoassay: A Novel Prostate Cancer Screening Method with Higher Specificity than Conventional PSA Test

Tohru Yoneyama¹, Yuki Tobisawa¹, Kazuyuki Mori², Shingo Hatakeyama¹, Hayato Yamamoto², Teppei Okamoto², Akiko Okamoto², Fumihiko Ishimura², Takahiro Yoneyama², Takuya Koie², Noritaka Kamimura², Chikara Ohyama²
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CS6: Basement Membranes

Posterboard #: B220 | Abstract #: 156

Regression of Pathological Changes of the Dermal-Epidermal Junction in Skin Constructs After Silencing the Expression of the p.R2622Q and p.G2623C Collagen VII Mutants

Andrzej Steplewski, Anthony Kasinskas, Jolanta Fertala, Andrzej Fertala
Department of Dermatology and Cutaneous Biology, Department of Orthopaedic Surgery, Thomas Jefferson University, Philadelphia, PA, USA

Posterboard #: B221 | Abstract #: 158

Laminin-332 Stabilizes Lamellipodium Dynamics Through $\beta 1$ Integrin Signaling in Migrating Madin-Darby Canine Kidney Epithelial Cells

Patricia G. Greciano¹, Mary M. Buschmann², Josh O. Hendin¹, Satu M. Myllymäki³, Aki Manninen³, Jose V. Moyano¹, Karl S. Matlin¹
¹Department of Surgery, The University of Chicago; ²Department of Pathology, The University of Chicago; ³Oulu Center for Cell-Matrix Research, University of Oulu, Finland

Posterboard #: B222 | Abstract #: 160

Dual-linked Role of Integrin αV Mediates TGF- β Activation and Fibronectin Fibrillogenesis to Regulate Laminin-332-mediated Repair in MDCK Epithelial Cells

Jose V. Moyano¹, Joshua O. Hendin¹, Patricia G. Greciano¹, Terhi P. Teräväinen², Satu M. Myllymäki², Aki Manninen², Karl S. Matlin¹
¹Department of Surgery, The University of Chicago; ²Oulu Center for Cell-Matrix Research, University of Oulu, Finland

Posterboard #: B223 | Abstract #: 162

Protomer and Network Organization of the $\alpha 6$ Chain of Collagen IV

Wesley E Robertson, Kristie L Rose, Mohamed Rafi, Billy G Hudson, Roberto M Vanacore
Vanderbilt University

CS7: Genetics and Gene Expression

Posterboard #: B224 | Abstract #: 164

Enhancing $\beta 1,4$ -galactosyltransferase and $\alpha 2,6$ -sialyltransferase activity by domain swapping and site-directed mutagenesis

Christoph Geisler, Donald Jarvis
University of Wyoming

Posterboard #: B225 | Abstract #: 166

Gene Expression of Brain Specific Glycosyltransferases and Their Epigenetic Regulation

Yasuhiko Kizuka, Kyohei Okahara, Shinobu Kitazume, Naoyuki Taniguchi
RIKEN Advanced Science Institute

Posterboard #: B226 | Abstract #: 168

Repository of Recombinant Expression Constructs For Mammalian Glycosylation Enzymes: Production of Glycosyltransferases and Glycoside Hydrolases in Mammalian Cells

Moremen¹, H. Strachan¹, A. Ramiah¹, R. Johnson¹, Meng¹, Z. Gao¹, A.V. Nairn¹, Y. Xiang¹, M. dela Rosa¹, D. Jarvis², J. Steel³, J. LaBaer³
¹University of Georgia; ²University of Wyoming; ³Arizona State University

Posterboard #: B227 | Abstract #: 170

The Art and Science Whole Exome Sequencing to Solve Novel Glycosylation Disorders

Bobby G. Ng, Marie Estelle Losfeld, Ping He, Alexey M. Eroshkin, Hudson H. Freeze
Sanford Burnham Medical Research Institute

Posterboard #: B228 | Abstract #: 172

Actin Regulates the Acquisition of a Myofibroblastic Phenotype By Passaged Chondrocytes

Justin Parreno¹, Katarina Andrejevic², Rita Kandel²
¹Department of Laboratory Medicine and Pathobiology, University of Toronto; ²Samuel Lunenfeld Research Institute, Toronto, Canada; ³Samuel Lunenfeld Research Institute, University of Toronto

Posterboard #: B315 | Abstract #: 348

Role of Bacterial Surface Factors in Adherence of Enteric Bacteria to Plant Polysaccharide

Yannick Rossez¹, Ashleigh Holmes¹, Louise Isager Ahl², Henriette Lodberg Pedersen², William G.T. Willats², Ian Toth¹, Nicola Holden¹
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CS8: Mechanobiology and Biomedical Engineering

Posterboard #: B229 | Abstract #: 175

Using Molecular Mechanics to Predict Bulk Material Properties of Fibronectin Fibers

Mark Bradshaw, Michael Smith
Boston University

Posterboard #: B230 | Abstract #: 177

Novel Mechanism For Localized Delivery of Osteoinductive Peptides, Protein-Releasing Nanocages and Gene Delivery Vectors on Bone Graft Materials For Enhanced Osteoregeneration

Bonnie Culpepper, Susan Bellis, Peter Prevelige, David Morris, Selvarangan Ponnazhagan, Seth Levy, Michael Reddy
University of Alabama at Birmingham, Birmingham, AL, USA

Posterboard #: B231 | Abstract #: 179

Biomedical engineering: An Approach That Can Be Effectively Used Not Only to Improve, But Also to Probe Insect Protein Glycosylation Pathways

Donald Jarvis, Christoph Geisler, Hideaki Mabashi-Asazuma, Ann Toth
University of Wyoming

Posterboard #: B232 | Abstract #: 181

Organotypic 3D-culture of Uterine Fibroid Cells

Friederike Jayes¹, Courtney Brimmer², Phyllis Leppert¹
¹Duke University SOM; ²DePauw University

Posterboard #: B233 | Abstract #: 183

Organization of Myocardial Matrix Collagens and Elastins of Heart Failure Patients after Mechanical Circulatory Assist

Anna Meredith, Thomas Abraham, Bruce McManus
University of British Columbia

Posterboard #: B234 | Abstract #: 185

Cyclic Tensile Strain Inhibits Interleukin-1 β and Tumor Necrosis Factor- α Induced Aggrecanase In Human Chondrosarcoma Cell Line OUMS-27 by Stretch-activated Channels

Takashi Ohtsuki¹, Keiichiro Nishida², Satoshi Hirohata¹, Yoshifumi Ninomiya¹
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Posterboard #: B235 | Abstract #: 187

Delivery of Platelet-Derived Growth Factor from Bone-Mimetic Electrospun Matrices as a Chemotactic Factor for Mesenchymal Stem Cells

Matthew Phipps, Yuanyuan Xu, Susan Bellis
University of Alabama at Birmingham, Birmingham, AL, USA

Posterboard #: B236 | Abstract #: 189

Cell-cell and Cell-matrix Interactions on Biomimetic 3D Scaffolds

Ashneet Sachar, Amanda Strom, Maria Serrano, Kathy KH Svoboda, Xiaohua Liu
Texas A&M Health Science Center, Baylor College of Dentistry

Posterboard #: B237 | Abstract #: 191

Cell Aspect Ratio Alters Stem Cell Lineage

Ludovic Vincent¹, Chor Yong Tay², Juan Carlos del Alamo¹, Lay Poh Tan², Adam Engler¹
¹*University of California, San Diego*; ²*Nanyang Technological University*

Posterboard #: B238 | Abstract #: 193

The Interplay of Duro- and Hapto-taxis in Regulating Stem Cell State

Jessica Wen, Jerome Karpiak, Adah Almutairi, Adam Engler
UC San Diego

Posterboard #: B239 | Abstract #: 195

Temporally-Regulated Mechanotransduction Controls Stem Cell Cardiomyogenesis

Jennifer Young, Kyle Kretchmer, Jacquelyn Schaefer, Adam Engler
University of California, San Diego

Posterboard #: B240 | Abstract #: 197

Kindlin-2 is a Mechanosensitive Regulator of the Cardiac Fibroblast Differentiation

Elena Zimina¹, Sophie Clement², Leena Bruckner-Tuderman³, Cristina Has³, Boris Hinz¹
¹*Matrix Dynamics Group, Faculty of Dentistry, University of Toronto, Toronto, Canada*; ²*Department of Pathology and Immunology, Faculty of Medicine, CMU University of Geneva, Switzerland*; ³*Department of Dermatology, University Medical Center Freiburg, Freiburg, Germany*

CS9: Stem/Progenitor Cells and Their Environment

Posterboard #: B241 | Abstract #: 198

The Role of SDF-1 α and ECM Crosstalk in Directing Neural Stem Cell Recruitment following Neural Injury

Caroline Addington, Christine Pauken, Michael Caplan, Sarah Stabenfeldt
Arizona State University

Posterboard #: B242 | Abstract #: 200

Adhesive Heterogeneity Within the Stem Cell Niche Promotes Differentiation

Adam Engler¹, Somyot Chirasatitsin¹, Priyalakshmi Viwanathan², Giuseppe Battaglia²
¹*UC San Diego*; ²*University of Sheffield*

Posterboard #: B243 | Abstract #: 202

The Basement Membrane of Hair Follicle Stem Cells is Specialized with EGFL6, Which Interacts with a Unique Sensory Nerve Complex, the Piloneural Complex

Hironobu Fujiwara¹, Fiona Watt²
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Posterboard #: B244 | Abstract #: 204

3-O-sulfated Heparan Sulfate Increases Epithelial Progenitor Cell Proliferation

Matthew Hoffman
NIDCR, NIH

Posterboard #: B245 | Abstract #: 206

Extracellular Matrix Dynamics of 3D Pluripotent Stem Cell Morphogenic Environments

Todd C. McDevitt, Rekha Nair, Krista M. Fridley, Marissa T. Cooke, Hilary Lynch, Melissa A. Kinney, Alyssa V. Ngangan
Georgia Institute of Technology/Emory University

Posterboard #: B246 | Abstract #: 208

The role of α 2,3-6 Linked NeuAc and Galactose Binding Protein in iPS-MBMC Pluripotency and Differentiation

Frederico Alisson da Silva, Deivid de Carvalho Rodrigues, Leandro Vairo, Wagner Barbosa Dias, Rosane Silva, Edson Rondinelli, Antonio Carlos Campos de Carvalho, Regina Goldemberg, Turan Urmenyi, Adriane Todeschini
Universidade Federal do Rio de Janeiro, Rio de Janeiro, Brazil

Posterboard #: B247 | Abstract #: 210

Stem Cell-Derived Matrix is Necessary to Switch from a Pluripotent to Lineage Specified State

Hermes Taylor-Weiner¹, Jean Schwarzbauer², Adam Engler¹
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Posterboard #: B248 | Abstract #: 212

Soluble Thy-1 Promotes Migration of BM-MSCs into Fibrotic Lungs *ex vivo*

Simon Wong, James Hagood
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CS10: Biosynthesis, Protein Folding, Secretion, and Matrix Assembly

Posterboard #: B249 | Abstract #: 214

Modulation of MUC1-associated sialyl Lewis x in normal prostatic RWPE-1 cells by epigenetic regulation of the B3GALT1 gene

Vishwanath Chachadi, Mohamed Ali, Pi-Wan Cheng
Omaha Western Iowa Health Care System, VA Service, Department of Research Service and Department of Biochemistry and Molecular Biology, College of Medicine, University of Nebraska Medical Center, Omaha, NE

Posterboard #: B250 | Abstract #: 216

Shedding of GPI-anchored Proteins by a Novel GPI-Cleaving Enzyme

Morihisa Fujita, Gun-Hee Lee, Yoshiko Murakami, Yusuke Maeda, Taroh Kinoshita
Research Institute for Microbial Diseases and WPI Immunology Frontier Research Center, Osaka University

Posterboard #: B251 | Abstract #: 218

Comprehensive Mass Spectrometric Mapping of the Alpha 1(V) Collagen Chain

Daniel Greenspan, Chenxi Yang, Nicholas Davis, Arick Park, Jason Russell, Joshua Coon
University of Wisconsin-Madison

Posterboard #: B252 | Abstract #: 220

Disruption of B3gnt2 expression May Not Be Achieved By Gene Trapped Mutant Mice

Leona TY Ho¹, Tomoya Akama², Noriko Koizumi¹, Tomoyuki Nakamura²
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Posterboard #: B253 | Abstract #: 222

Evolutionary Origins of (GPP)_n 3-Hydroxyproline Formation in Fibrillar Collagen

David Hudson, MaryAnn Weis, Jiann-Jiu Wu, David Eyre
University of Washington, WA, USA

Posterboard #: B254 | Abstract #: 224

Important But Overlooked: Silicon Control of the Extracellular Matrix

Katarzyna S. Kopanska, Ravin Jugdaohsingh, Jonathan J. Powell, Sylvaine F.A. Bruggaber
MRC Human Nutrition Research

Posterboard #: B255 | Abstract #: 226

Disruption of Col2a1 pre-mRNA Alternative Splicing Affects Matrix Assembly and Post-Natal Bone Development

Soumya Ravindran¹, Louisa Wirthlin¹, Renate Lewis¹, Geoffrey Traeger², Uwe Hansen³, Russell Fernandes², Audrey McAlinden¹
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Posterboard #: B256 | Abstract #: 228

A Putative Polypeptide N-Acetylgalactosaminyltransferase/WBSCR17 Regulates Cell Adhesion and Endocytic Pathways in HEK293T Cells

Yoshiaki Nakayama, Naosuke Nakamura, Akira Kurosaka
Department of Molecular Biosciences, Faculty of Life Sciences, Kyoto Sangyo University

Posterboard #: B257 | Abstract #: 230

Consequences of Suppressing Expression of the R789C and R992C Collagen II Mutants in Cell-Based Models

Deborah Jensen¹, Andrzej Steplewski¹, Katarzyna Gawron², Andrzej Fertala¹
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Posterboard #: B258 | Abstract #: 232

Chondroitin Sulfate Synthase-2/Chondroitin Polymerizing Factor: Characterization and Impact on Chondroitin Sulfate Biosynthesis

Hideto Watanabe¹, Hiroyasu Ogawa¹, Masafumi Shionyu², Nobuo Sugiura¹, Sonoko Hatano¹, Naoko Nagai¹, Takashi Sato³, Hisashi Narimatsu³, Katsuji Shimizu⁴, Koji Kimata¹
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⁴Department of Orthopaedic Surgery, Gifu University, Graduate School of Medicine

Posterboard #: B259 | Abstract #: 234

Are N-glycosylation Sites Always Fully Occupied?

Hui Zhou, John Froehlich, Richard Lee
Children's Hospital Boston, Harvard Medical School

CS11: Cancer Microenvironment

Posterboard #: B260 | Abstract #: 236

Role of Cell Surface Lysosome Associated Membrane Protein-1 (LAMP1) in Metastasis

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²Beirne B. Carter Centre for Immunology Research, University of Virginia, Charlottesville, VA, USA

Posterboard #: B261 | Abstract #: 238

Heterogeneity in Cell-matrix Adhesion as an Indicator of Metastatic State

Alexander Fuhrmann, Thea Tlsty, Adam Engler
University of California, San Diego

Posterboard #: B262 | Abstract #: 240

Soluble Form of Luthern/B-CAM in Plasma as a Potential Maker for Hepatocellular Carcinoma

Yamato Kikkawa¹, Naoki Tanimizu², Takahiro Miwa¹, Toru Mizuguchi³, Koichi Hirata³, Motoyoshi Nomizu¹, Toshihiro Mitaka²
¹Laboratory of Clinical Biochemistry, Tokyo University of Pharmacy and Life Sciences, Tokyo, Japan; ²Department of Tissue Development and Regeneration, Research Institute for Frontier Medicine, Sapporo Medical University School of Medicine, Sapporo, Japan; ³Department of 1st Surgery, Sapporo Medical University School of Medicine, Sapporo, Japan

Posterboard #: B263 | Abstract #: 242

Decorin Induces PGC-1 α and Mitostatin to Regulate Mitochondrial Respiratory Complexes in Breast Carcinoma Cells

Thomas Neill¹, Rick Owens², Raffaele Baffa³, Renato Iozzo¹
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Posterboard #: B264 | Abstract #: 244

Heparanase Enhances The Insulin Receptor Signaling Pathway to Activate ERK in Multiple Myeloma

Anurag Purushothaman¹, Stephen Babitz², Ralph Sanderson²
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²University of Alabama at Birmingham

Posterboard #: B265 | Abstract #: 246

NK-derived galectin-1 is involved in lysis of low sialylated 3-MCA-induced fibrosarcoma tumor cells

Achinoam Ravet, Rachel Lichtenstein
Ben-Gurion University

Posterboard #: B266 | Abstract #: 248

Shed syndecan-1 Translocates to the Nucleus of Tumor and Host Cells

Mark Stewart, Vishnu Ramani, Ralph Sanderson
University of Alabama at Birmingham, Birmingham, AL, USA

Posterboard #: B267 | Abstract #: 250

Targeted Drug Delivery to Tumor Vasculature by the IF7 Peptide in Mouse Glioma Mode

Misa Suzuki-Anekoji¹, Toshiaki K. Shibata¹, Jun Nakayama², Tomoya O. Akama³, Kazuhiro Sugihara⁴, Minoru Fukuda¹, Michiko N. Fukuda¹
¹Sanford-Burnham Medical Research Institute, CA, USA; ²Shinshu University Graduate School of Medicine, Matsumoto, Japan; ³Kansai Medical University, Osaka Prefecture, Japan; ⁴Hamamatsu University School of Medicine, Shizuoka, Japan

Posterboard #: B268 | Abstract #: 252

Expression of core2 b-1,6-N -acetylglucosaminyltransferase is an Independent Risk Factor For PSA Recurrence After Radical Prostatectomy and Closely Associated with Aggressive Potential

Yuki TOBISAWA, Tohru Yoneyama, Shingo Hatakeyama, Hayato Yamamoto, Takuya Koie, Takahiro Yoneyama, Teppei Okamoto, Noritaka Kamimura, Chikara Ohyama
Hiroasaki University

Posterboard #: B269 | Abstract #: 254

Effect of N-AcetylglucosaminyltransferaseIVa on CD147-Mediated Cell Invasion and Metastatic Potential

Jianhui Fan, Shujing Wang, Shengjin Yu, Jingna He, Weilong Zheng, Jianing Zhang
Department of Biochemistry, Institute of Glycobiology, Dalian Medical University Dalian, China 116044

CS12: Glycomics/Chemical Biology I: Function

Posterboard #: B270 | Abstract #: 256

A Glycopeptide Approach for the Site Specific Characterization of O-linked Glycosylation of Human Synovial lubricin by CID and ETD

Liaqat Ali¹, Chungsheng Jin², Niclas G. Karlsson²

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Posterboard #: B271 | Abstract #: 258

Elucidating the Complexity of Heparin Oligosaccharides using Heparin Lyase Enzymes and Mass Spectrometry

Alicia Bielik, David Landry, Elizabeth McLeod, Paula Magnelli, Ellen P. Guthrie

New England Biolabs, Ipswich, MA, USA

Posterboard #: B272 | Abstract #: 260

Neurofascin 186 is O-mannosylated Within and Outside of the Mucin Domain

Sandra Pacharra, Franz-Georg Hanisch, Isabelle Breloy
University of Cologne, Medical Faculty

Posterboard #: B273 | Abstract #: 262

High-throughput O-Glycomics

Christina Dobson
University of Georgia

Posterboard #: B274 | Abstract #: 264

2-O-sulfated HS Domains in Syndecan-1 Inhibit Acetaminophen-induced Liver Injury By Suppressing Hepatocyte Apoptosis

Kazutaka Hayashida¹, Rafael Aquino¹, Eon Jeong Nam¹, Jian Liu², Pyong Woo Park¹

¹Children's Hospital, Harvard Medical School; ²University of North Carolina at Chapel Hill

Posterboard #: B275 | Abstract #: 266

Strategy for Large-Scale Release and Purification of Sialylated N-linked Glycans by Hydrazinolysis and SAX-HPLC

Mayumi Ishihara, Stephanie Archer-Hartmann, Christian Heiss, Parastoo Azadi
Complex Carbohydrate Research Center, UGA, Athens, GA, USA

Posterboard #: B276 | Abstract #: 268

Shotgun Glycan Glycomics Studies of Influenza Virus Pathogenesis

Renpeng Liu, Konrad Bradley, Lauren Byrd-Leotis, Sandra F Cummings, David F Smith, David Steinhauer, Richard D Cummings
Emory University

Posterboard #: B277 | Abstract #: 270

Characterization of New Glycosidases

David Landry, Elizabeth McLeod, Paula Magnelli, Alicia Bielik, Ellen Guthrie
New England Biolabs

Posterboard #: B278 | Abstract #: 272

Extracellular Esterase and Intracellular Processing of SCFA-Hexosamine Analogs: Implications for Metabolic Oligosaccharide Engineering and Drug Delivery

Mohit Mathew, Elaine Tab, Shivam Shah, Adam Meledeo, Rahul Bhattacharya, Kevin Yarema
Department of Biomedical Engineering and the Translational Tissue Engineering Center, The Johns Hopkins University

Posterboard #: B279 | Abstract #: 274

Application of Systems Biology to Construct and Simulate Glycosylation Reaction Networks

Sriram Neelamegham, Gang Liu
State University of New York, Buffalo, USA

Posterboard #: B280 | Abstract #: 276

Synthesis of Sialylated Poly-LacNAc N-linked and O-linked Glycans

Wenjie Peng, Ryan Mcbride, Buyankhishig Tsogtbaatar, Jennifer Pranskevich, James Paulson
Department of Chemical Physiology, The Scripps Research Institute

Posterboard #: B281 | Abstract #: 278

Salt-Free Guanidination for Maximizing Characterization of Proteins and Glycoproteins Using Matrix-Assisted Laser Desorption/Ionization Time of Flight Mass Spectrometry

Margaret Baker, Qing Li
University of Hawaii at Manoa

Posterboard #: B282 | Abstract #: 280

Mass Spectrometric Profiling of Heparan sulfate on Tissue Histological Slides

Chun Shao, Xiaofeng Shi, Nancy Leymarie, Joseph Zaia
Biochemistry Department, School of Medicine, Boston University

Posterboard #: B283 | Abstract #: 282

Alpha1,6-Fucosyltransferase (Fut8) is Implicated in Vulnerability to Smoke-induced Emphysema in Mice and a Possible Non-invasive Predictive Marker for Human Chronic Obstructive Pulmonary Disease (COPD)

Congxiao Gao¹, Koichiro Kamio², Fumi Ota¹, Takeo Ishii², Satoshi Kobayashi¹, Kozui Kida², Naoyuki Taniguchi¹
¹RIKEN ASI; ²Nippon Medical School

Posterboard #: B284 | Abstract #: 284

In Vitro Inhibition of Sialic Acid Expression

Paul Robin Wratil¹, Long Duc Nguyen¹, Stefan Rigol², Tomas Trnka³, Werner Reutter¹

¹Charité Universitätsmedizin Berlin, Institute of Biochemistry and Molecular Biology, Arnimallee 22, D-14195 Berlin, Germany; ²Universität Leipzig, Institute of Organic Chemistry, Johannisallee 29, D-04103 Leipzig, Germany; ³Charles University of Prague, Institute of Organic Chemistry, Albertov 6, 128 43 Praha 2, Czech Republic

Posterboard #: B285 | Abstract #: 286

Functional Glycomic Studies of Human Milk Glycans Reveals Presence of Embryonic Stem Cell Biomarkers and Virus Receptors

Ying Yu¹, Shreya Mishra¹, Xuezheng Song¹, Yi Lasanajak¹, Konrad C. Bradley¹, Mary Tappert¹, Gillian M. Air², David A. Steinhauer¹, Sujata Halder³, Susan Cotmore⁴, Peter Tattersall⁴, Mavis Agbandje-McKenna⁵, Richard D. Cummings¹, David F. Smith¹

¹Emory University; ²University of Oklahoma Health Sciences Center; ³University of Florida; ⁴Yale School of Medicine; ⁵University of Florida

Posterboard #: B286 | Abstract #: 288

Evolutionally Conserved Blood Group Glycolipids are Endogenous Antigens for Invariant Natural Killer T Cells

Chengfeng Xia¹, Yunsen Li², Peng Wang³, Dapeng Zhou⁴

¹State Key Laboratory of Phytochemistry and Plant Resources in West China, Kunming Institute of Botany, Chinese Academy of Sciences, Kunming 650201, China; ²Laboratory of Cellular and Molecular Tumor Immunology, Institutes of Biology and Medical Sciences, the First Affiliated Hospital, Soochow University, Suzhou 215123, China; ³State Key Laboratory of Medicinal Chemical Biology, Nankai University, Tianjin 300071, China; ⁴Department of Melanoma Medical Oncology, The University of Texas MD Anderson Cancer Center, Houston, TX 77030, USA

CS13: Development

Posterboard #: B287 | Abstract #: 290

Complex N-glycans Are Essential For Spermatogenesis

Frank Batista, Pamela Stanley
Albert Einstein College of Medicine

Posterboard #: B288 | Abstract #: 292

Unbiased Transcriptome Analysis of Cleft Palate in Adamts9+Adamts20 Deficient Mice Identifies Novel Cellular Consequences of Defective Versican Proteolysis

Johanne Dubail¹, Courtney Nelson¹, Brendan Stamper², Suneel Apte¹

¹Cleveland Clinic Lerner Research Institute; ²Pacific University, Portland, OR

Posterboard #: B289 | Abstract #: 294

Homeostasis and Degradation of Heparan Sulfate: Involvement in Normal and Pathological Skeletogenesis

Julianne Huegel, Eiki Koyama, Maurizio Pacifici
Children's Hospital of Philadelphia, PA, USA

Posterboard #: B290 | Abstract #: 296

The Fibrillin-like fbn-1 Gene Regulates Epithelial Stem Cell and ECM Dynamics in Molts

Vijaykumar Meli, Alison Frand
University of California Los Angeles

Posterboard #: B291 | Abstract #: 298

Developmental Roles of Mucin-type Glycosylation in Zebrafish

Naosuke Nakamura¹, Yoshiaki Nakayama¹, Ayumi Miyake², Nobuyuki Itoh², Akira Kurosaka¹

¹Kyoto Sangyo University, Kyoto, 603-8555, Japan; ²Kyoto University Graduate School of Pharmaceutical Sciences, Kyoto, 606-8501, Japan

Posterboard #: B292 | Abstract #: 300

Cellular and Transcriptional Regulation of Collagen Fibrils Assembly and Growth in Tendons

Jennifer Houmani, Spencer Watson, Doug Keene, Ronen Schweitzer
Shriner's Hospital for Children and Oregon Health and Science University, Portland Oregon

Posterboard #: B293 | Abstract #: 302

Mammalian GDP-Fucose Transporters Required for Notch Signaling

Hua-xing Wei, Linchao Lu, Pamela Stanley
Dept. Cell Biology, Albert Einstein College of Medicine, New York NY, 10461

CS14: Fibrosis, Proteolysis, and Tissue Repair

Posterboard #: B294 | Abstract #: 305

Fibulin-1 as an Inhibitor of α -Secretase Processing Of Amyloid Precursor Protein

Keerthi Harikrishnan¹, Marion A. Cooley¹, Waleed O. Twal¹, Mark S. Kindy², W. Scott Argraves¹

¹Department of Regenerative Medicine and Cell Biology, Medical University of South Carolina, Charleston, SC 29425, USA; ²Department of Neurosciences, Medical University of South Carolina, Charleston, SC 29425, USA

Posterboard #: B295 | Abstract #: 307

Engineering Fibroblast-remodeled Electrospun Matrices for Full-Thickness Skin Regeneration

Paul Bonvallet, Susan Bellis
University of Alabama at Birmingham, Birmingham, AL, USA

Posterboard #: B296 | Abstract #: 309

Manipulating Myofibroblast Differentiation With Growth Factors

Vivek Desai¹, Henry Hsia², Jean Schwarzbauer¹

¹Princeton University; ²Robert Wood Johnson Medical School

Posterboard #: B297 | Abstract #: 311

Fibronectin Degradation by Granzyme B Disrupts Endothelial Cell Angiogenic Potential and Alters Vascular Endothelial Cell Growth Factor Bioavailability

Alon Hendel, David Granville
University of British Columbia, British Columbia, Canada

Posterboard #: B298 | Abstract #: 313

Matrix Metalloproteinase-9 Inhibition Attenuates ADAMTS2 and TOLLIP Expression Post-Myocardial Infarction in Mice

Rugmani Iyer¹, Nicole Patterson¹, Gregg Fields², Merry Lindsey¹
¹*San Antonio Cardiovascular Proteomics Center;*
²*Torrey Pines Institute for Molecular Studies*

Posterboard #: B299 | Abstract #: 315

Engineered Antibody for Reducing Localized Fibrotic Scarring

Andrzej Steplewski¹, Jolanta Fertala¹, James Kostas¹, Joseph Abboud², William Arnold², Pedro Beredjikian², Gerald Williams², Andrzej Fertala¹
¹*Department of Orthopaedic Surgery, Division of Orthopaedic Research, Thomas Jefferson University, Philadelphia, PA, USA;*
²*Rothman Institute of Orthopaedics, Thomas Jefferson University, Philadelphia, PA, USA*

Posterboard #: B300 | Abstract #: 317

Fibronectin is Essential For Survival But is Dispensable For Proliferation of Hepatocytes in Acute Liver Injury*

Takao Sakai
Department of Biomedical Engineering, Lerner Research Institute, Cleveland Clinic, Cleveland, OH 44195, USA

CS15: Glycomics/Chemical Biology II: Analytical Methods

Posterboard #: B301 | Abstract #: 320

A Systems-Level View of the Extracellular Matrix: From Definition to Domains

Graham Cromar¹, Noeleen Loughran², Hongyan Song², John Parkinson²
¹*Department of Molecular Genetics, University of Toronto, Canada;*
²*Department of Molecular Structure and Function, Hospital for Sick Children, Toronto, Canada*

Posterboard #: B302 | Abstract #: 322

Apolipoproteins E and AV are Required for Heparan Sulfate-dependent Clearance of Triglyceride-rich Lipoproteins

Jon Gonzales, Philip Gordts, Jeffrey Esko
University of California San Diego

Posterboard #: B303 | Abstract #: 324

Biglycan and Decorin Dependent Fetal Membrane Signaling

Casie Horgan¹, Zhiping Wu¹, Huiling Ji¹, Renato V. Iozzo², Beatrice E. Lechner¹
¹*Women and Infants Hospital of Rhode Island/ Brown University, Providence, RI;* ²*Thomas Jefferson University, Philadelphia, Pennsylvania*

Posterboard #: B304 | Abstract #: 326

In Vivo Reduction Of Smad2 Concomitant With Proteoglycan Accumulation Results In High Penetrance Of Bicuspid Aortic Valves

Loren Dupuis¹, Robert B. Hinton², Christine B. Kern¹
¹*Department of Regenerative Medicine and Cell Biology, Medical University of South Carolina, Charleston, SC 29464, USA;* ²*Division of Cardiology, the Heart Institute, Cincinnati Children's Hospital Medical Center, Cincinnati, OH 45229, USA*

Posterboard #: B305 | Abstract #: 328

Interactions of DC-SIGN with 2 α -Mannobiose and Lewis-x

Kari Pederson, James Prestegard
University of Georgia

Posterboard #: B306 | Abstract #: 330

Fibronectin induces Crk Protein Recruitment of Caspase-8 to the Cell Migration Machinery

Ryon Graf, Simone Barbero, Karl Bacos, Dwayne Stupack
Moore's Cancer Center, UC San Diego

Posterboard #: B307 | Abstract #: 332

Platelet Functions Require Correct Protein O-Glycosylation

Yingchun Wang¹, Shawn M. Jobe², Xiaokun Ding¹, Hyojung Choo², David Archer², Rongjuan Mi¹, Tongzhong Ju¹, Richard D. Cummings¹
¹*Department of Biochemistry, Emory University School of Medicine, Atlanta, GA 30322;* ²*Department of Pediatrics, Emory University School of Medicine, Atlanta, GA 30322*

Posterboard #: B308 | Abstract #: 334

Bacterial Mucus-Binding Proteins – Structural and Functional Insights into Their Role in the Adhesion to Host Glycans

Sabrina Etzold¹, Donald A. MacKenzie¹, Rob Field², Andrew M. Hemmings³, Nathalie Juge¹
¹*Institute of Food Research, Norwich, UK;* ²*John Innes Centre, Norwich, UK;* ³*University of East Anglia, Norwich, UK*

CS16: Host-Pathogen Interactions

Posterboard #: B309 | Abstract #: 336

Syndecan-1 Attenuates Lung Injury During Influenza Infection By Limiting Apoptosis

Rena Brauer, Catherine Buell, Peter Chen
Center for Lung Biology, University of Washington, Seattle (WA), USA

Posterboard #: B310 | Abstract #: 338

Influenza A Interactions with the Host Mucus
Matrix Sialome

Miriam Cohen, Xing Quan Zhang, HuiWen Chen, Sergei Kosakovsky
Pond, Nissi Varki, Robert Schooley, Pascal Gagneux
University of California San Diego

Posterboard #: B311 | Abstract #: 340

Specific-Sized Hyaluronan Fragments Promote Innate
Defense Of The Intestinal Epithelium

David Hill¹, Sean Kessler¹, Craig Homer¹, Christine McDonald¹,
Hyunjin Rho¹, Mary Cowman², Carol de la Motte¹
¹*Cleveland Clinic*; ²*New York University*

Posterboard #: B312 | Abstract #: 342

“Trans-sialidases of *Trypanosma congolense*

Sørge Kelm¹, Thaddeus T. Gbem¹, Gloria D. Chechet²,
Mario Waespy¹, Peter Dede¹, Mohammed Mamman³, Andrew J. Nok⁴
¹*Centre for Biomolecular Interactions Bremen, Faculty of Biology and
Chemistry, University Bremen, Germany*; ²*Centre for Biotechnology
Research and Training, Ahmadu Bello University, Zaria, Nigeria*;
³*Nigerian Institute for Trypanosomiasis Onchocerciasis Research,
Kaduna, Nigeria*; ⁴*Centre for Biotechnology Research and Training,
Ahmadu Bello University, Zaria, Nigeria*

Posterboard #: B313 | Abstract #: 344

Roles of Sialidase in Bacterial Vaginosis: *Gardnerella*
Vaginalis in a New Murine Model

Nicole Gilbert, Warren Lewis, Amanda Lewis
Washington University School of Medicine

Posterboard #: B314 | Abstract #: 346

“Overexpression of UDP-GlcNAc:polypeptide O- α -N-
acetyl-Dglucosaminyltransferase-2 (TcOGNT2) inhibits
metacyclogenesis of *Trypanosomacruzi*

C.M. Koeller¹, H. van der Wel², C.L. Feasley², F. Abreu¹, F. Monta vao¹,
P. Fampa¹, G. Atella¹, T. Souto-Padron¹, C.M. West², N. Heise¹
¹*Universidade Federal do Rio de Janeiro*;
²*University of Oklahoma Health Sciences Center*

Late-breaking Posters

Poster Session I

Posterboard #: B150 | Abstract #: LB01

X-ray Diffraction and Microscopy Study of Non-Enzymatic Decomposition of Collagen Fibers by a Biglycan Antibody and a Plausible Mechanism for Rheumatoid Arthritis

Olga Antipova, Joseph Orgel
Illinois Institute of Technology, IL, USA

Posterboard #: B151 | Abstract #: LB03

Microfibril-associated Protein 4 (MFAP4) as a Biomarker of COPD

Sofie L. Johansson¹, Nassim B. Roberts², Anders G. Schlosser¹, Helle Wulf Johansson¹, Ingrid Titlestad³, Ida Tornøe¹, Uffe Holmskov¹, Jørgen Vestbo^{2,4}, Grith L Sørensen¹
¹*Institute of Molecular Medicine, University of Southern Denmark;*
²*Department of Cardiology and Respiratory Medicine, Hvidovre Hospital;* ³*Department of Respiratory Medicine, Odense University Hospital;* ⁴*The University of Manchester, Manchester Academic Health Science Centre, South Manchester University Hospital NHS Foundation Trust*

Posterboard #: B152 | Abstract #: LB05

Keratinocyte-derived Laminin-332 Promotes Melanin Synthesis via Regulating the Uptake of Tyrosine

Heesung Chung¹, Hye-Jung Jung¹, Jung-Hyun Lee¹, Hye-Yun Oh¹, Ok-Bin Kim¹, Inn-Oc Han², Eok-Soo Oh¹
¹*Ewha Womans University;* ²*Inha University*

Posterboard #: B153 | Abstract #: LB07

Transmembrane Domain Plays a Specific Role in Regulating the Functions of Syndecan

Mi-jung Kwon¹, Youngsil Choi¹, Inn-Oc Han¹, Eok-Soo Oh¹
¹*Ewha Womans University;* ²*Inha University*

Posterboard #: B154 | Abstract #: LB09

Right Ventricle Outflow Tract Reconstruction using Extracellular Matrix Scaffolds in GFP Chimera Rats

Nathaniel Remlinger¹, Masahiro Yoshida², Brogan Guest¹, Ryotaro Hashizume¹, Peter Wearden¹, Kimimasa Tobita¹, Thomas Gilbert¹
¹*McGowan Institute for Regenerative Medicine, University of Pittsburgh, Department of Cardiothoracic Surgery, Children's Hospital of Pittsburgh, Pittsburgh, PA, USA;* ²*Department of Cardiothoracic Surgery, Children's Hospital of Pittsburgh, Pittsburgh, PA, USA*

Posterboard #: B155 | Abstract #: LB11

A Crystal Structure of Human β -1,4-Galactosyltransferase 7

Yuko Tsutsui, Boopathy Ramakrishnan, Pradman Qasba
Frederick National Laboratory for Cancer Research and SAIC-Frederick Inc, SGS, CCR-NP, Frederick, MD, USA

Posterboard #: B156 | Abstract #: LB13

Cell Surface Glycosylation and Glycosaminoglycan Composition Profiles in Immature and Mature Intervertebral Discs

Michelle Kilcoyne¹, Estelle Collin¹, Sybille Grad², Mauro Alini², Abhay Pandit¹, Lokesh Joshi¹
¹*National University of Ireland Galway;* ²*AO Research Institute*

Posterboard #: B157 | Abstract #: LB15

Glycosaminoglycans as Specific Regulators of Signaling Pathways Driving Stem Cell Differentiation

Catherine Merry
Stem Cell Glycobiology, School of Materials, The University of Manchester

Posterboard #: B158 | Abstract #: LB17

Renal Progenitors On Extracellular Matrix As A Potential Tool for Kidney Regeneration

Ilenia Zanusso¹, Stefano Da Sacco¹, Scott Leslie², Astgik Petrosyan¹, Maria Teresa Conconi³, Kevin Lemley¹, Roger De Filippo¹, Laura Perin¹
¹*Children's Hospital Los Angeles, Los Angeles, USA;* ²*University of Southern California, CA, USA;* ³*University of Padova, Italy*

Posterboard #: B159 | Abstract #: LB19

Cartilage-specific Deletion of the Site-1 Protease in Mice Results in the Intracellular Entrapment of both Type IIB Procollagen and Adamts3

Debabrata Patra, Elizabeth DeLassus, Linda Sandell
Washington University in St Louis, WA, USA

Posterboard #: B160 | Abstract #: LB21

A Novel Mode Of Action To Stimulate Collagen Production In Aged Skin Cells

Raaj Khusial, Jennifer Conte, Uma Santhanam
Global R & D, Avon Products Inc. 1, Avon Place, Suffern, NY 10901, USA

Posterboard #: B161 | Abstract #: LB23

Overexpression of ST3Gal-IV Induces Activation of Cell Signaling Pathways and Alteration in Gastric Cancer Cell Line Phenotype

Catarina Gomes, Hugo Osório, Marta T. Pinto, Celso A. Reis
Institute of Molecular Pathology and Immunology of the University of Porto -IPATIMUP

Posterboard #: B162 | Abstract #: LB25

Amino Acids Determining Regiospecificity of the E. Coli K1 and K92 Capsule Polysialyltransferases

Timothy G Keys¹, Hazel LS Fuchs¹, Sebastian P. Galuska², Friedrich Freiberger¹, Rita Gerardy-Schahn¹
¹*Hannover Medical School;* ²*University of Giessen*

Posterboard #: B163 | Abstract #: LB27

Cross-platform comparison of carbohydrate microarrays: Six groups and five lectins

Linlin Wang¹, Christopher Campbell², Richard Cummings³, Jared Q. Gerlach⁴, Jeffrey C. Gildersleeve¹, Margaret Huflejt⁵, Lokesh Joshi⁶, Marian Kane⁶, Roland Pieters⁷, Neils Reichardt⁸, David Smith³, Lara K Mahal¹

¹New York University; ²National Cancer Institute;

³Emory University; ⁴National Diagnostics Centre at NUI Galway;

⁵NYU Langone Medical Center; ⁶National Diagnostics Centre at NUI Galway; ⁷Utrecht University; ⁸Biomaterials-CIC biomaGUNE

Posterboard #: B164 | Abstract #: LB29

Modulating the Effector Function of rMAbs by Host Cell Glycoengineering

R.M. Kelly, L. Fan, C.C. Frye, T. Wang

Eli Lilly and Company, Indianapolis, Indiana

Posterboard #: B165 | Abstract #: LB31

Nitrogen Mustard Exposure of the Cornea Induces Erk Activation of Adam17 Within Minutes

Andrea DeSantis-Rodrigues¹, Rita A. Hahn², Donald R. Gerecke², Kathy K.H. Svoboda³, Marion K. Gordon²

¹Allergan, Irvine, CA; ²Ernest Mario School of Pharmacy, Rutgers University, Piscataway, NJ; ³Baylor College of Dentistry, Dallas, TX

Posterboard #: B166 | Abstract #: LB33

Comparison of Docking Software to Predict Saccharide Binding to Proteins Combination With In silico Protein Engineering

Sushil Mishra¹, Lenka Adamova¹, Jan Adam¹, Michaela Wimmerova², Jaroslav Koca²

¹NCBR, Fac Sci, Masaryk University, Brno, Czech Republic;

²CEITEC, Masaryk University, Brno, Czech Republic

Poster Session II

Posterboard #: B316 | Abstract #: LB02

Novel anti-HIV-1 Activity Produced by Conjugating Unsulfated Dextran with Poly-L-lysine and Characterization of the Unique antiviral mechanism

Fumie Kano¹, Takahiro Otsuki², Kosuke Nakamura¹, Haruyo Mori³, Hiroo Hoshino², Hiromi Sakagami², Haruko Ogawa²

¹Ochanomizu University; ²Gunma University;

³Osaka Prefectural Institute of Public Health

Posterboard #: B317 | Abstract #: LB04

Trypanosoma Cruzi Surface Calreticulin Interacts with Thrombospondin-1 to Enhance Infection

Candice A. Johnson¹, Yulia Y Kleshchenko², Adaeze O. Lkejiani¹, Aniekanabasi N. Udoko¹, Tatiana C. Cardenas¹, Siddharth Pratap¹, Mark Duquette³, Maria F. Lima¹, Jack Lawler³, Fernando Villalta¹, Pius N. Nde¹

¹Department of Microbiology and Immunology, Meharry Medical College, Nashville, TN; ²Department of Malaria, Naval Medical Research Center, Silver Spring, MD; ³Department of Pathology, Beth Israel Deaconess Medical Center, Boston, MA

Posterboard #: B318 | Abstract #: LB06

Fer Tyrosine Kinase Down-regulates α -dystroglycan Glycosylation in C2C12 Myotube Cells

Motohiro Nonaka¹, Tohru Yoneyama², Misa Suzuki-Anekoji¹, Minoru Fukuda¹

¹Sanford-Burnham Medical Research Institute, La Jolla, CA, USA;

²Graduate School of Medicine, Hirosaki University, Hirosaki, Japan

Posterboard #: B319 | Abstract #: LB08

A proximal Region Within Endorepellin Binds Ig Domains 3–5 of VEGFR2 and Blocks Proangiogenic Signaling by VEGFA in Endothelial Cells

Chris D. Willis¹, Chiara Poluzzi¹, Maurizio Mongiat², Jouni Uitto³, Renato V. Iozzo¹

¹Department of Pathology, Anatomy and Cell Biology and the Cancer Cell Biology and Signaling Program, Kimmel Cancer Center, Thomas Jefferson University, Philadelphia, PA, USA; ²Department of Molecular Oncology and Translational Research, National Cancer Institute, Aviano, Italy; ³Department of Dermatology and Cutaneous Biology, Jefferson Medical College, Jefferson Institute of Molecular Medicine, Thomas Jefferson University, Philadelphia, PA, USA

Posterboard #: B320 | Abstract #: LB10

Looking Beyond MGP in Warfarin-induced Vascular Calcification

Maria Nurminskaya, Kelly Beazley

University of Maryland

Posterboard #: B321 | Abstract #: LB12

Fer tyrosine kinase regulates breast and prostate cancer cell motility through α -dystroglycan glycosylation

Tohru Yoneyama^{1,2}, Motohiro Nonaka¹, Chikara Ohyama³, Sara Courtneidge¹, Minoru Fukuda¹

¹Glycobiology Unit, Tumor Microenvironment Program, Cancer Center, Sanford-Burnham Medical Research Institute, La Jolla, CA, USA; ²Department of Advanced Transplantation and Regenerative Medicine, Graduate School of Medicine, Hirosaki University, Hirosaki, Japan; ³Department of Urology, Graduate School of Medicine, Hirosaki University, Hirosaki, Japan

Posterboard #: B322 | Abstract #: LB14

Scleraxis is a General Regulator of Extracellular Matrix Gene Expression in Cardiac Myofibroblasts

Michael Czubyrt, Rushita Bagchi
University of Manitoba

Posterboard #: B323 | Abstract #: LB16

Molecular Mechanisms Controlling Trafficking of Adipose Stromal Cells

Olga Sirin, Chieh Tseng Tseng, Yan Zhang, Mikhail Kolonin
University of Texas, Houston

Posterboard #: B324 | Abstract #: LB18

A Novel Source of Cultured Podocytes for in Vitro Studies

Stefano Da Sacco¹, Kevin Lemley¹, Sargis Sedrakyan¹, Ilenia Zanusso¹, Astgik Petrosyan¹, Janos Pete-Petardi², Roger De Filippo¹, Laura Perin¹
¹CHLA; ²USC

Posterboard #: B325 | Abstract #: LB20

Lectin-Like Ubiquitin Ligases are the Final Arbitrators in Glycoprotein Quality Control

Hsiang Wen¹, Geoff Dankle¹, Kevin Glenn^{1,2}
¹University of Iowa Carver College of Medicine, Iowa City, Iowa;
²Veterans Affairs Medical Center, Iowa City, Iowa

Posterboard #: B326 | Abstract #: LB22

Modulation of miRs: A Novel Approach to Targeting Skin Aging

Raaj Khusial, Uma Santhanam
Global R & D, Avon Products Inc. 1, Avon Place, Suffern, NY 10901

Posterboard #: B327 | Abstract #: LB24

Structure and Expression of Glycosaminoglycans in Cancerous Tissue

Amanda Weyers¹, Bo Yang¹, Leyla Gasimli¹, Lingyun Li¹, Dae Sung Yoon², Jong-Hwan Park², Fuming Zhang¹, Kyung Bok Lee², Robert Linhardt¹
¹Rensselaer Polytechnic Institute; ²Konyang University Hospital College of Medicine

Posterboard #: B328 | Abstract #: LB26

Large Scale Glycan Array Analysis of Commercial Lectins and Antibodies: 86 lectins and 15 antibodies

Praveen Agrawal¹, David Smith², William Eng¹, Richard Cummings², Lara Mahal¹
¹New York University; ²Emory University

Posterboard #: B329 | Abstract #: LB28

Tuning docking algorithms for carbohydrates: VIVA-CARB and MD simulations

Oliver C. Grant¹, Matthew B. Tessier², Robert T. Davis², B. Lachele Foley², Robert J. Woods³
¹National University of Ireland, Galway, Ireland; ²Complex Carbohydrate Research Center, University of Georgia; ³Complex Carbohydrate Research Center, University of Georgia, 315 Riverbend Road, Athens, GA 30602, USA

Posterboard #: B330 | Abstract #: LB30

Mesangial Cell Matrix Deposition in High Glucose as a Model of Glomerulosclerosis

Charles Miller¹, Ambra Pozzi², Roy Zent², Jean Schwarzbauer¹
¹Department of Molecular Biology, Princeton University, Princeton, NJ 08544, USA; ²Department of Medicine, Division of Nephrology, Vanderbilt University, Nashville, TN 37232, USA

Posterboard #: B331 | Abstract #: LB32

Heparan Sulfate 3-O-sulfation: A Rare Modification in Search of a Function

Bryan Thacker¹, Roger Lawrence², Jian Liu³, Jeffrey D. Esko¹
¹Department of Cellular and Molecular Medicine and Glycobiology Research and Training Center, Biomedical Sciences Graduate Program, University of California, San Diego, La Jolla, CA; ²Department of Cellular and Molecular Medicine and Glycobiology Research and Training Center, University of California, San Diego, La Jolla, CA; ³Division of Chemical Biology and Medicinal Chemistry, Eshelman School of Pharmacy, University of North Carolina, Chapel Hill, NC

Posterboard #: B332 | Abstract #: LB34

Novel pH-dependent Lectin From Bioluminescent Bacterium *Photobacterium luminescens*

Petra Rozumova¹, Pavel Dobes², Pavel Hyrs², Michaela Wimmerova³
¹National Centre for Biomolecular Research and Department of Biochemistry, Faculty of Science, Masaryk University, Brno, Czech Republic; ²Department of Animal Physiology and Immunology, Institute of Experimental Biology, Faculty of Science, Masaryk University, Brno, Czech Republic; ³Central European Institute of Technology, Masaryk University, Brno, Czech Republic

Posterboard #: B336 | Abstract #: LB35

Analysis of *Toxoplasma gondii* genome for Glycosyltransferases

A. Datta¹, A. Sinai², J. Kissinger³
¹National University, San Diego (CA); ²University of Kentucky, Lexington (KY); ³University of Georgia, Athens (GA)

Posterboard #: B333 | Abstract #: LB36

An Integrated Strategy for N-Glycan Sample Preparation and Analysis Suitable for All Stages of Therapeutic Protein Discovery, Characterization, Manufacture and Quality Release

Ted Haxo¹, Justin Hyché¹, Michael Kimzey¹, Sybil Lockhart¹, Craig Nishida¹, Shiva Pourkaveh¹, Jo Wegstein¹, Ying Qing Yu², Dorothy J. Phillips²
¹ProZyme, Inc., Hayward, CA; ²Waters Corporation, Milford, MA

Posterboard #: B335 | Abstract #: LB38

Glycoprofiling of Plant-derived Glycoproteins

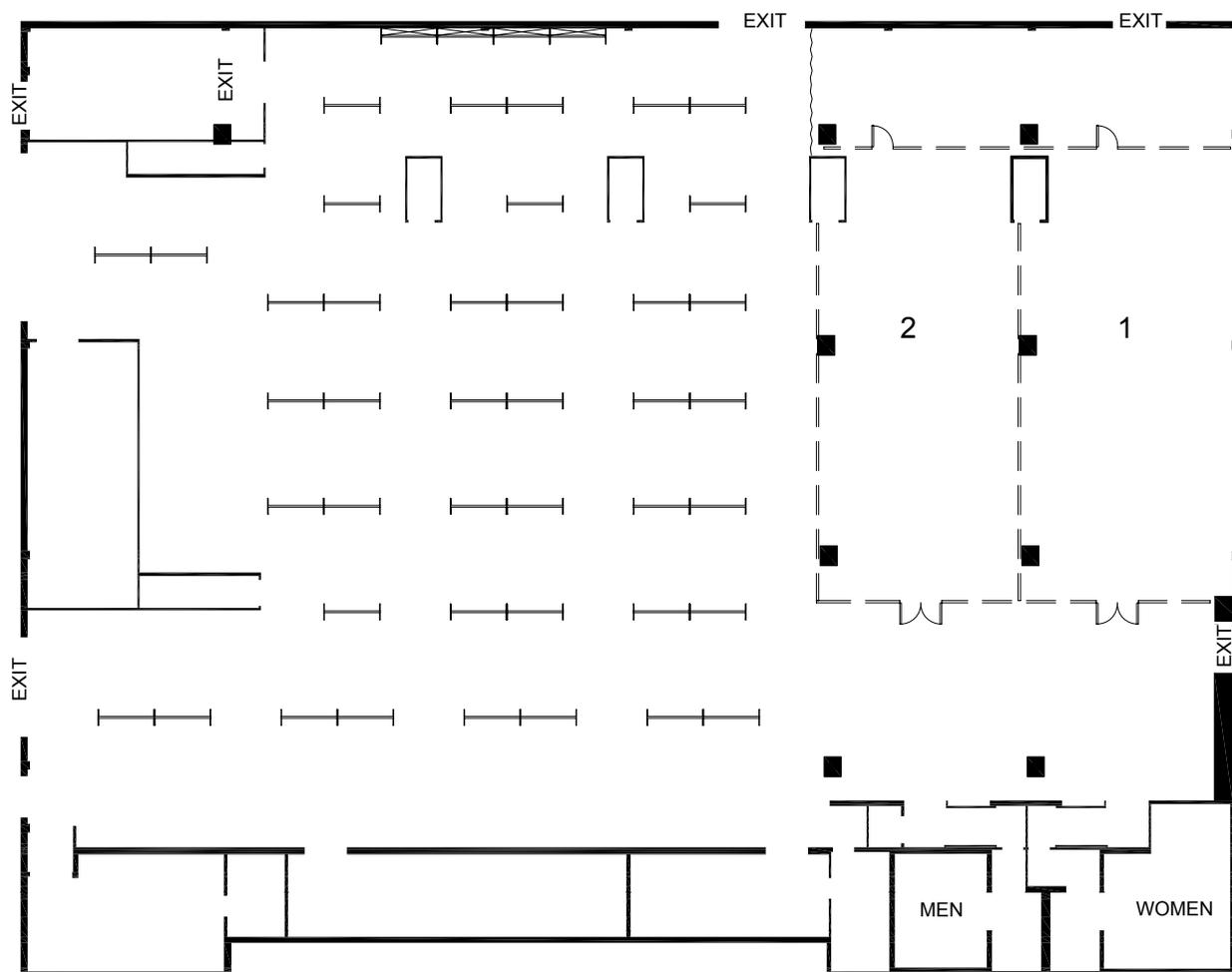
Jayesh J. Kattla¹, Joanne Withers¹, Weston Struwe¹, Michael Schomberg¹, Michael Bannister², Marco Rhotert², Pauline M. Rudd¹
¹Dublin-Oxford Glycobiology Group, National Institute for Bioprocessing Research & Training, Foster's Avenue, Mount Merrion, Blackrock, Co. Dublin, Ireland; ²Europa Bioproducts Ltd, 15-17 North Street, Wicken, Ely, Cambs, CB7 5XW

Posterboard #: B334 | Abstract #: LB37

N-Glycan Profiling Using Orthogonal Methods: UPLC[®] and CE

Michael Kimzey, Zoltan Szabo, Shiva Pourkaveh, Sybil Lockhart, Steven Mast, Justin Hyché, Ted Haxo, Jo Wegstein
 ProZyme, Inc., Hayward, CA, USA

Posterboard Floorplan



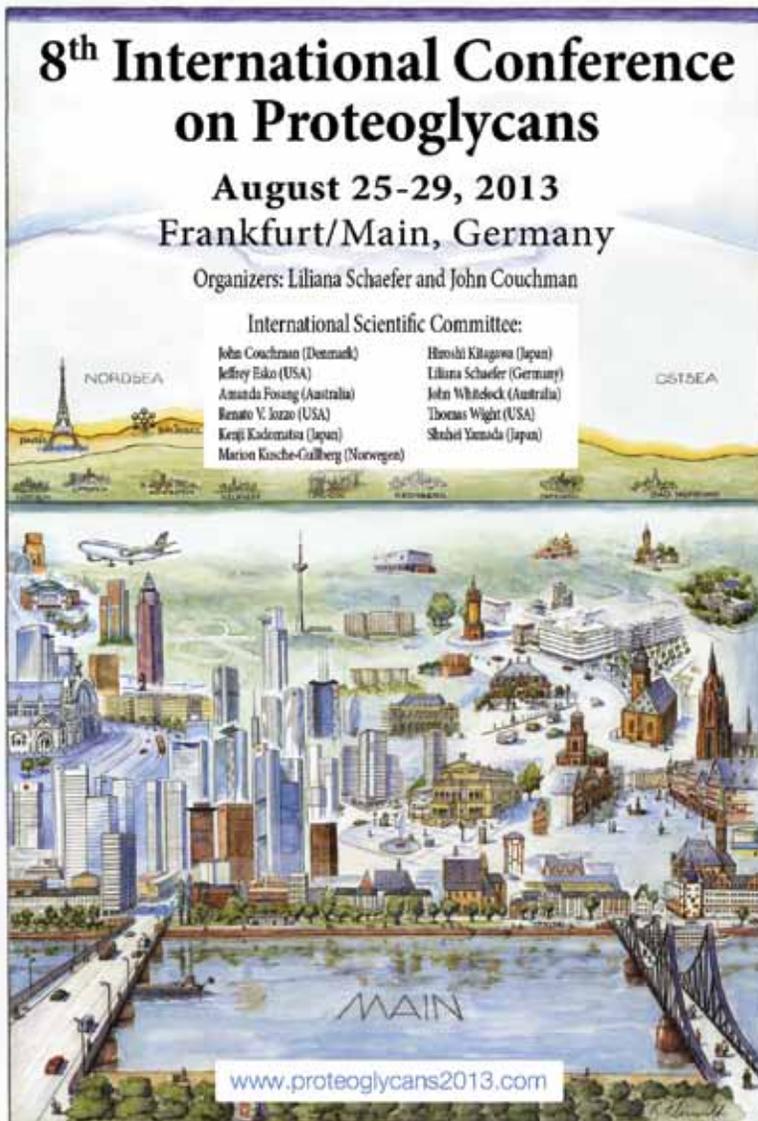
8th International Conference on Proteoglycans

August 25-29, 2013
Frankfurt/Main, Germany

Organizers: Liliana Schaefer and John Couchman

International Scientific Committee:

John Couchman (Denmark)	Hiroshi Kitagawa (Japan)
Jeffrey Esko (USA)	Liliana Schaefer (Germany)
Amanda Fosang (Australia)	John Whitebeck (Australia)
Renato V. Jozzo (USA)	Thomas Wight (USA)
Kenji Kadomatsu (Japan)	Shizhei Yamada (Japan)
Marion Kosche-Gallberg (Norwegen)	



Program-at-a-Glance

Sunday, November 11th

8:30am-5:30pm

SFG Guest Symposium I

Advances in Glycoprotein Production, Characterization and Modification

Location: Nautilus II

9:00am-5:30 pm

ASMB Guest Symposium I

Wound Healing Society

Quantifying Heterogeneity and Modeling Complexity in the Injury Response. Implications for Therapeutics Development

Location: Nautilus I

1:00-4:00 pm

ASMB Guest Symposium II

TERMIS: Tissue Engineering & Regenerative Medicine International Society

Location: Grande Ballroom C

12:00-5:30 pm

SFG Guest Symposium II

Consortium for Functional Glycomics Participating Investigator Meeting and Symposium

Location: Grande Ballroom B

12:00-7:00 pm

Exhibits Open

Location: Grande Ballroom A

6:00-7:00 pm

Opening Reception

Location: Foyer & Grande Ballroom A

7:00-8:00 pm

ASMB and SFG Society Welcome and Keynote Lecture

Location: Grande Ballroom B & C

Monday, November 12th

7:30 -8:30 am

Continental Breakfast

Location: Foyer & Grande Ballroom A

7:30-8:30 am

Career Mentoring Breakfast

Location: Marina 5

7:30 am-5:30 pm

Exhibits

Location: Grande Ballroom A

8:30-10:00 am

Plenary I: Stem and Progenitor Cells, Genetic Therapy and Regenerative Medicine

Location: Grande Ballroom B & C

10:00-10:30 am

Coffee Break

Location: Foyer & Grande Ballroom A

10:30-12:00 pm

Plenary II: Biomaterials and Matrix Engineering

Location: Grande Ballroom B & C

12:00-2:00 pm

Poster Session I/ Lunch

Location: Nautilus III, IV, and V

2:00-3:30 pm

Concurrent Sessions 1 - 4

CS1: Matrix and Carbohydrate Immunology

Location: Grande Ballroom C

CS2: Matricellular Proteins

Location: Nautilus I

CS3: Receptors, Signaling, and Cytoplasmic Glycosylation

Location: Grande Ballroom B

CS4: Vascular Biology, Elastic Fibers, and Related Diseases

Location: Nautilus II

3:30-4:00 pm

Coffee Break

Location: Foyer & Grande Ballroom A

4:00-5:30 pm

Concurrent Sessions 5-8

CS5: Carbohydrate and Matrix Metabolism in Disease States

Location: Grande Ballroom C

CS6: Basement Membranes

Location: Nautilus I

CS7: Genetics and Gene Expression

Location: Grande Ballroom B

CS8: Mechanobiology and Biomedical Engineering

Location: Nautilus II

6:00-7:30 pm

SFG Award Lectures

Location: Grande Ballroom C

6:00-8:00 pm

ASMB Award Lectures

Location: Grande Ballroom B

Tuesday, November 13th

7:30 am -8:30 am

Continental Breakfast

Location: Foyer & Grande Ballroom A

7:30-8:30 am

Career Mentoring Breakfast

7:30 am-6:00 pm

Exhibits

Location: Grande Ballroom A

8:30-10:00 am

Plenary III: Biosynthesis, Secretion and Assembly

Location: Grande Ballroom B & C

10:00-10:30 am

Coffee Break

Location: Foyer & Grande Ballroom A

10:30 am-12:00 pm

Plenary IV: Immunology and Inflammation

Location: Grande Ballroom B & C

12:00-2:00 pm

Poster Session II/ Lunch

Location: Nautilus III, IV, and V

2:00-2:30 pm

ASMB Business Meeting

Location: Grande Ballroom C

2:00-2:30 pm

SFG Business Meeting

Location: Grande Ballroom B

2:30-4:00 pm

Concurrent Sessions 9-12

CS9: Stem/Progenitor Cells and Their Environment

Location: Grande Ballroom C

CS10: Biosynthesis, Protein Folding, Secretion, and Matrix Assembly

Location: Nautilus I

CS11: Cancer Microenvironment

Location: Grande Ballroom B

CS12: Glycomics/Chemical Biology I: Function

Location: Nautilus II

4:00-4:30 pm

Coffee Break

Location: Grande Foyer and Grande Ballroom A

4:30-6:00 pm

Concurrent Sessions 13-16

CS13: Development

Location: Grande Ballroom C

CS14: Fibrosis, Proteolysis, and Tissue Repair

Location: Nautilus I

CS15: Glycomics/Chemical Biology II: Analytical Methods

Location: Grande Ballroom B

CS16: Host-Pathogen Interactions

Location: Nautilus II

7:00-10:00 pm

Banquet

Location: Grande Ballroom C

Wednesday, November 14th

7:30 -8:30 am

Continental Breakfast

Location: Grande Ballroom A

7:30-8:30 am

Special Guest Lecture: Jennifer Zeitzer, Director of Legislative Relations FASEB Office of Public Affairs

Biomedical Research: A Perspective from Washington, DC

Location: Grande Ballroom B & C

7:30am -12:00 pm

Exhibits

Location: Grande Ballroom A

8:30-10:00 am

Plenary V: Rare Glycosylation and Matrix Diseases

Location: Grande Ballroom B & C

10:00-10:30 am

Coffee Break

Location: Foyer & Grande Ballroom A

10:30-12:00 pm

Plenary VI: Development and Morphogenesis

Location: Grande Ballroom B & C