A brilliant scientist* once said:

Stop. Collaborate. And listen.

So we did. We took some time and talked extensively with our editors, our authors, and our readership. And we learned a lot... about what people believe we are, what they want and expect from us, and about how we can better serve the greater scientific community. Now we're on a mission to make it all happen.

See how we're doing it at jbc.org/mission, and be sure to visit us here at booth 1214 at the ASBMB show.

* Or not. (Yes, it was Vanilla Ice.)
ASBMB 2017
MEETING PROGRAM
Chicago, Illinois
April 22–26

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# Program At-A-Glance

## FRIDAY APRIL 21

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<tr>
<th>Time</th>
<th># = Follow on Twitter</th>
<th>Location</th>
<th>Event (☆ = advance event registration required)</th>
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<tbody>
<tr>
<td>5:00 PM – 7:00 PM</td>
<td>profdev</td>
<td>Hyatt Regency, DuSable ABC</td>
<td>ASBMB Graduate and Postdoc Travel Award Networking Reception ☆</td>
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## SATURDAY APRIL 22

<table>
<thead>
<tr>
<th>Time</th>
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<th>Location</th>
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<tbody>
<tr>
<td>8:30 AM – 4:30 PM</td>
<td>profdev</td>
<td>Convention Center, W183C</td>
<td>ASBMB Graduate Student and Postdoctoral Fellow Career Development Event ☆</td>
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<tr>
<td>11:00 AM – 11:30 AM</td>
<td>profdev</td>
<td>Convention Center, W183AB</td>
<td>ASBMB Undergraduate Student Orientation</td>
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<tr>
<td>11:30 AM – 4:00 PM</td>
<td>profdev</td>
<td>Convention Center, W375B</td>
<td>ASBMB Undergraduate Student Poster Competition ☆</td>
</tr>
<tr>
<td>4:00 PM – 5:15 PM</td>
<td>profdev</td>
<td>Convention Center, W375C</td>
<td>Science Outreach Poster Session</td>
</tr>
<tr>
<td>4:15 PM – 5:15 PM</td>
<td>profdev</td>
<td>Convention Center, W183AB</td>
<td>Exploring Careers Speed Networking Event</td>
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<tr>
<td>5:30 PM – 5:45 PM</td>
<td></td>
<td>Convention Center, Skyline Ballroom</td>
<td>ASBMB Business Meeting</td>
</tr>
<tr>
<td>5:30 PM – 6:30 PM</td>
<td>bigtalks</td>
<td>Convention Center, W375C</td>
<td>ASBMB Opening Lecture: Herbert Tabor Research Award Post-Transcriptional Regulation and the Bacterial Response to Stress. S. Gottesman</td>
</tr>
<tr>
<td>6:30 PM – 7:00 PM</td>
<td>profdev</td>
<td>Convention Center, W375C</td>
<td>Science Outreach Poster Session, continued</td>
</tr>
<tr>
<td>7:00 PM – 8:30 PM</td>
<td>profdev</td>
<td>Convention Center, W375DE</td>
<td>EB Welcome Reception</td>
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Add us on Snapchat!
(username: theasbmb)
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<tr>
<th>Time</th>
<th>Event (★ = advance event registration required)</th>
<th>Location</th>
<th>Event (★ = advance event registration required)</th>
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<tr>
<td>8:45 AM – 9:15 AM</td>
<td>William C. Rose Award A Reductionist Approach to Understanding Membrane Fusion. W. T. Wickner</td>
<td>Convention Center, W183AB</td>
<td></td>
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<tr>
<td>9:15 AM – 9:45 AM</td>
<td>Earl and Thressa Stadtman Distinguished Scientist Award Lessons Learned from PKA: From Motifs to the Dynamic Assembly of Isoform-Specific Macromolecular Switches. S. S. Taylor</td>
<td>Convention Center, W183AB</td>
<td></td>
</tr>
<tr>
<td>10:00 AM – 12:00 PM</td>
<td>Pharmacological Modulation of the HIF Pathway</td>
<td>Convention Center, W184BC</td>
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<tr>
<td>10:00 AM – 12:00 PM</td>
<td>New Approaches for Antibiotic Discovery</td>
<td>Convention Center, W185BC</td>
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<tr>
<td>10:00 AM – 12:00 PM</td>
<td>Dynamics of Cytoskeletal Assembly</td>
<td>Convention Center, W186ABC</td>
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<tr>
<td>10:00 AM – 12:10 PM</td>
<td>Life at Higher Resolution: Single Molecule and Single Cell Technologies</td>
<td>Convention Center, W187ABC</td>
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<tr>
<td>10:00 AM – 12:15 PM</td>
<td>Biochemistry, Physiology, and Pathophysiology of Sphingolipids</td>
<td>Convention Center, W183C</td>
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<tr>
<td>10:00 AM – 12:15 PM</td>
<td>Enhancing STEM Student Success and Retention in the Academic Pipeline</td>
<td>Convention Center, W185A</td>
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<tr>
<td>11:40 AM – 12:10 PM</td>
<td>Walter A. Shaw Young Investigator Award in Lipid Research Molecular Probes to Study the Subcellular Localization and Dynamics of Phospholipids and Cholesterol. G. D. Fairn</td>
<td>Convention Center, W183C</td>
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</tr>
<tr>
<td>12:00 PM – 2:30 PM</td>
<td>ASBMB Poster Presentations Poster manning: 12:00 – 1:15 PM, odd board numbers; 1:15 – 2:30 PM, even board numbers</td>
<td>Exhibit Hall</td>
<td></td>
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<tr>
<td>12:30 PM – 1:00 PM</td>
<td>ASBMB Meet the Speakers</td>
<td>Convention Center, Hall F, across from ASBMB booth #1214</td>
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<tr>
<td>12:30 PM – 1:30 PM</td>
<td>ASBMB Award for Exemplary Contributions to Education &amp; Poster Competition Awards Ceremony When Undergraduate Research Becomes the Curriculum. E. Dolan</td>
<td>Convention Center, W184BC</td>
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<tr>
<td>SUNDAY</td>
<td>Time</td>
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<td>1:00 PM – 3:00 PM</td>
<td>Tang Prize</td>
<td>Convention Center, W183AB</td>
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<tr>
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<td><em>The Bacterial CRISPR-Cas9 System: A Game Changer in Genome Engineering.</em> E. Charpentier</td>
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<td></td>
<td>1:30 PM – 2:00 PM</td>
<td>ASBMB Meet the Speakers</td>
<td>Convention Center, Hall F, across from ASBMB booth #1214</td>
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<tr>
<td></td>
<td>2:30 PM – 4:00 PM</td>
<td>Bacterial Persistence, Toxin–Antitoxin Systems and PrAMPs</td>
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<td></td>
<td>2:30 PM – 4:00 PM</td>
<td>Biocatalysts: Understanding Important Reactions and Pathways</td>
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<td>2:30 PM – 4:00 PM</td>
<td>Chromatin Modification, Gene Expression and Epigenetic Mutations</td>
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<td>2:30 PM – 4:00 PM</td>
<td>Systems Approaches to Signaling in Human Disease</td>
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<td>2:30 PM – 4:00 PM</td>
<td>Lipid Signaling</td>
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<td>2:30 PM – 4:00 PM</td>
<td>Cancer Metabolism</td>
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<td>2:30 PM – 4:00 PM</td>
<td>Plant Biochemistry and Metabolism (Session I)</td>
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<td>2:30 PM – 4:00 PM</td>
<td>Protein Folding, Aggregation and Chaperones: Emerging Frontiers</td>
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<td>2:30 PM – 4:45 PM</td>
<td>Immigration and Visa Issues for Foreign STEM Graduate Students and Postdoctoral Fellows</td>
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<td>3:00 PM – 5:00 PM</td>
<td>High-Resolution Imaging in Medicine</td>
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<td>4:15 PM – 5:45 PM</td>
<td>Natural Product Discovery and Biosynthesis</td>
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<td></td>
<td>4:15 PM – 5:45 PM</td>
<td>Signal Transduction and Protein Modifications</td>
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<tr>
<td></td>
<td>4:15 PM – 5:45 PM</td>
<td>DNA Replication, Recombination and Repair (Session I)</td>
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<td>4:15 PM – 5:45 PM</td>
<td>Emerging Technologies in Proteomics</td>
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<td>4:15 PM – 5:45 PM</td>
<td>Regulation of Intracellular Cholesterol Transport</td>
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<td>Convention Center, W187A</td>
<td>Glycans and Glycobiology</td>
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<tr>
<td>4:15 PM – 5:45 PM</td>
<td>#plants</td>
<td>Convention Center, W187B</td>
<td>Plant Biochemistry and Metabolism (Session II)</td>
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<td>#RNA</td>
<td>Convention Center, W187C</td>
<td>Non-Coding RNA Functional Diversity</td>
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<td>5:00 PM – 5:45 PM</td>
<td>#ASBMBed</td>
<td>Convention Center, W185A</td>
<td>Organizing A Successful ASBMB Student Chapter</td>
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<tr>
<td>6:15 PM – 7:45 PM</td>
<td>#profdev</td>
<td>Convention Center, W184BC</td>
<td>Grant Success Demystified</td>
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<td>6:15 PM – 7:45 PM</td>
<td>#profdev</td>
<td>Convention Center, W185BC</td>
<td>High-Performance Mass Spectrometry for Proteomics</td>
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<tr>
<td>6:15 PM – 7:45 PM</td>
<td>#profdev</td>
<td>Convention Center, W186ABC</td>
<td>Beyond DNA Methylation and Histone Modifications</td>
</tr>
</tbody>
</table>
| 7:30 PM – 9:00 PM | #profdev          | Hyatt Regency, Regency Ballroom C | ASBMB Welcome Reception  
Sponsored by the Minority Affairs Committee   |

Visit ASBMB Booth #1214
Ask how you can receive a complimentary membership and your choice of a free gift!
<table>
<thead>
<tr>
<th>Time</th>
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<th>Location</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:45 AM – 9:15 AM</td>
<td>Mildred Cohn Award in Biological Chemistry</td>
<td>Convention Center, W183AB</td>
<td>A New Paradigm for Catalysis of Nucleotidyltransfer Reactions. W. Yang</td>
</tr>
<tr>
<td>9:15 AM – 9:45 AM</td>
<td>ASBMB Young Investigator Award</td>
<td>Convention Center, W183AB</td>
<td>What Lurks Beneath (The Membrane): A Mechanistic Exploration of Rhomboid Proteolysis. S. Urban</td>
</tr>
<tr>
<td>10:00 AM – 12:00 PM</td>
<td>New Insights Into Nuclear Structure and Function</td>
<td>Convention Center, W183C</td>
<td>Basis of Longevity and Age-Related Diseases</td>
</tr>
<tr>
<td>10:00 AM – 12:00 PM</td>
<td>New Insights Into Mechanisms of Antibiotic Action</td>
<td>Convention Center, W183C</td>
<td>Discovery and Development of New Enzyme Chemistry</td>
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<tr>
<td>10:00 AM – 12:00 PM</td>
<td>Supramolecular Complexes</td>
<td>Convention Center, W183C</td>
<td>A 21st-Century Approach to STEM Teaching and Research Mentoring</td>
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<tr>
<td>12:00 PM – 2:30 PM</td>
<td>ASBMB Poster Presentations</td>
<td>Convention Center, Exhibit Hall</td>
<td>Poster manning: 12:00 – 1:15 PM, odd board numbers; 1:15 – 2:30 PM, even board numbers</td>
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<tr>
<td>12:30 PM – 1:00 PM</td>
<td>ASBMB Meet the Speakers</td>
<td>Convention Center, Hall F, across from ASBMB booth #1214</td>
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<tr>
<td>12:30 PM – 2:00 PM</td>
<td>Advocacy Town Hall</td>
<td>Convention Center, W183D</td>
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<tr>
<td>1:30 PM – 2:00 PM</td>
<td>ASBMB Meet the Speakers</td>
<td>Convention Center, Hall F, across from ASBMB booth #1214</td>
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<tr>
<td>2:30 PM – 4:00 PM</td>
<td>Signal Transduction: Building Blocks and Scaffolds</td>
<td>Convention Center, W183C</td>
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<tr>
<td>2:30 PM – 4:00 PM</td>
<td>Chemical Tools to Solve Biological Puzzles</td>
<td>Convention Center, W183C</td>
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<tr>
<td>Time</td>
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<tr>
<td>2:30 PM – 4:00 PM</td>
<td>#DNA</td>
<td>Convention Center, W185BC</td>
<td>DNA Replication, Recombination and Repair (Session II)</td>
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<tr>
<td>2:30 PM – 4:00 PM</td>
<td>#metabolism</td>
<td>Convention Center, W186ABC</td>
<td>Lipids, Metabolism and the Central Nervous System</td>
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<td>2:30 PM – 4:00 PM</td>
<td>#omics</td>
<td>Convention Center, W187A</td>
<td>Gems From Genome Database Mining</td>
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<tr>
<td>2:30 PM – 4:00 PM</td>
<td>#proteins</td>
<td>Convention Center, W187B</td>
<td>Protein Interactions and Assemblies</td>
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<tr>
<td>2:30 PM – 4:10 PM</td>
<td>#bigtalks</td>
<td>Convention Center, W184A</td>
<td>Alice and C. C. Wang Award in Molecular Parasitology</td>
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<td></td>
<td>Genetic Analysis of Pathogenesis in <em>Toxoplasma gondii</em>. D. Sibley</td>
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<td>2:30 PM – 4:45 PM</td>
<td>#ASBMBed</td>
<td>Convention Center, W185A</td>
<td>Tenure and Promotion across the STEM Academic Landscape</td>
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<td>3:00 PM – 5:00 PM</td>
<td>#cellbio</td>
<td>Convention Center, W184D</td>
<td>Progress Toward Adoption of Microphysiological Systems in Biology and Medicine</td>
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<td>#enzymes</td>
<td>Convention Center, W183C</td>
<td>Structural Dynamics of Enzymes</td>
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<td>4:15 PM – 5:45 PM</td>
<td>#chembio</td>
<td>Convention Center, W184BC</td>
<td>Lighthouses Inside Cells: Applications of Biosensors</td>
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<td>#chromatin</td>
<td>Convention Center, W185BC</td>
<td>Chromatin and Gene Expression</td>
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<td>#metabolism</td>
<td>Convention Center, W186ABC</td>
<td>Cardiac Metabolism and Function</td>
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<td>4:15 PM – 5:45 PM</td>
<td>#omics</td>
<td>Convention Center, W187A</td>
<td>Systems Biology/Proteomics in Health and Disease</td>
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<td>#proteins</td>
<td>Convention Center, W187B</td>
<td>Protein Folding, Aggregation and Chaperones: New Applications</td>
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<tr>
<td>4:15 PM – 5:45 PM</td>
<td>#microbes</td>
<td>Convention Center, W187C</td>
<td>Microbial Signaling and Pathogenesis</td>
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<tr>
<td>5:00 PM – 5:45 PM</td>
<td>#ASBMBed</td>
<td>Convention Center, W185A</td>
<td>ASBMB Accreditation Workshop</td>
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<tr>
<td>6:15 PM – 7:45 PM</td>
<td>#microbes</td>
<td>Convention Center, W184BC</td>
<td>CRISPR-Based Versatile Tools and Their Major Application Area</td>
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**MONDAY**

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<tr>
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<tr>
<td>6:15 PM – 7:45 PM</td>
<td>#chembio Convention Center, W185BC</td>
<td>Academic Drug Discovery: Charting a Roadmap for Moving Basic Ideas Into the Clinic</td>
</tr>
<tr>
<td>6:15 PM – 7:45 PM</td>
<td>#profdev Convention Center, W186ABC</td>
<td>How to Get a Life in the Life Sciences</td>
</tr>
<tr>
<td>9:00 PM – 10:30 PM</td>
<td>#profdev The Comedy Clubhouse, 1462 N. Ashland</td>
<td>Nothing Academic: A Night of Science-Themed Improv</td>
</tr>
<tr>
<td>9:00 PM – 11:00 PM</td>
<td>#profdev Hilton Chicago</td>
<td>Young Experimental Scientists Mixer</td>
</tr>
<tr>
<td>Time</td>
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<tr>
<td><strong>TUESDAY APRIL 25</strong></td>
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<tr>
<td>8:45 AM – 9:15 AM</td>
<td>#bigtalks Avanti Award in Lipids</td>
<td>Convention Center, W183AB</td>
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<tr>
<td>9:15 AM – 9:45 AM</td>
<td>#bigtalks Ruth Kirschstein Diversity in Science Award</td>
<td>Convention Center, W183AB</td>
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<tr>
<td>10:00 AM – 12:00 PM</td>
<td>#cellbio Organelle Trafficking and Signaling</td>
<td>Convention Center, W183C</td>
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<tr>
<td>10:00 AM – 12:00 PM</td>
<td>#cellbio Biochemical Basis of Cellular Processes</td>
<td>Convention Center, W184BC</td>
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<tr>
<td>10:00 AM – 12:00 PM</td>
<td>#antibiotics Antibiotic Resistance</td>
<td>Convention Center, W185BC</td>
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<tr>
<td>10:00 AM – 12:00 PM</td>
<td>#glyco Glycobiology, Glycan Receptors and Functional Glycomics</td>
<td>Convention Center, W186ABC</td>
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<td>12:00 PM – 2:30 PM</td>
<td>#cellbio Metal Homeostasis</td>
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<tr>
<td>12:30 PM – 1:00 PM</td>
<td>#profdev ASBMB Meet the Speakers</td>
<td>Convention Center, Hall F; across from ASBMB booth #1214</td>
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<td>12:30 PM – 2:00 PM</td>
<td>#profdev NIH and NSF Funding Opportunities</td>
<td>Convention Center, W185BC</td>
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<td>1:30 PM – 2:00 PM</td>
<td>#profdev ASBMB Meet the Speakers</td>
<td>Convention Center, W185BC</td>
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<tr>
<td>2:30 PM – 4:00 PM</td>
<td>#microbes Microbiomes and Their Evolution During Infection and Disease</td>
<td>Convention Center, W183C</td>
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<td>2:30 PM – 4:00 PM</td>
<td>#cellsignal Beyond the Code: Chemistry of Nucleotide and Amino Acid Modifications</td>
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<td>#proteins Molecular Mechanisms of Regulation in Proteolysis</td>
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<tr>
<td>2:30 PM – 4:00 PM</td>
<td>#RNA</td>
<td>Convention Center, W185A</td>
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<td>2:30 PM – 4:00 PM</td>
<td>#chembio</td>
<td>Convention Center, W185BC</td>
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<tr>
<td>2:30 PM – 4:00 PM</td>
<td>#metabolism</td>
<td>Convention Center, W186ABC</td>
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<tr>
<td>2:30 PM – 4:00 PM</td>
<td>#proteins</td>
<td>Convention Center, W187A</td>
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<tr>
<td>3:00 PM – 5:00 PM</td>
<td>#microbes</td>
<td>Convention Center, W184D</td>
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<td>4:15 PM – 5:45 PM</td>
<td>#enzymes</td>
<td>Convention Center, W187B</td>
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<tr>
<td>6:15 PM – 7:45 PM</td>
<td>#profdev</td>
<td>Convention Center, W184BC</td>
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<td>6:15 PM – 7:45 PM</td>
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<td>6:15 PM – 7:45 PM</td>
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<tr>
<td>7:30 PM – 9:00 PM</td>
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<td>Hyatt Regency, Grant Park B</td>
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<td>Time</td>
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<tr>
<td>8:45 AM – 9:15 AM</td>
<td><strong>#bigtalks</strong> ASBMB-Merck Award&lt;br&gt;Proteostasis Function and Dismfunction: The Delicate Art of Maintaining a Healthy Proteome</td>
<td>Convention Center, W183AB</td>
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<tr>
<td>9:15 AM – 9:45 AM</td>
<td><strong>#bigtalks</strong> Delano Award for Computational Biosciences&lt;br&gt;Structure-Based Discovery of New Chemotypes&lt;br&gt;Conferring New Biology</td>
<td>Convention Center, W183AB</td>
</tr>
<tr>
<td>10:00 AM – 12:00 PM</td>
<td><strong>#proteins</strong> Low-Complexity Domain Proteins&lt;br&gt;and the Making of Germ Cells</td>
<td>Convention Center, W183C</td>
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<tr>
<td>10:00 AM – 12:05 PM</td>
<td><strong>#cellbio</strong> Molecular Quality Control</td>
<td>Convention Center, W184BC</td>
</tr>
<tr>
<td>10:00 AM – 12:00 PM</td>
<td><strong>#lipids</strong> New Insights in Regulated Lipid Metabolism</td>
<td>Convention Center, W185BC</td>
</tr>
<tr>
<td>10:00 AM – 12:00 PM</td>
<td><strong>#metabolism</strong> Redox Signaling and the Metabolome</td>
<td>Convention Center, W186ABC</td>
</tr>
<tr>
<td>12:00 PM – 2:30 PM</td>
<td><strong>#profdev</strong> ASBMB Poster Presentations&lt;br&gt;Poster manning: 12:00 – 1:15 PM, odd board numbers; 1:15 – 2:30 PM, even board numbers</td>
<td>Convention Center, Skyline Ballroom</td>
</tr>
<tr>
<td>12:30 PM – 1:00 PM</td>
<td><strong>#profdev</strong> ASBMB Meet the Speakers</td>
<td>Convention Center, Skyline Ballroom</td>
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<tr>
<td>1:30 PM – 2:00 PM</td>
<td><strong>#profdev</strong> ASBMB Meet the Speakers</td>
<td>Convention Center, Skyline Ballroom</td>
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</tbody>
</table>

Learn about our career and professional development resources

VISIT ASBMB BOOTH #1214
ASBMB Oral Program

SATURDAY
APRIL 22

16 **ASBMB Graduate Student and Postdoctoral Fellow Career Development Event**

**SPECIAL EVENT**  #profdev

8:30 AM – 4:30 PM  CONVENTION CENTER, W183C

**CHAIR:** C. Heinen, T. O’Connell

Advance event registration required. Required participation by all Graduate/Postdoctoral Travel Awardees, including recipients of the Graduate Student Travel Awards supported by the ASBMB Minority Affairs Committee.

Before you dig into the nitty-gritty of the very best molecular biology and biochemistry at the ASBMB annual meeting, join your peers for this day of networking, exploring careers and developing professional skills.

17 **ASBMB Undergraduate Student Orientation**

**SPECIAL EVENT**  #profdev

11:00 AM – 11:30 AM  CONVENTION CENTER, W183AB

**CHAIR:** J. Provost

First time at a national meeting? What now? Learn how to develop a game plan to get the biggest bang for your buck during your time at the meeting.

Orientation open to all undergraduates attending the poster competition. No registration required. All ASBMB undergraduate travel award winners are required to attend.

18 **ASBMB Undergraduate Student Poster Competition**

**SPECIAL EVENT**  #profdev

11:30 AM – 4:00 PM  CONVENTION CENTER, W375B

**CO-CHAIRS:** K. Cornely, K. Dickson, P. Ortiz

Advance competitor registration required. Competitors may check-in and set-up posters beginning at 11:30 (board assignments distributed at check-in). Posters must remain on display 12:30 – 4:00 pm.

Undergraduate biochemists and molecular biologists will present their research and gain valuable practice in advance of presentations during the main meeting. Best Poster winners announced Sunday, April 24, 12:30 pm, Room W184bc.

Graduate program recruiters will be on hand to share exciting educational and research opportunities.

20 **Science Outreach Poster Session**

**POSTER DISCUSSION**  #profdev

4:00 PM – 5:15 PM  CONVENTION CENTER, W375C

Outreach posters will be manned before and after the ASBMB Opening Lecture which takes place in the same room.

Manning times: 4:00 – 5:15 pm and 6:30 – 7:00 pm.

**BOARD 1:** CSI: Choosing Science and Innovation. B. Lehrman

**BOARD 2:** Promoting STEM awareness in East Texas: Stephen F. Austin State University ASBMB Student Chapter. C. Tovar

**BOARD 3:** Take Your Vitamins! Suffolk ASBMB Student Chapter Outreach Activities. C. Peterson
BOARD 4:  BlastOff! with Biochemistry.  G. Le
BOARD 5:  Middle School Science Educational Outreach Programs: “Present Your Ph.D. Thesis to a 12-year-old” and “Shadow a Scientist”.  G. Clark
BOARD 6:  Project CRYSTAL (Colleagues Researching with Young Scientists: Teaching and Learning): A Scientific Outreach Program for Middle School Students.  H. Holden
BOARD 7:  Science Explorers: Small Group Mentoring/Tutoring During the School Day to Help Underserved Chicago Public School Students Transition Into High School.  J. Hatfield
BOARD 8:  Scientific Community Outreach in Central Texas.  K. Lewis
BOARD 9:  Science in the News: Communicating Science to the General Public.  K. Wu
BOARD 10:  Promoting Science Through a Science Club to Science Club Initiative.  K. Hicks
BOARD 11:  Fostering of a Love of Science and Science Education.  L. Zhao
BOARD 12:  Teaching-Learning Model of Science at an Informal Environment with an Emphasis on Active Participation.  M. Perez-Oquendo
BOARD 13:  Students Sharing Science: Cal Poly SLO Student Chapter Outreach.  M. Hansen
BOARD 14:  Promoting Rural Student Enthusiasm for STEM by Establishing a Model Biotechnology Company in their High School.  M. Koci
BOARD 15:  Long-Term Research Projects Between Students from the ASBMB Student Chapter at Hampden-Sydney College and Prince Edward High School, Virginia.  M. Wolyniak
BOARD 16:  Communication Training and Outreach Programs at Northwestern.  M. Paulsen
BOARD 17:  University of Texas Health Science Center at San Antonio Outreach: Meshing Science and Culture.  M. Sifuentes
BOARD 18:  “Science for the Curious” through Beer, Whiskey, Chocolate, GMOs, Pi(e), Films, and ‘Game of Thrones’.  M. Metzler
BOARD 19:  Expanding Your Horizons Connects STEM Professionals With Middle School Girls.  M. Beck
BOARD 20:  Jugando con la Ciencia — Northwestern University.  N. Martinez
BOARD 21:  New Beginnings—Our First Experience As a New ASBMB Student Chapter.  P. Mullen
BOARD 23:  Fired Up for Science: Engaging Community and Science Majors.  T. Clark
BOARD 24:  The ASBMB Student Chapter at Otterbein University: Best Practices and Outreach Efforts.  T. Hyatt
BOARD 25:  Discovery Outreach and The Wisconsin Science Festival—Growing a Statewide Footprint for Informal Science Engagement.  W. Marner
BOARD 26:  Outreach in New York City! The ASBMB Student Chapter at Marymount Manhattan College.  A. Aguanno
BOARD 27:  Informal STEM Education: Resources for Outreach, Engagement and Broader Impacts.  C. Garibay
BOARD 28:  “Science Fiesta!” Combining Student-Led Community Outreach with Local Culture.  T. Block

Exploring Careers Speed Networking Event
WORKSHOP  #profdev
4:00 PM – 5:15 PM  CONVENTION CENTER, W183AB
Scientists from all career fields will meet with students and share advice about their career paths. All undergraduate students are encouraged to attend.

ASBMB Business Meeting
BUSINESS MEETING
5:30 PM – 5:45 PM  CONVENTION CENTER, SKYLINE BALLROOM W375C

www.asbmb.org/meeting2017
22 ASBMB Opening Lecture: Herbert Tabor Research Award

AWARD LECTURE #bigtalks

5:30 PM – 6:30 PM CONVENTION CENTER, SKYLINE BALLROOM, W375C
5:30 ASBMB Business Meeting and Award Introduction
5:45 22.1 Post-Transcriptional Regulation and the Bacterial Response to Stress S. Gottesman, NCI, NIH

23 Science Outreach Poster Session, continued

POSTER DISCUSSION #profdev

6:30 PM – 7:00 PM CONVENTION CENTER, W375C
Outreach posters will be manned before and after the ASBMB Opening Lecture which takes place in the same room.
Manning times: 4:00 – 5:15 pm and 6:30 – 7:00 pm. Refer to session 20 (page 13) for presentation information.

24 EB Welcome Reception

SPECIAL EVENT #profdev

7:00 PM – 8:30 PM CONVENTION CENTER, W375DE
Join fellow attendees for our first-ever, inter-disciplinary meet and mingle and appreciate the power and energy of the EB Meeting! Light refreshments and cash bar available. Member-attendees receive one complimentary drink ticket when they sign up for the event during EB Meeting registration.

ASBMB Science Outreach Events

Outreach poster sessions
SATURDAY, APRIL 22, 4:00–5:15 PM & 6:30–7:00 PM
CONVENTION CENTER W375C
This is your chance to see examples of outreach activities from across the country and talk with program organizers.

Science Outreach “Meet the Experts”
SUNDAY, APRIL 23, 9:00 AM–NOON & 2:00–4:00 PM
THE ASBMB LOUNGE
Members of the ASBMB Public Outreach Committee will talk about different approaches to outreach, share their expert insight and provide hands-on demonstrations.

Nothing Academic:
A Night of Science-Themed Improv
MONDAY, APRIL 24, 7:00–8:30 PM & 9:00–10:30 PM
THE COMEDY CLUBHOUSE (1462 N. ASHLAND)
Come see a humorous approach to science communication, featuring performers from the One Group Mind comedy collective.
William C. Rose Award  
AWARD LECTURE  #bigtalks  
8:45 AM – 9:15 AM  CONVENTION CENTER, W183AB  
8:45  Introduction.  
8:50  98.1  A Reductionist Approach to Understanding Membrane Fusion.  W.T. Wickner, Dartmouth Medical School

Earl and Thressa Stadtman Distinguished Scientist Award  
AWARD LECTURE  #bigtalks  
9:15 AM – 9:45 AM  CONVENTION CENTER, W183AB  
9:15  Introduction.  
9:20  99.1  Lessons Learned from PKA: From Motifs to the Dynamic Assembly of Isoform-Specific Macromolecular Switches.  S.S. Taylor, University of California, San Diego

Pharmacological Modulation of the HIF Pathway  
SYMPOSIUM  #chembio  
10:00 AM – 12:00 PM  CONVENTION CENTER, W184BC  
CHAIR: W.G. Kaelin  
10:00  100.1  Signaling Hypoxia by Protein Hydroxylation: Transcriptional Architecture of the HIF Response.  P.J. Ratcliffe, University of Oxford and Francis Crick Institute, United Kingdom  
10:30  100.2  Visualizing the Drug-Binding Potentials of HIF-α Proteins Through X-Ray Crystallography.  F. Rastinejad, Sanford Burnham Prebys Medical Discovery Institute  
11:00  100.3  Small Molecule HIF-2α Antagonists and Their Therapeutic Applications.  E.M. Wallace, Peloton Therapeutics  
11:30  100.4  On-Target Efficacy of a HIF2a Antagonist in Preclinical Kidney Cancer Models.  W. Kaelin, Howard Hughes Medical Institute, Dana-Farber Cancer Institute, Brigham and Women’s Hospital and Harvard Medical School

New Approaches for Antibiotic Discovery  
ISSUES IN DEPTH  #antibiotics  
10:00 AM – 12:00 PM  CONVENTION CENTER, W185BC  
CHAIR: A. Mankin  
10:00  101.1  Antibody-Antibiotic Conjugates: A New Platform for Treatment of Serious Bacterial Infections.  E.J. Brown, Genentech  
10:30  101.2  Synthetic Biology for Tackling Antimicrobial Resistance.  T. Lu, Massachusetts Institute of Technology  
11:00  101.3  To Kill a Bacterium, You Need to Think Like a Bacterium.  E. Brown, McMaster University, Canada  
11:30  101.4  Engineered Bacteriophage Therapeutics Against Multidrug-Resistant Pathogens.  M. Barbu, Y. DelRosario, B. Hubby, Synthetic Genomics Vaccine
102 **Dynamics of Cytoskeletal Assembly**

**SYMPOSIUM**  #cellbio

10:00 AM – 12:00 PM  CONVENTION CENTER, W186ABC

**CHAIR:** T.D. Pollard

- **10:00**  102.1  Regulation of Microtubule Dynamics by Suppression of Microtubule Assembly Kinetics.  
  **M.K. Gardner,**  
  **University of Minnesota**

- **10:30**  102.2  Strings Attached: Sound Perception and Brain Wiring Enabled by Cadherins.  
  **M. Sotomayor,**  
  **The Ohio State University**

- **11:00**  102.3  Mechanics of the Actin Cytoskeleton.  
  **M. Gardel,**  
  **University of Chicago**

- **11:30**  102.4  Molecular Mechanism of Cytokinesis.  
  **T.D. Pollard,**  
  **Yale University**

103 **Life at Higher Resolution: Single Molecule and Single Cell Technologies**

**SYMPOSIUM**  #cellbio

10:00 AM – 12:00 PM  CONVENTION CENTER, W187ABC

**CHAIR:** T. Ha

- **10:00**  103.1  Transcriptional Dynamics of Mfd.  
  **M. Wang,**  
  **Cornell University, HHMI**

- **10:30**  103.2  DNA Origami Supported Precision Measurements of Biomolecular Interactions and Structure.  
  **H. Dietz,**  
  **Technical University of Munich, Germany**

- **11:00**  103.3  Playing a Tug of War with Integrin and Notch Receptors.  
  **T. Ha,**  
  **Whiting School of Engineering, Johns Hopkins School of Medicine, HHMI**

- **11:30**  103.4  A 3D Code in the Human Genome.  
  **E. Lieberman Aiden,**  
  **Baylor College of Medicine, and Rice University**

104 **Biochemistry, Physiology, and Pathophysiology of Sphingolipids**

**SYMPOSIUM**  #lipids

10:00 AM – 12:10 PM  CONVENTION CENTER, W183C

**CHAIR:** Y.A. Hannun

- **10:00**  104.1  Neutral Sphingomyelinase: Structure and Function.  
  **Y. Hannun,**  
  **Stony Brook University**

- **10:25**  104.2  Regulation and Role of ER-Golgi Contact Sites.  
  **A. De Matteis, R. Venditti, M. Masone, L. Rega, E. Polishchuk, M. Santoro, G. Di Tullio, R. La Montagna,**  
  **Telethon Institute of Genetics and Medicine, Italy, Ospedale Pediatrico Bambino Gesù, Italy**

- **10:50**  104.3  Sphingolipid Chaperone Proteins Modulate Signal Transduction and Pathophysiology.  
  **T. Hla,**  
  **Boston Children’s Hospital, Harvard Medical School**

- **11:15**  104.4  Lipid Homeostasis and Function.  
  **H. Riezman, J. Hannich, A. Galih, A.X. Santos, I. Riezman, J. Martinou, S. Gentina,**  
  **University of Geneva, Switzerland and Friedrich Miescher Institute, Switzerland**

- **11:40**  Walter A. Shaw Young Investigator Award introduction and presentation.

- **11:45**  104.5  Molecular Probes to Study the Subcellular Localization and Dynamics of Phospholipids and Cholesterol.  
  **G.D. Fairn,**  
  **St. Michael’s Hospital, Canada and University of Toronto, Canada**
Enhancing STEM Student Success and Retention in the Academic Pipeline

SYMPOSIUM  #ASBMBed
10:00 AM – 12:15 PM  CONVENTION CENTER, W185A
CHAIR: S. E. Feeney

Sponsored by ASBMB Education and Professional Development Committee

Students, post-docs, and faculty are encouraged to attend this session focused on highlighting best practices for encouraging student success at each stage of their academic development and methods for retaining diverse STEM students. This will be a fantastic session for all to take away some new insights for how to propel student success in STEM classrooms.

10:00  Chair’s Introduction.
10:05  105.1 Socio-Cognitive Considerations to Broaden Participation and Support Student Success in STEM. G. Trujillo, Stanford University
10:30  105.2 Engaging Students in the Large-Lecture Biology Classroom. L.K. Elfring, The University of Arizona
10:55  105.3 Improving Student Understanding of Pre-Requisite Knowledge and Long Term Understanding of Biochemical Concepts. A.T. Taylor, W.R. Novak, Wabash College (588.3)
11:10  Discussion.
11:15  105.4 The t-STEM Initiative: Faculty Inquiry in the Context of Institutional Commitments to Student Success. S. Jewett, W. LaCourse, University of Maryland, Baltimore County (UMBC)
11:40  104.5 Proxies for Success—How Application Changes Correlate to PhD Path Pursuit for a Small Diversity Research Program. C.R. Shadding, D. Whittington, Washington University in St. Louis - School of Medicine, Strategic Evaluations, Inc. (751.15)
11:55  Discussion.
12:00  Mental Health Crisis in Graduate Education: The Data and Intervention Strategies. T.M. Evans, L. Bira, J. Beltran-Gastelum, L. Weiss, N. Vanderford, UT Health San Antonio, St. Mary’s University and University of Kentucky (750.7)

Walter A. Shaw Young Investigator Award in Lipid Research

AWARD LECTURE  #bigtalks
11:40 AM – 12:10 PM  CONVENTION CENTER, W183C

Presented in the session, “Biochemistry, Physiology and Pathophysiology of Sphingolipids,” beginning at 10:00 a.m. Refer to session 104 for additional details.

11:40  Walter A. Shaw Young Investigator Award introduction and presentation.
11:45  104.5 Molecular Probes to Study the Subcellular Localization and Dynamics of Phospholipids and Cholesterol. G.D. Fairn, St. Michael’s Hospital, Canada and University of Toronto, Canada

ASBMB Meet the Speakers

SPECIAL EVENT  #profdev
12:30 PM – 1:00 PM  CONVENTION CENTER, HALL F

Join us in the exhibit hall, across from ASBMB booth #1214. Meet up with the morning presenters for continued scientific discussion and networking in an informal environment.

AS OF PRESS TIME, CONFIRMED SPEAKERS INCLUDE:
A. De Matteis, Telethon Institute of Genetics and Medicine; H. Dietz, Technical University of Munich; G. Fairn, St. Michael’s Hospital; W. A. Shaw Young Investigator in Lipid Research Award; M. Gardel, University of Chicago; M. Gardner, University of Minnesota; T. Ha, Johns Hopkins School of Medicine, HHMI; T. Pollard, Yale University; H. Riezman, University of Geneva; M. Sotomayor, Ohio State University
108 **ASBMB Award for Exemplary Contributions to Education**

**AWARD LECTURE #bigtalks**

**12:30 PM – 1:30 PM** CONVENTION CENTER, W184BC

Sponsored by ASBMB Education and Professional Development Committee

Undergraduate Student Research Poster Competition award winners and Honor Society inductees will be announced during this lecture.

12:30 **Introduction.**

12:35 **108.1 When Undergraduate Research Becomes the Curriculum.** E. Dolan, University of Georgia

83 **Tang Prize**

**AWARD LECTURE #bigtalks**

**1:00 PM – 3:00 PM** CONVENTION CENTER, W183AB

Sponsored by Tang Foundation

1:00 *The Bacterial CRISPR-Cas9 System: A Game Changer in Genome Engineering.*

E. Charpentier, Max Planck Institute for Infection Biology

110 **ASBMB Meet the Speakers**

**SPECIAL EVENT #profdev**

**1:30 PM – 2:00 PM** CONVENTION CENTER, HALL F

Join us in the exhibit hall, across from ASBMB booth #1214. Meet up with the morning presenters for continued scientific discussion and networking in an informal environment.

AS OF PRESS TIME, CONFIRMED SPEAKERS INCLUDE:

E. Brown, Genentech; E. Brown, McMaster University; F. Rastinejad, Sanford Burnham Prebys Medical Discovery Institute; P. Ratcliffe, University of Oxford; S. Taylor, UCSD, Earl and Thressa Stadtman Distinguished Scientist Award; E. Wallace, Peloton Therapeutics; W. Wickner, Dartmouth Medical School, William C. Rose Award

111 **Bacterial Persistence, Toxin-Antitoxin Systems and PrAMPs**

**SPOTLIGHT SESSION #microbes**

**2:30 PM – 4:00 PM** CONVENTION CENTER, W183C

**CHAIR: R. Page**

2:30 **111.1 Toxin-Antitoxin Systems: Novel Mechanisms of Toxin Activity and Antitoxin Inhibition.** R. Page, W. Peti, University of Arizona (777.14)

2:45 **Antimicrobial Peptide Turns the Ribosome Into a Release Factor Trap.** T. Florin, C. Maracci, M. Graf, P. Karki, D. Klepacki, M.V. Rodnina, D.N. Wilson, N. Vázquez-Laslop, A.S. Mankin, University of Illinois at Chicago, Max Planck Institute for Biophysical Chemistry, Germany, University of Munich, Germany and University of Hamburg, Germany (600.5)

3:00 **Gyrase Inhibition by Toxin-Antitoxin Modules.** C.R. Bourne, J.C. White, S. Dabadi, M. Muthuramalingam, University of Oklahoma (777.14)

3:15 **Determination of Protein Turnover in E. coli Cells During Exit from Persistence.** M. Semanjski, E. Germain, K. Gerdes, B. Macek, University of Tuebingen, Germany and University of Copenhagen, Denmark (915.2)


3:45 **Discrete Structural Dynamics of Pseudo-Palindromic Motifs Control DNA Binding of Bacterial Toxin-Antitoxin Complexes.** D.E. Brodersen, K.L. Bendtsen, K. Xu, M. Luckmann, K. Winther, S.A. Shah, C.N. Pedersen, Aarhus University, Denmark and University of Copenhagen, Denmark (777.2)
**Biocatalysts: Understanding Important Reactions and Pathways**

**SPOTLIGHT SESSION**  #enzymes

**2:30 PM – 4:00 PM**  CONVENTION CENTER, W184A

**CHAIR:** J. DuBois

- **2:30** A Structure-Based Mechanism for Oxidative Decarboxylation Reactions Mediated by Amino Acids and Heme Propionates.  A.I. Celis, Montana State University (607.8)
- **2:45** Protein-Based Models of Nickel Metalloenzymes.  H.S. Shafaat, A.C. Manesis, C.R. Schneider, M.C. O’Connor, The Ohio State University (605.4)
- **3:00** Probing the Charge and Conformational Requirements of JmjC Demethylases.  G.W. Langley, A. Brinkø, M. Munzel, L.J. Walport, C.J. Schofield, R.J. Hopkinson, University of Oxford, United Kingdom and Aarhus University, Denmark (767.1)
- **3:15** Effects of Isotopic Substitution in Enzyme and Co-Factor on Enzyme Catalyzed Hydride Transfer.  C. Ranasinghe, P. Pagano, Q. Guo, C. Cheatum, A. Kohen, The University of Iowa (764.1)
- **3:45** Structural and Biochemical Insights Into the Activation and Substrate Selectivity of Clostripain-Like Proteases Secreted from Commensal Gut Bacteria.  E.J. Roncase, A.J. O’Donoghue, D.W. Wolan, The Scripps Research Institute, University of California, San Diego (918.5)

**Chromatin Modification, Gene Expression and Epigenetic Mutations**

**SPOTLIGHT SESSION**  #chromatin

**2:30 PM – 4:00 PM**  CONVENTION CENTER, W184BC

**CHAIR:** B. D. Strahl

- **2:30** Role of H3K36 Methylation in Cell Cycle Control and Nutrient Stress Response.  B. Strahl, UNC School of Medicine
- **2:45** INO80 Chromatin Remodeling Connects Metabolic Gene Expression to Cell Division.  A.J. Morrison, G. Gowans, A. Schep, D. King, W. Greenleaf, Stanford University (593.14)
- **3:00** An Epigenetic Switch Regulates de Novo DNA Methylation at Pluripotency Gene Enhancers.  H. Gowher, C.J. Petell, Purdue University (593.15)
- **3:15** Biochemical Insights Into the Mechanism of Oncohistones.  P.W. Lewis, University of Wisconsin-Madison (593.16)
- **3:45** Decipher and Target Cancer Cell Dependency on Epigenetic Mutations.  G. Wang, University of North Carolina at Chapel Hill (593.3)

**Systems Approaches to Signaling in Human Disease**

**SPOTLIGHT SESSION**  #omics

**2:30 PM – 4:00 PM**  CONVENTION CENTER, W185BC

**CHAIR:** M. B. Yaffe

- **2:30** Phosphoproteomic Analysis of DNA Damage Checkpoint Kinase Signaling Reveals Unexpected Links to Actin Cytoskeletal Remodeling, Cell Migration, and Chemoresistance.  M. Yaffe, M. Hwang, S. Gordonow, J. Ivaska, D. Lauffenburger, F. Gertler, MIT and University of Turku, Finland (926.8)

www.asbmb.org/meeting2017
**Lipid Signaling**

**SPOTLIGHT SESSION**  
**#lipids**

**CONVENTION CENTER, W186ABC**

**CHAIR:** D. M. Raben

**2:30**  
Crystal Structure of LCAT Bound to a Small Molecule Allosteric Activator Reveals Its Active Conformation.  

**2:45**  
Readers, Writers and Erasers of Nuclear PIP3.  
R. D. Blind, Vanderbilt University School of Medicine (946.11)

**3:00**  
Diacylglycerol and Phosphatidic: Regulation of Levels and Roles in Synaptic Vesicle Cycling.  
D. Raben, H. Goldschmidt, C. Barber, Johns Hopkins University School of Medicine

**3:15**  
Crystal Structure of Lysophosphatidic Acid Acyltransferase Reveals a Paired Reentrant Helix Membrane Anchor That Positions the Active Site Inside the Phospholipid Bilayer.  
S. W. White, R. M. Robertson, J. Yao, S. Gajewski, G. Kumar, C. O. Rock, St. Jude Children’s Research Hospital (630.13)

**3:30**  
Phosphatidic Acid-Protein Phosphatase 2A Interactions Regulate Haloptropic Bending in Rice.  
E. Han, D. Petrella, J. Lin, A. DeLong, J. J. Blakeslee, The Ohio State University and Brown University (617.5)

**3:45**  
N. Singh, E. Arauz, V. Aggarwal, T. Ha, J. Chen, University of Illinois at Urbana Champaign (946.10)

**Cancer Metabolism**

**SPOTLIGHT SESSION**  
**#metabolism**

**CONVENTION CENTER, W187A**

**CHAIR:** J. M. Ellis, F. Pascal

**2:30**  
Pyruvate Carboxylase Is Essential for Breast Cancer Metastasis in Vivo.  
T. M. Wilmanski, A. Shinde, S. S. Donkin, J. Burgess, M. Wendt, D. Teegarden, Purdue University (942.12)

**2:45**  
Repurposing P-Glycoprotein Inhibitors as Modifiers of Sphingolipid Metabolism — Therapeutic Implications in Cancer.  
M. C. Cabot, East Carolina University, Brody School of Medicine (629.6)

**3:00**  
Syntaphilin Regulates Mitochondrial Dynamics and Tumor Cell Invasion.  
M. Cairo, D. C. Altieri, The Wistar Institute (631.3)

**3:15**  
B. F. Clem, T. Krueer, J. Bradley, M. Merchant, J. O. Trent, R. B. Sit, University of Louisville (942.9)

**3:30**  
Electrophilic Nitro-Oleic Acid Inhibits Triple Negative Breast Cancer Cell Migration via Suppression of NF-kB Activity.  
C. Woodcock, S. Woodcock, S. Salvatore, N. Davidson, Y. Huang, B. Freeman, University of Pittsburgh and University of Pittsburgh Cancer Institute (934.1)

**3:45**  
Identification of Inhibitors of ACSV L3, a Therapeutic Target in Glioma.  
E. Clay, X. Shi, Y. Liu, C. C. DiRusso, P. N. Black, P. A. Watkins, Johns Hopkins University School of Medicine, Kennedy Krieger Institute, University of Nebraska Lincoln (781.17)
**SPOTLIGHT SESSION #plants**

**SESSION II, SUNDAY, 4:15 PM, ROOM W178B.**

**2:30** Cracking the Interorganellar Communication Codes. A.J. de Souza, J. Svozil, J. Wang, H. Ke, Y. Xiao, W. Gruissem, K. Dehesh, UC Riverside, ETH Zurich, Switzerland and UC Davis (617.2)

**2:45** Understanding Plant Energy Sensing and Homeostasis. S. Williams, J. Yen, G. Gillaspy, Virginia Tech (628.11)

**3:00** Probing the Global Kinome and Phosphoproteome in Chlamydomonas reinhardtii via Sequential Enrichment and Quantitative Proteomics. E.G. Werth, E.W. McConnell, T.K. Gilbert, I.C. Liane, C.W. Perez, C. Manley, L.M. Graves, J.G. Umen, L.M. Hicks, University of North Carolina at Chapel Hill and Donald Danforth Plant Science Center (926.5)

**3:15** Molecular Basis of TyrA Substrate Specificity Underlying the Evolution of Alternative Tyrosine Biosynthetic Pathways. C. Schenck, C. Holland, M. Schneider, J. Jez, H. Maeda, University of Wisconsin-Madison and Washington University in St. Louis (628.4)

**3:30** Regulation of the Arabidopsis thaliana Ca2⁺-Dependent Protein Kinase, CPK28, by Autophosphorylation and Calmodulin-Binding. K.W. Bender, R.E. Zielinski, S.C. Huber, University of Illinois at Urbana-Champaign and USDA-Agricultural Research Service (772.13)

**3:45** ORM: A Central Regulator of Sphingolipid Homeostasis and Composition in Arabidopsis. E. Cahoon, University of Nebraska, Lincoln

---

**SPOTLIGHT SESSION #proteins**

**2:30 PM – 4:00 PM CONVENTION CENTER, W187C**

**CHAIR: X. Zhang**

**2:30** A Fluorogenic Proteostasis Sensor to Monitor Proteome Stress in Real-Time. X. Zhang, Y. Liu, Penn State University

**2:45** Identifying and Ameliorating Complex Collagen Misfolding Defects. M.D. Shoulders, Massachusetts Institute of Technology (763.11)

**3:00** The Structural Basis for Polypeptide Translocation by the HSP104 Disaggregase. D.R. Southward, A. Yokom, S. Gates, M. Jackerel, J. Shorter, University of Michigan and University of Pennsylvania (604.3)

**3:15** Metal Induced Conformational Changes of Alpha-Synuclein and the Role of Ambient Oxygen. H.R. Lucas, Virginia Commonwealth University (763.15)

**3:30** Understanding the Influence of Translation-Elongation Kinetics on Protein Structure and Function. E.P. O’Brien, Penn State University (604.2)

**3:45** Translation of Heat Shock Proteins Is Regulated by Poly(A)-Binding Protein Assembly. C.D. Katanski, J. Riback, E. Pilipenko, D.A. Drummond, University of Chicago (763.10)

---

**ASBMB Advocacy Town Hall**

**MONDAY, APRIL 24, 12:30–2:00 PM**

**MCCORMICK PLACE, W184D**

Expert panelists are prepared to answer your questions about the impact President Trump and the new Congress will have on the biomedical research enterprise. **Follow #PolicyTownHall**
Immigration and Visa Issues for Foreign STEM Graduate Students and Postdoctoral Fellows

**EDUCATION ROUNDTABLE #ASBMBed**

**2:30 PM – 4:45 PM CONVENTION CENTER, W185A**

This will be an exciting panel session offered for the first time at the ASBMB annual conference that is aimed at all foreign STEM graduate students, post-doctoral fellows and their mentors who are seeking information on how to navigate immigration and VISA issues. Speakers all have personal or professional experience that they will share about the various visa and immigration processes. Please note that this is an informational session. Nothing said during this session should be taken as legal counsel. Attendees should seek their own legal help concerning their personal visa issues.

**PANELISTS:**
- R. Mukhopadhyay, ACS;
- J. Kerilla, International Scholars, Johns Hopkins University;
- N. Vizer, Nancy M. Vizer, PC;
- V. Wang, Law Office of Vivian Wang

High Resolution Imaging in Medicine

**SEBM SYMPOSIUM #cellbio**

**3:00 PM – 5:00 PM CONVENTION CENTER, W184D**

**CHAIR:** W. Zimmer

**Guest Society: Society for Experimental Biology and Medicine**

3:00 Chair’s Introduction.

3:10 Illuminating biology at the nanoscale and systems scale using single-molecule and super-resolution imaging. X. Zhuang, Howard Hughes Medical Institute

3:45 In Vivo Heart Imaging Shows Single Myosins Under Tension Down Shift Step-Size. T. Burghardt, Mayo Clinic

4:15 Imaging subcellular dynamics in three dimensions. R. Ober, Texas A&M University

4:45 Discussion.

Natural Product Discovery and Biosynthesis

**SPOTLIGHT SESSION #chembio**

**4:15 PM – 5:45 PM CONVENTION CENTER, W183C**

**CHAIR:** R. Butcher

4:15 121.1 Discovery and Biosynthesis of Hybrid Polyketide-Nonribosomal Peptides in Nematodes. R.A. Butcher, L. Peng, Q. Shou, University of Florida


4:45 Characterization of an Unprecedented Hybrid Pteridine-Nonribosomal Peptide Synthetase-Like Biosynthetic Gene Cluster. C.E. Perez, H. Park, K.W. Barber, J. Rinehart, J.M. Crawford, Yale University and Yale School of Medicine (766.19)


5:15 Biosynthetic Studies of the Antibiotic Uncialamycin. H. Hindra, T. Huang, D. Yang, X. Yan, H. Ge, B. Shen, The Scripps Research Institute (766.2)

5:30 The PepSAVI-MS Pipeline for Natural Product Bioactive Peptide Discovery. C.L. Kirkpatrick, D. Pritchard, N. Parsley, Y. Liu, D.W. Hoskin, L.N. Shaw, L.M. Hicks, University of North Carolina, Chapel Hill, Dalhousie University, Canada and University of South Florida (609.6)
### Signal Transduction and Protein Modifications

**SPOTLIGHT SESSION #cellsignal**

**4:15 PM – 5:45 PM**  
**CONVENTION CENTER, W184A**

**CHAIR: J. Zhang**

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Speakers</th>
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<tbody>
<tr>
<td>4:15</td>
<td>Elucidation of Molecular Signaling Battles Between the Eukaryotic Host and a Bacterial Pathogen.</td>
<td>K. Orth, M. de Souza Santos, D. Salomon, HHMI, UT Southwestern Medical Center UT Southwestern Medical Center (614.12)</td>
</tr>
<tr>
<td>4:30</td>
<td>Novel Physiological Targets of Fic-Mediated Adenylylation/AMPylation.</td>
<td>S. Mattoo, A. Sanyal, Purdue University (602.8)</td>
</tr>
<tr>
<td>4:45</td>
<td>Multi-Generational Silencing Dynamics Control Cell Aging.</td>
<td>N. Hao, Y. Li, M. Jin, R. O’Laughlin, L. Tsimring, L. Pillus, J. Hasty, University of California San Diego (614.6)</td>
</tr>
<tr>
<td>5:00</td>
<td>Uncovering Novel Substrates and Functions for the Calcineurin Phosphatase in Human Cells.</td>
<td>C.P. Wiginton, J. Roy, N.P. Damle, S. Ei Cho, N. Davey, Y. Ivarsson, C. Wong, A. Gingras, M.S. Cyert, Stanford University, University College Dublin, Ireland, Uppsala University, Sweden and University of Toronto, Canada (771.1)</td>
</tr>
<tr>
<td>5:15</td>
<td>PÂSsing on Signals: Activation of PAS Kinase by mTOR Orchestrates Epigenetic Processes of Stem Cell Differentiation.</td>
<td>C.K. Kikani, X. Wu, J. Rutter, University of Utah School of Medicine (614.28)</td>
</tr>
</tbody>
</table>

### DNA Replication, Recombination and Repair (Session I)

**SPOTLIGHT SESSION #DNA**

**4:15 PM – 5:45 PM**  
**CONVENTION CENTER, W184BC**

**CHAIR: H. Merrikh**

**SESSION II, MONDAY AT 2:30 PM, ROOM W185BC.**

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Speakers</th>
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<tbody>
<tr>
<td>4:15</td>
<td>Resolution of Head-On Replication-Transcription Conflicts in Bacteria.</td>
<td>H. Merrikh, A. Hall, K. Lang, University of Washington</td>
</tr>
<tr>
<td>4:30</td>
<td>Defining Lagging-Strand Polymerase Dynamics in Vivo.</td>
<td>D. Smith, New York University (753.3)</td>
</tr>
<tr>
<td>4:45</td>
<td>Role of the Excluded Strand in DNA Unwinding by Hexameric Helicases.</td>
<td>M. Trakselis, Baylor University (592.1)</td>
</tr>
<tr>
<td>5:00</td>
<td>Escherichia coli DinB and Replication-Transcription Collisions.</td>
<td>T. Tashjian, J.A. Halliday, C. Herman, V. Godoy, Northeastern University and Baylor College of Medicine (591.3)</td>
</tr>
<tr>
<td>5:15</td>
<td>The Epsilon Subunit of DNA Polymerase III in the Bacterial Response to Quinolones.</td>
<td>Z. Whatley, N. Sy, S. DiDomenico, A. Finck, Gettysburg College (592.7)</td>
</tr>
<tr>
<td>5:30</td>
<td>Dynamics of the E. coli Beta Clamp and Its Influence on DNA Loading.</td>
<td>B. Koleva, J. Baez, J. Conway, A. Wu, P. Beuning, Northeastern University and Colgate University (592.4)</td>
</tr>
</tbody>
</table>

### Emerging Technologies in Proteomics

**SPOTLIGHT SESSION #omics**

**4:15 PM – 5:45 PM**  
**CONVENTION CENTER, W185BC**

**CHAIR: L. Huang**

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Speakers</th>
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<tbody>
<tr>
<td>4:15</td>
<td>Structural Analysis of the 26S Proteasome Complex to Understand Its Function and Regulation.</td>
<td>L. Huang, UC, Irvine</td>
</tr>
<tr>
<td>4:30</td>
<td>Structure and Function of the Nuclear Pore Complex Cytoplasmic mRNA Export Platform.</td>
<td>Y. Shi, J. Fernandez-Martinez, S. Kim, U. Paula, R. Pellarin, M. Gagnon, I. Chemmama, J. Wang, L. Nudelman, W. Zhang, R. Williams, W. Rice, D. Stokes, D. Zenklusen, A. Sali, M.P. Rout, B.T. Chait, Rockefeller University, University of Pittsburgh School of Medicine, UCSF, NYU School of Medicine and University of Montreal, Canada (926.7)</td>
</tr>
</tbody>
</table>
### ASBMB Oral Program SUNDAY continued

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<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Authors</th>
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</thead>
<tbody>
<tr>
<td>4:45</td>
<td>Analysis of Proteins and Protein Interactions by Size Exclusion Chromatography — High Resolution Mass Spectrometry</td>
<td>F.M. Busch, A. Sahasrabuddhe, Z. vanAernum, B. Rivera, Y.V. Wysocki, The Ohio State University and Phenomenex (926.9)</td>
</tr>
<tr>
<td>5:15</td>
<td>Detecting Lipid Induced Structural Changes of Marburg Virus-VP40 Protein Using Hydrogen-Deuterium Exchange Mass Spectroscopy (HDX-MS).</td>
<td>K.J. Wijesinghe, S. Urata, S. Li, R.V. Stahelin, University of Notre Dame, University of California-San Diego and Indiana University School of Medicine-South Bend (761.1)</td>
</tr>
<tr>
<td>5:30</td>
<td>Phosphoproteins in Extracellular Vesicles as Candidate Markers for Breast Cancer.</td>
<td>W.A. Tao, I. Chen, A. Iliuk, Purdue University (926.4)</td>
</tr>
</tbody>
</table>

#### 125 Regulation of Intracellular Cholesterol Transport

**SPOTLIGHT SESSION**  #lips

**4:15 PM – 5:45 PM** CONVENTION CENTER, W186ABC

**CHAIR:** A. Radhakrishnan

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Authors</th>
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<tbody>
<tr>
<td>4:15</td>
<td>Structure of Human Niemann-Pick C1 (NPC1) Protein and NPC1-NPC2 Complex</td>
<td>X. Li, Rockefeller University (629.2)</td>
</tr>
<tr>
<td>4:30</td>
<td>NPC1-Mediated Cholesterol Export from Lysosomes.</td>
<td>S.R. Pfeffer, Stanford University (948.1)</td>
</tr>
<tr>
<td>4:45</td>
<td>OlyA — A Tool to Study Sphingomyelin-Cholesterol Interactions in Plasma Membranes.</td>
<td>S. Endapally, A. Radhakrishnan, UT Southwestern Medical Center (629.4)</td>
</tr>
<tr>
<td>5:00</td>
<td>Homeostatic Regulation of Serine Palmitoyltransferase (SPT) Is Mediated by a Direct Interaction of Ceramide with the SPT/ORMDL Complex.</td>
<td>D. Davis, B. Wattenberg, Virginia Commonwealth University (946.1)</td>
</tr>
<tr>
<td>5:15</td>
<td>Sac1 Degrades Its Lipid Substrate PI4P in the ER to Maintain a Steep Electrochemical Gradient on Donor Membranes.</td>
<td>G. Hammond, R. Wills, J. Zewe, University of Pittsburgh (948.4)</td>
</tr>
<tr>
<td>5:30</td>
<td>Control of PI4P Turnover by Endogenous OSBP for Fast Cholesterol Transport at Membrane Contact Sites.</td>
<td>B. Mesmin, J. Bigay, J. Polidori, S. Lucas-Gervais, B. Antonny, Institut de Pharmacologie Moléculaire et Cellulaire—CNRS, France and Université Nice Sophia Antipolis, France (629.9)</td>
</tr>
</tbody>
</table>

#### 126 Glycans and Glycobiology

**SPOTLIGHT SESSION**  #glyco

**4:15 PM – 5:45 PM** CONVENTION CENTER, W187A

**CHAIR:** K.G. Ten Hagen

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Authors</th>
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<tbody>
<tr>
<td>4:15</td>
<td>Imaging Developmentally Regulated Secretory Granule Biogenesis and Exocytosis.</td>
<td>K. Ten Hagen, D.T. Tran, S. Ji, NIH (126.1)</td>
</tr>
<tr>
<td>4:45</td>
<td>The Expanding Glycouniverse: Diverse Glycan Modifications in Lower Eukaryotes.</td>
<td>I.B. Wilson, S. Yan, A. Hykollari, B. Eckmair, J. Vanbeselaere, K. Paschinger, Universitätsklinikum des Saarlandes, Germany and Institute of Molecular Biology, RIKEN, Japan (784.5)</td>
</tr>
<tr>
<td>5:00</td>
<td>Glycoproteins in the Midgut Microvilar Membrane of Spodoptera frugiperda (Lepidoptera: Noctuidae).</td>
<td>F.J. Fuzita, K.B. Chandler, J.R. Haserick, C. Ferreira, W.R. Terra, C.E. Costello, University of Sao Paulo, Brazil and Boston University (784.6)</td>
</tr>
<tr>
<td>5:15</td>
<td>Identification of a Post-Translational Modification with Ribitol-Phosphate and Its Defect in Muscular Dystrophy: Roles of ISPD, Fukutin, and FKRP in α-Dystroglycan Glycosylation.</td>
<td>M. Kanagawa, K. Kobayashi, M. Tajiri, H. Manya, A. Kuga, Y. Yamaguchi, Y. Wada, T. Endo, T. Toda, Kobe University, Japan, Osaka Medical Center and Research Institute for Maternal and Child Health, Japan, Tokyo Metropolitan Geriatric Hospital and Institute of Gerontology, Japan and RIKEN Global Research Cluster, Japan (753.3)</td>
</tr>
</tbody>
</table>
**Plant Biochemistry and Metabolism (Session II)**

**SPOTLIGHT SESSION**  #plants

**4:15 PM – 5:45 PM**  CONVENTION CENTER, W187B

**CHAIR:** A. P. Alonzo

**SESSION I, SUNDAY, 2:30 PM, ROOM W187B.**

**4:15**  Deficiencies in RNS2-Mediated Ribosomal RNA Turnover Cause Changes in the Pentose Phosphate Pathway Flux and Alter Cell Growth in *Arabidopsis*. G. C. MacIntosh, S. Morriss, X. Liu, D. Bassham, Iowa State University (911.3)

**4:30**  Structural Basis for Regulation of Rhizobial Nodulation and Symbiosis Gene Expression by the Regulatory Protein NolR. S. Lee, J. Jez, Washington University in St. Louis (623.3)

**4:45**  A Prokaryotic-Like Lysophosphatidic Acid Aciytransferase Reveals Unique Features of Triacylglycerol Biosynthesis in Microalgae. Y. Kim, E. L. Terng, W. Riekhof, E. B. Cahoon, H. Cerutti, University of Nebraska-Lincoln (629.28)

**5:00**  Engineering Biochemical Bypass to Photorebreption to Improve Photosynthesis and Crop Production. P. South, D. R. Ort, USDA-ARS / University of Illinois and USDA-ARS (628.3)


**5:30**  Application of Metabolomics and Fluxomics to Study Fatty Acid Synthesis in Alternative Crops. A. Alonso, E. Tsogtbaatar, J. Cocuron, The Ohio State University

**Non-Coding RNA Functional Diversity**

**SPOTLIGHT SESSION**  #RNA

**4:15 PM – 5:45 PM**  CONVENTION CENTER, W187C

**CHAIR:** J. D. Kohtz

**4:15  128.1** TheEvf2 Enhancer IncRNA Links Chromosomal Interactions and Interneuron Diversity. J. Kohtz, I. Cajigas, K. R. Swyter, M. Bastidas, A. Chakraborty, E. Morris, F. Ay, Northwestern University, Feinberg School of Medicine and La Jolla Institute for Allergy & Immunology (599.6)

**4:30**  A Cellular Non-Coding RNA Activator of Human 2′,5′-Oligoadenylate Synthetase 1. B. M. Calderon, G. L. Conn, Emory University (575.8)


**5:00**  New Biotechnology to Inhibit microRNA Activity in Vivo and in Vitro. B. Amendt, H. Cao, W. Yu, T. Sharp, S. Eliason, University of Iowa (757.15)

**5:15**  Targeting High-Mobility Group Box 2 by miR-127 Modulates Pluripotency of Muscle Embryonic Stem Cells and Contributes to Aggressiveness of Hepatocellular Carcinoma. Y. Zhao, Z. Yang, L. Wang, University of Connecticut, Veterans Affairs Connecticut Healthcare System and Yale University (757.14)

**5:30**  Transcriptome-Wide Mapping of the miR-122 Targetome Revealed Its Mechanistic Role in the Maintenance of Liver Homeostasis. J. M. Barajas, J. Luna, K. Teng, R. Darnell, K. Ghoshal, The Ohio State University and The Rockefeller University (757.1)

**Organizing A Successful ASBMB Student Chapter**

**WORKSHOP**  #ASBMBed

**5:00 PM – 5:45 PM**  CONVENTION CENTER, W185A

Sponsored by ASBMB Student Chapters Steering Committee

Learn about the ASBMB Student Chapters program and how to maintain an active chapter. Network with existing faculty advisers and student members as they share their successful chapter activities and best practices.
**Grant Success Demystified**

**WORKSHOP**  
#profdev  
6:15 PM – 7:45 PM  
CONVENTION CENTER, W184BC  
CHAIR: S. Barbour, S. Flores

Sponsored by ASBMB Minority Affairs Committee

This workshop will provide participants with an effective set of tools to enhance their grantsmanship and demystify the grant submission and review process. The workshop presenters have extensive knowledge of all aspects of the process for NIH and NSF submissions, and will focus on practical methods that have been used with great success in the more extensive two-day program for Interactive Mentoring Activities for Grantsmanship Enhancement.

**High-Performance Mass Spectrometry for Proteomics**

**WORKSHOP**  
#profdev  
6:15 PM – 7:45 PM  
CONVENTION CENTER, W185BC  
CHAIR: J. Brodbelt, J. Coon

The improvements in performance metrics of mass spectrometers, coupled with the development of new MS/MS methods and new strategies for quantitation, have significantly accelerated the field of proteomics, to the point where nearly every protein in a human cell can be quantified. This workshop will showcase some of the latest mass spectrometry technologies for identifying proteins and their posttranslational modifications, as well as forefront applications of bottom-up and top-down proteomic approaches to untangling the multi-faceted networks that regulate complex organisms and their diseases.

**Beyond DNA Methylation and Histone Modifications**

**WORKSHOP**  
#profdev  
6:15 PM – 7:45 PM  
CONVENTION CENTER, W186ABC  
CHAIR: W. Li, K. Tan

Epigenetic mechanisms, such as DNA methylation and histone modifications, can change gene expression and cause diseases without changing the underlying DNA sequence. Next-generation sequencing has been transforming the field of epigenetics, generating large datasets of BS-seq, ChIP-seq and RNA-seq information. This poses great challenges for data analysis, requiring knowledge of best ways to distill high-dimensional information into comprehensible conclusions. This workshop will present several cutting-edge analytical frameworks for epigenomic data analysis and demonstrate how to integrate multidimensional epigenomic datasets to construct condition-specific transcriptional regulatory networks.

**ASBMB Welcome Reception**

Sponsored by the Minority Affairs Committee

**SPECIAL EVENT**  
#profdev  
7:30 PM – 9:00 PM  
HYATT REGENCY, REGENCY BALLROOM C

This annual professional networking event has an emphasis on encouraging mentoring relationships and includes an opportunity to view and discuss ASBMB Graduate Student Travel Award research posters. ASBMB members and biochemistry registrants welcome.
### MONDAY APRIL 24

#### 253 Mildred Cohn Award in Biological Chemistry

**AWARD LECTURE**  
**#bigtalks**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>8:45 AM</td>
<td>Introduction.</td>
</tr>
<tr>
<td>8:50 AM</td>
<td>253.1 A New Paradigm for Catalysis of Nucleotidyltransfer Reactions. W. Yang, Y. Gao, N. Samara, J. Wu, NIDDK, NIH</td>
</tr>
</tbody>
</table>

#### 254 ASBMB Young Investigator Award

**AWARD LECTURE**  
**#bigtalks**

<table>
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<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>9:15 AM</td>
<td>Introduction.</td>
</tr>
<tr>
<td>9:20 AM</td>
<td>254.1 What Lurks Beneath (The Membrane): A Mechanistic Exploration of Rhomboid Proteolysis. S. Urban, Johns Hopkins University School of Medicine</td>
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</table>

#### 255 New Insights Into Nuclear Structure and Function

**SYMPOSIUM**  
**#cellbio**

<table>
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<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>10:00 AM</td>
<td>255.1 The Nuclear Lamins Are Major Determinants of Nuclear Architecture. R. Goldman, S.A. Adam, A.E. Goldman, T. Shimi, M. Kittisopikul, K. Jaqaman, Y. Turgay, O. Medalia, Feinberg School of Medicine, Northwestern University, University of Texas Southwestern Medical Center and University of Zurich, Switzerland</td>
</tr>
<tr>
<td>10:30 AM</td>
<td>255.2 The Role of Long Non-Coding RNAs in Nuclear Organization and Disease. D.L. Spector, Cold Spring Harbor Laboratory</td>
</tr>
<tr>
<td>11:00 AM</td>
<td>255.3 Pre-mRNA Splicing, Histone Modification, and the Coordinated Control of Gene Expression. T.L. Johnson, M. Hossain, University of California, Los Angeles</td>
</tr>
<tr>
<td>11:30 AM</td>
<td>255.4 Single Molecule Transcription Factor Dynamics in Mammalian Cells and the Syncytial Drosophila Embryo. X. Darzacq, M. Mir, University of California, Berkeley</td>
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#### 256 Basis of Longevity and Age-Related Diseases

**SYMPOSIUM**  
**#cellsignal**

<table>
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<th>Time</th>
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<tbody>
<tr>
<td>10:00 AM</td>
<td>256.1 Repurposing Drugs to Ameliorate Aging. L. Partridge, Max Planck Institute for Biology of Ageing, Germany</td>
</tr>
<tr>
<td>10:30 AM</td>
<td>256.2 Orchestrating Aging Across a Troubled Soma. A. Dillin, University of California, Berkeley and HHMI</td>
</tr>
<tr>
<td>11:00 AM</td>
<td>256.3 Understanding and Modeling Aging. A. Brunet, Stanford University School of Medicine</td>
</tr>
<tr>
<td>11:30 AM</td>
<td>256.4 Targeting mTOR Signaling to Promote Healthy Longevity. M. Kaeberlein, University of Washington</td>
</tr>
</tbody>
</table>
### 257 New Insights Into Mechanisms of Antibiotic Action

**ISSUES IN DEPTH #antibiotics**

**10:00 AM – 12:00 PM** CONVENTION CENTER, W185BC

**CHAIR:** E. Brown

<table>
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<th>Time</th>
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<tbody>
<tr>
<td>10:00</td>
<td><strong>257.1</strong> Bacterial Metabolism and Antibiotic Efficacy. J.J. Collins, MIT and Harvard University</td>
</tr>
<tr>
<td>10:30</td>
<td><strong>257.2</strong> Antibiotics from the Microbial Dark Matter. K. Lewis, Northeastern University</td>
</tr>
<tr>
<td>11:00</td>
<td><strong>257.3</strong> Structures and Functions of Nonribosomal Peptide Synthetases, Natural Antibiotic Factories. M. Schmeing, McGill University, Canada</td>
</tr>
<tr>
<td>11:30</td>
<td><strong>257.4</strong> Context-Specific Action of Ribosomal Antibiotics. N. Vazquez-Laslop, A. Mankin, University of Illinois at Chicago</td>
</tr>
</tbody>
</table>

### 258 Discovery and Development of New Enzyme Chemistry

**SYMPOSIUM #enzymes**

**10:00 AM – 12:00 PM** CONVENTION CENTER, W186ABC

**CHAIR:** J. M. Bollinger, Jr.

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>10:00</td>
<td><strong>258.1</strong> Mechanistic Pathways to Unusual Outcomes in Reactions of Iron-Dependent Oxygenases. J. Bollinger, Jr., C. Krebs, Penn State University</td>
</tr>
<tr>
<td>10:30</td>
<td><strong>258.2</strong> Chemical Discovery in the Microbial World. E.P. Balskus, Harvard University</td>
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<tr>
<td>11:00</td>
<td><strong>258.3</strong> Radical Strategies for Biological Methylation. S.J. Booker, The Pennsylvania State University and HHMI</td>
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<tr>
<td>11:30</td>
<td><strong>258.4</strong> Evolution of heme proteins for expanding the chemistry of the biological world. J. Kan, California Institute of Technology</td>
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### 259 Supramolecular Complexes

**SYMPOSIUM #proteins**

**10:00 AM – 12:00 PM** CONVENTION CENTER, W187ABC

**CHAIR:** A-C. Gingras

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tr>
<td>10:00</td>
<td><strong>259.1</strong> In Vivo Mapping of Protein Complex Organization. A. Gingras, Lunenfeld-Tanenbaum Research Institute at Mount Sinai Hospital, Canada</td>
</tr>
<tr>
<td>10:30</td>
<td><strong>259.2</strong> Evolution and the Proteome: Insights Into Protein Function from Deeply Conserved Gene Modules. E. Marcotte, University of Texas, Austin</td>
</tr>
<tr>
<td>11:00</td>
<td><strong>259.3</strong> Probing Protein Assemblies and Interactions by Hybrid Mass Spectrometry Approaches. A.J. Heck, Utrecht University, Netherlands</td>
</tr>
<tr>
<td>11:30</td>
<td><strong>259.4</strong> Electron Cryomicroscopy of Rotary Atpases. J.L. Rubinstein, The Hospital for Sick Children, Canada</td>
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</table>

### 260 A 21st Century Approach to STEM Teaching and Research Mentoring

**SYMPOSIUM #ASBMBed**

**10:00 AM – 12:15 PM** CONVENTION CENTER, W185A

**CHAIR:** M. Carroll

This session is for students, trainees and faculty who want to maximize their efforts in STEM teaching and mentoring. Recent innovations in such topics such as graduate education and professional development will be discussed with the purpose of providing attendees with new insights and ideas to bring back to their home institutions to amplify their own program’s success.

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<tr>
<th>Time</th>
<th>Session</th>
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<tr>
<td>10:00</td>
<td>Chair’s Introduction.</td>
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<td>10:05</td>
<td><strong>Design of a Robust Undergraduate Biochemistry Laboratory Course Based on a Modified and Expanded Bovine Serum Albumin Purification Scheme.</strong> T. Odunuga, N. Cheatwood, J. Mullins, M. Harris, Stephen F. Austin State University</td>
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<td>Time</td>
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<td>10:20</td>
<td><strong>CRISPR in the Undergraduate Classroom: A CURE.</strong> H.J. Evans Anderson, Winthrop University</td>
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<td>10:35</td>
<td>Discussion.</td>
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<td>10:40</td>
<td><strong>A Framework for Assessing Molecular Visualization Skills and Competencies.</strong> D.R. Dries,</td>
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<td>P.A. Craig, D. Dean, H.V. Jakubowski, W.R. Novak, A.I. Roca, C.R. Terrell, M.A. Franzen,</td>
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<tr>
<td></td>
<td>Juniard College, Rochester Institute of Technology, University of Saint Joseph, College of</td>
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<td>St. Benedict/St. John’s University, Wabash College, ProfileGrid.org, University of</td>
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<tr>
<td></td>
<td>Minnesota, Rochester and Milwaukee School of Engineering. (589.6)</td>
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<td>10:55</td>
<td><strong>Innovations in Biotechnology Graduate Education.</strong> D.S. Jamison-McClung, University of</td>
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<td>California, Davis</td>
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<td>11:20</td>
<td>Discussion.</td>
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<td>11:25</td>
<td>**Group Coaching, Grounded in Theory and Evidence, Deployed Through the National Research</td>
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<td>Mentoring Network (NRMN) to Complement Research Mentoring and Increase Diversity.** R. McGee;</td>
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<td>Jr., Northwestern University Feinberg School of Medicine</td>
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<td>11:50</td>
<td><strong>Maximizing Career and Professional Development During Doctoral Training.</strong> S.E. Feeney,</td>
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<td>University of California, Davis</td>
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**ASBMB Meet the Speakers**

**SPECIAL EVENT** #profdev

12:30 PM – 1:00 PM  CONVENTION CENTER, HALL F

Join us in the exhibit hall, across from ASBMB booth #1214. Meet up with the morning presenters for continued scientific discussion and networking in an informal environment.

**AS OF PRESS TIME, CONFIRMED SPEAKERS INCLUDE:**

- A. Brunet, Stanford University School of Medicine
- X. Darzacq, UC, Berkeley
- R. Goldman, Northwestern University Feinberg School of Medicine
- M. Kaeberlein, University of Washington
- L. Partridge, Max Planck Institute for Biology of Ageing
- D. Spector, Cold Spring Harbor Lab

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**Advocacy Town Hall**

**SPECIAL EVENT** #profdev

12:30 PM – 2:00 PM  CONVENTION CENTER, W184D

Sponsored by ASBMB Public Affairs Advisory Committee

You’ve got questions, and we’ve got answers. The ASBMB Public Affairs Advisory Committee, PAAC, invites you to participate in our science policy town hall. Join our expert panelists as they discuss what impact President Trump and the new Congress will have on the biomedical research enterprise. Mr. Corb will provide highlights and perspectives as the ASBMB voice to political leaders in Capitol Hill, in the White House, and at the federal science funding agencies. Dr. Sundquist will share what ASBMB has done in the important space of sustaining the biomedical research community, and Dr. Lauer will provide NIH perspectives on key policy issues.

Your questions will be taken live, as well as on twitter, #PolicyTownHall.

Boxed lunches will be available to the first 50 attendees, beginning at 12:20 p.m.

**PANELISTS:** B. Corb, ASBMB Public Affairs Director; M. Lauer, NIH Director of External Research; W. Sundquist, PAAC Chair, University of Utah

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**ASBMB Meet the Speakers**

**SPECIAL EVENT** #profdev

1:30 PM – 2:00 PM  CONVENTION CENTER, HALL F

Join us in the exhibit hall, across from ASBMB booth #1214. Meet up with the morning presenters for continued scientific discussion and networking in an informal environment.

**AS OF PRESS TIME, CONFIRMED SPEAKERS INCLUDE:**

- E. Balskus, Harvard University
- S. Booker, Pennsylvania State University
- A. Heck, Utrecht University
- E. Marcotte, UT, Austin
- S. Urban, Johns Hopkins University School of Medicine
- N. Vasquez-Laslop, University of Illinois at Chicago
264 Signal Transduction: Building Blocks and Scaffolds

SPOTLIGHT SESSION  #cellsignal
2:30 PM – 4:00 PM  CONVENTION CENTER, W183C
CHAIR: A. Bennett

2:30 TAK1/TRAF6 Signalling in Regulation of Skeletal Muscle Mass. A. Kumar, S.M. Hindi, University of Louisville School of Medicine (614.7)
2:45 mTORC1 Balances Cellular Amino Acid Supply with Demand for Protein Synthesis Through Post-Transcriptional Control of ATF4. C.C. Thoreen, Y. Park, Yale School of Medicine (614.32)
3:00 The (AAA+) ATPases PSMC5 and VCP/p97 Control ERK1/2 Signals Transmitted Through the Shoc2 Scaffolding Complex. E. Galperin, E. Jang, D. Anderson, H. Jang, University of Kentucky and Cleave Bioscience (930.1)
3:15 A Filamin Phosphorylation Gateway to GPCR Function. S. Ithychanda, K. Dou, S. Karnik, J. Qin, Cleveland Clinic (614.24)
3:30 MAPK Substrate Phosphoproteomics Screen Identifies GRAB as a Novel MKP-5-Regulated MAPK Substrate. A.M. Bennett, Yale University School of Medicine

265 Chemical Tools to Solve Biological Puzzles

SPOTLIGHT SESSION  #chembio
2:30 PM – 4:00 PM  CONVENTION CENTER, W184BC
CHAIR: Y.J. Zhang

2:30 Nature’s Imitation Game: Decipher the Combinatorial CTD Code for Eukaryotic Transcription. Y. Zhang, UT Austin
2:45 Drugging the Undruggable Steroid Receptor Coactivators. J. Wang, Baylor College of Medicine (608.2)
3:00 Earmarking Target-Specific Redox Trajectories for Wound Healing in Zebrafish. Y. Aye, Cornell University and Weill Cornell Medical College (608.14)
3:15 Mechanistic Comparison of Structurally Divergent Transcriptional Coactivators Through Covalent Activator-Coactivator Complexes. A.R. Henderson, M. Beyersdorf, N. Foster, K. Sanford, M. Henley, A. Mapp, University of Michigan (608.11)
3:30 PTEN Regulation by WWP2. Z. Chen, D. Dempsey, W. Xu, X. Li, D. Dempsey, P. Devreotes, C. Wolberger, S. Gabelli, P. Cole, Johns Hopkins University (608.5)

266 DNA Replication, Recombination and Repair (Session II)

SPOTLIGHT SESSION  #DNA
2:30 PM – 4:00 PM  CONVENTION CENTER, W185BC
CHAIR: J. Loparo

SESSION I, SUNDAY, 4:15 PM – 5:45 PM, W184BC

2:45 DDI1- and DDI2-Dependent Removal of Replication Termination Factor Domain Containing 1 (RTFDC1) from Replication Forks Is Necessary for Proper Response to Replication Stress. M.C. Kottemann, B. Conti, F.P. Lach, A. Smogorzewska, The Rockefeller University (591.1)
3:00 Genetic and Environmental Factors That Regulate Tandem Repeat Variation in Coding Regions. S.M. Fuchs, Tufts University and Allen Discovery Center at Tufts (591.4)
3:15 Activation of Intra-S Phase Checkpoint Facilitates Tolerance of Replication Stress Caused by Mismatch Repair Processing of DNA Damage. D. Gupta, B. Lin, C.D. Heinen. UConn Health (906.3)

3:30 Molecular Mechanisms of Mutagenesis Induced by DNA Repair. B. Shen, J. Chapman, A.V. Furano, NIH (906.15)

3:45 Structure and Mechanism of a Viral Genome Packaging Motor. B. Kelch, University of Massachusetts Medical School (591.8)

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**267 Lipids, Metabolism and the Central Nervous System**

**SPOTLIGHT SESSION**  #metabolism

**2:30 PM – 4:00 PM**  CONVENTION CENTER, W186ABC

**CHAIR:** J.M. Ellis

2:30 Up-Regulation of Atrial and Neuronal Kir3 Activity by Cholesterol. A. Rosenhouse-Dantsker, A.N. Bukiya, University of Illinois at Chicago and The University of Tennessee Health Science Center (772.4)

2:45 Potential Role of Hepatic Lipase in the Accrual of Docosahexaenoic Acid (DHA) in the Brain. S. Dhavamani, P. Yang, D. Ng, S. Khetarpal, C. Vitali, D. Rader, P. Subbaiah, University of Illinois, University of Toronto, Canada and University of Pennsylvania (781.4)

3:00 Different Lipids in Synaptic Vesicle and Synaptosome Membrane. K.T. Lewis, K.R. Maddipati, A.R. Naik, B.P. Jena, Wayne State University (629.8)


3:30 Subcellular Localization and Functional Characterization of cAMP-Dependent Protein Kinase A Isoforms: Painting Specificity by Mosaic Brain Mapping. R. Ilouz, V. Lev Ram, M. Ellisman, S. Taylor. UCSD (770.5)

3:45 The Transmembrane Sequences of Amyloid Precursor Protein Family Members Regulate Their Ectodomain Shedding. G. Multhaup, L. Schauenburg, M. Mayer, C. Walter, M. Eravci, C. Weise, F. Liebsch, McGill, Canada and FU Berlin, Germany (941.7)

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**268 Gems From Genome Database Mining**

**SPOTLIGHT SESSION**  #omics

**2:30 PM – 4:00 PM**  CONVENTION CENTER, W187A

**CHAIR:** W. van der Donk

2:30 Discovery of Antibiotic Peptides from Novelty-Prioritized Natural Product Genome Mining. C.J. Schwalen, D. Mitchell, University of Illinois at Urbana-Champaign (939.8)


3:00 Individualized Proteogenomics in Analysis of Resistance to BRAF Inhibition in Malignant Melanoma. M. Schmitt, N. Naalpas, A. Maass, B. Duncan, University of Tuebingen, Germany (934.3)

3:15 HeteroPath: A Pathway-Based Computational Modeling Approach to Identify Tissue-Specific Gene Expression Networks. A. Jambusaria, J. Klomp, Z. Hong, S. Rafii, A.B. Malik, J. Rehman, University of Illinois at Chicago and Cornell University (927.4)

3:30 PathQuant: A Bioinformatic Tool to Quantitatively Annotate the Relationship Between Genes and Metabolites Through Metabolic Pathway Mapping. S. Therrien-Laperrière, S. Cherkaooui, G. Boucher, T. Consortium, F. Jourdan, G. Lettre, J. Rioux, C. Des Rosiers, Montreal Heart Institute, Canada, University of Montreal, Canada, Institute of Molecular Systems Biology, ETH Zürich, Switzerland, INRA and Toulouse University, France (769.3)

3:45 Characterizing the Functions of Structural Genomics Proteins Through Computed Chemical Properties and Experimental Chemistry. C.L. Mills, P.J. Beuning, M. Ondrechen, Northeastern University (927.6)
269 **Protein Interactions and Assemblies**

**SPOTLIGHT SESSION**  
#proteins

**2:30 PM – 4:00 PM**  
CONVENTION CENTER, W187B

**CHAIR:** K. Fleming

- **2:30**  

- **2:45**  
  Chaperoning the Proteome. W.A. Houry, University of Toronto, Canada (604.6)

- **3:00**  

- **3:15**  
  Proximity Labeling and Interactomic Study of Primary Cilia. M. Rinschen, P. Kohli, T. Benz ing, B. Schermer, University Hospital Cologne, Germany (926.6)

- **3:30**  
  Novel Protein Interactions Provide Insight Into the Regulation of the Polymerase Associated Factor Complex in Acute Myeloid Leukemia. J. Ropa, J. Serio, L. Chen, W. Chen, M. Mysliwski, D. Mellacheruvu, V. Basrur, A. Nesvizhskii, A. Muntean, University of Michigan (604.6) (933.3)

- **3:45**  

270 **Alice and C. C. Wang Award in Molecular Parasitology**

**AWARD SESSION**  
#bigtalks

**2:30 PM – 4:10 PM**  
CONVENTION CENTER, W184A

- **2:30**  
  Alice and C.C. Wang Award presentation and speaker introduction.

- **2:40 270.1**  
  Genetic Analysis of Pathogenesis in Toxoplasma gondii. L.D. Sibley, Washington University School of Medicine, St. Louis

- **3:05 270.2**  
  Targeting Epigenetic Regulation of Malaria Blood-Stage Infections. M. Duraisingh, Harvard T. H. Chan School of Public Health

- **3:30 270.3**  

- **3:45 270.4**  
  Opposing Transcriptional Forces Underlie Chronic Disease Caused by Toxoplasma gondii. M. White, D. Hong, D. Worth, S. Huang, J. Radke, W. Sullivan, E. Wilson, University of South Florida, University of California Riverside and Indiana School of Medicine

271 **Tenure and Promotion across the STEM Academic Landscape**

**EDUCATION ROUNDTABLE**  
#ASBMBed

**2:30 PM – 4:45 PM**  
CONVENTION CENTER, W185A

This panel session is for all interested in pursuing or are currently employed as faculty in academia. Speakers are highly successful STEM faculty at an array of academic institutions. They will be sharing advice gained from their own journey and answering attendee’s questions.

**PANELISTS:** A. Aguanno, Marymount Manhattan College; T. Baird, Jr., San Francisco State University; T. Baldwin, UC, Riverside; V. Bandarian, University of Utah; M. Carroll, Medgar Evers College/CUNY
Progress Toward Adoption of Microphysiological Systems in Biology and Medicine

SEBM SYMPOSIUM  #cellbio
3:00 PM – 5:00 PM  CONVENTION CENTER.W184D
CHAIR: J. Wikswo

Guest Society: Society for Experimental Biology and Medicine

3:00  Chair’s Introduction.
3:10  Evolution of a Human Liver MPS Platform. L. Taylor, University of Pittsburg Drug Discovery Institute
3:35  Programming microphysiological systems for children’s health protection. T. Knudsen, U.S. Environmental Protection Agency
4:00  Integrating the female reproductive tract organs through hormonal control using microfluidics. J. Burdette, University of Illinois at Chicago
4:25  Assembly of stem cell-derived human tissues for screening applications. W. Murphy, University of Wisconsin-Madison
4:50  Conclusion.

Structural Dynamics of Enzymes

SPOTLIGHT SESSION  #enzymes
4:15 PM – 5:45 PM  CONVENTION CENTER.W183C
CHAIR: D. D. Boehr

4:15  Dynamics Underlying Cytochrome P450cam Regioselectivity via 2D IR Spectroscopy. M. Thielges, E. Basom, Indiana University (762.9)
4:30  Altered Protein Dynamics Modified the Chemical Step in Thymidylate Synthase. A.K. Ghosh, T. Abeyesinghe, A. Kohen, The University of Iowa (762.5)
4:45  Conformational Motions Impacting Function in an Enzyme Superfamily. C. Narayanan, D.N. Bernard, K. Bafna, O.P. Choudhary, C.S. Chennubhotla, P.K. Agarwal, N. Doucet, INRS - University of Quebec, Canada, University of Knoxville (762.6)
5:00  273.1 Amino Acid Networks in Enzyme Catalysis. D. Boehr, K.F. O’Rourke, J.M. Axe, D. Sahu, R. D’Amico, Penn State University
5:15  Unmixing Enzyme Allostery. S. Meisburger, N. Ando, A.B. Taylor, C.A. Kahn, S. Zhang, P.F. Fitzpatrick, Princeton University and University of Texas Health Science Center (607.6)
5:30  Probing Carrier Domain Movement and Location During Catalytic Turnover by Pyruvate Carboxylase. M. St Maurice, Y. Liu, J.H. Hakala, Marquette University (607.4)

Lighthouses Inside Cells: Applications of Biosensors

SPOTLIGHT SESSION  #chembio
4:15 PM – 5:45 PM  CONVENTION CENTER.W184BC
CHAIR: Y. J. Zhang

4:15  Identifying a Serine Protease Network Involved in Ovarian Cancer Progression Using Activity-Based Protein Profiling (ABPP). C. Mehner, A. Hockla, D.C. Radisky, E.S. Radisky, Mayo Clinic (918.3)
4:30  Constructing Red-Shifted Fluorescent Protein Sensors of Cellular Redox Status. S. Norcross, K. Trull, J. Snider, S. Doan, K. Tat, L. Huang, M. Tantama, Purdue University (767.14)
4:45  Stay on Target: Deconvoluting Mixed Redox Messages Through Precision Redox Targeting. Y. Aye, Cornell U & Weill Cornell Med (774.4)
5:00  Real Time Imaging of Tri-Molecular Protein Interactions in Live Cells by Förster Resonance Energy Transfer (FRET) Microscopy. H. Kuo, N. Chang, National Cheng Kung University College of Medicine, Taiwan (952.1)
5:15  Multiplexing Metabolomic-Based Disease Diagnosis by Surface Enhanced Raman Spectroscopy (SERS) Platform. Y. Chen, L.D. Ziegler, Boston University  (767.8)  
5:30  Investigation of Cellular Signaling and Epigenetic Dynamics via Optogenetic Control of Nuclear Cytoplasmic Distribution. H. Yumerefendi, B. Kuhlman, University of North Carolina at Chapel Hill  (763.5)  

275  Chromatin and Gene Expression  
SPOTLIGHT SESSION  #chromatin  
4:15 PM – 5:45 PM  CONVENTION CENTER, W185BC  
CHAIR: C. Kaplan, P. Grant  

4:15  Fine-Tuning of FACT by the Ubiquitin Proteasome System in Regulation of Transcriptional Elongation. S.R. Bhaumik, R. Sen, J. Ferdoush, A. Kaja, Southern Illinois University School of Medicine  (593.17)  
4:30  Role of the ELL Complex in Transcriptional Regulation in S. pombe. S. Gopalan, D. Gibbon, C. Seidel, Y. Zhang, L. Florens, M. Washburn, J. Conaway, R. Conaway, Stowers Institute and University of Kansas Medical Center  (593.12)  
4:45  Dissecting the Mechanism of H3K36 Methylation in Regulating Pre-mRNA Splicing. C. Leung, S. Douglass, T. Johnson, UCLA  (596.12)  
5:00  Argonaute2 Cooperates with Lamin b to Repress Transcription at Lamin-Associated Domains in Drosophila melanogaster. E. Nazer, M. Chinen, R. Dale, E. Lei, National Institute of Diabetes and Digestive and Kidney Diseases and National Institutes of Health  (593.11)  
5:30  Understanding the role of the histone demethylase LID in the SIN3 histone modifying complexes in Drosophila melanogaster. A. Chaubal, L. Pile, Wayne State University  (755.18)  

276  Cardiac Metabolism and Function  
SPOTLIGHT SESSION  #metabolism  
4:15 PM – 5:45 PM  CONVENTION CENTER, W186ABC  
CHAIR: F. Pascual  

4:15  Metabolic and Transcriptional Alterations Observed in the Early Stages of Cardiac Substrate Switching Hint at Novel mTOR-Regulated Hypertrophy Signaling Pathways. F. Pascual, J.C. Schisler, T.J. Grevengoed, R.A. Coleman, UNC  
4:30  Decreased Insulin Signaling Causes Loss of PFK-2 and Impaired Glycolysis in the Heart. K. Humphries, L. Bockus, C. Oyster, Oklahoma Medical Research Foundation  (624.3)  
4:45  NAD+ Replacement Therapy with Nicotinamide Riboside Does Not Improve Cardiac Function in a Model of Mitochondrial Heart Disease. A.R. Stram, P.M. Pride, R.M. Payne, Indiana University School of Medicine  (602.15)  
5:00  A Severe Inherited Arrhythmia Syndrome Highlights the Role of Fatty Acid Metabolism in the Regulation of Cardiac Electrical Activity. R. Gelinas, P. Goyette, A. Forest, B. Bouchard, I. Robillard Frayne, L. Pruneau, M. Ruiz, L. Villeneuve, J. Thompson-Legault, M. Talajic, C. Des Rosiers, J.D. Rioux, Montreal Heart Institute, Canada and Université de Montréal, Canada  (782.14)  
5:15  The Role of Fatty Acid Oxidation in Cardiac Remodeling and Acylation. J. Ellis, Purdue University  
5:30  Cardiac Myocyte KLF5 Regulates Adiposity via Alteration of Cardiac FGF21. C.J. Pol, N.M. Pollak, M.J. Jurczak, I. Karagiannides, P. Ntzichristos, D.A. Scerbo, I. Aifantis, G.I. Shulman, I.J. Goldberg, K. Drosatos, LKSM Temple University, University of Graz, Austria, Yale University School of Medicine, David Geffen School of Medicine at UCLA, NYU School of Medicine, Columbia University and NYU-Langone School of Medicine  (624.2)
### Systems Biology/Proteomics in Health and Disease

**SPOTLIGHT SESSION #omics**

**4:15 PM – 5:45 PM**

**CONVENTION CENTER, W187A**

**CHAIR:** Y. Yu

- **4:15**
  - Mass Spectrometric Approaches Toward Site-Specific Characterization of the ADP-Ribosylated Proteome. Y. Yu, UT Southwestern Medical Center (926.17)

- **4:30**
  - Dissecting the Proteome of *Drosophila* Hybrids. T.C. Bamberger, M. Montgomery, S. Martinez-Bartolomé, J.R. Yates III, The Scripps Research Institute (926.2)

- **4:45**
  - Landscape of the Regulatory Elements for Lysine 2-Hydroxyisobutyrylation Pathway. H. Huang, Z. Luo, S. Qi, J. Huang, L. Dai, J. Dai, Y. Zhao, The University of Chicago, Tsinghua University, People's Republic of China, Sichuan University, People's Republic of China (926.1)

- **5:00**
  - A High-Throughput Approach to Annotate the Lysine Methylome. E.M. Cornett, B.M. Dickson, K. Krajewski, M.W. Cowles, Z. Sun, S.B. Rothbart, Van Andel Research Institute, University of North Carolina and EpiCypher (602.11)

- **5:15**
  - O-GlcNAcylation of the Human Kinome. X. Liu, G. Han, A. Pandey, G. Hart, Johns Hopkins University (770.2)

- **5:30**
  - Role of Sumoylated SOD2 in Alcoholic Liver Disease and Liver Cancer. Y. Spissu, C. Cossu, A. Floris, M. Tomasi, Cedars-Sinai Medical Center (602.10)

### Protein Folding, Aggregation, and Chaperones: New Applications

**SPOTLIGHT SESSION #proteins**

**4:15 PM – 5:45 PM**

**CONVENTION CENTER, W187B**

**CHAIR:** A. M. Ring

- **4:15**
  - Engineering Hsp104 Variants to Counter Protein Misfolding. M. Jackrel, J. Shorter, University of Pennsylvania (763.3)

- **4:30**
  - Protein Aggregation Small Molecule Inhibitor Discovery and Mechanisms. B. Xu, Virginia Tech (763.13)

- **4:45**
  - New Insights from High-Throughput Biophysical Screening of Protein-Sequence and Coding-Sequence Libraries. B. Allen, Penn State University (604.21)

- **5:00**

- **5:15**

- **5:30**
  - Directed Evolution of Nanobody Chaperones that Stabilize GPCR:G-Protein Complexes. A. Manglik, A.C. Kruse, A. Koehl, B.K. Kobilka, A.M. Ring, Yale University and Harvard University.

### Microbial Signaling and Pathogenesis

**SPOTLIGHT SESSION #microbes**

**4:15 PM – 5:45 PM**

**CONVENTION CENTER, W187C**

**CHAIR:** M. J. Federle

- **4:15**
  - Recognition and Selectivity of Peptide Pheromones by ComR in the Regulation of Natural Competence Among *Streptococcus* Species. G. Prehna, E. Shanker, D.A. Morrison, A. Talagas, S. Nessler, M.J. Federle, University of Illinois at Chicago and University of Paris-Sud, France

- **4:30**

- **4:45**
5:00  *Streptococcus mitis* and *Streptococcus oralis* Mutate an “Essential” Gene upon Exposure to Daptomycin.  
H. Adams, L. Joyce, Z. Guan, R. Akins, K. Palmer, *University of Texas at Dallas, Duke University Medical Center and Methodist Charlton Medical Center*

5:15  Structural, Biochemical, and Cellular Studies of TarA, the Novel Wall Teichoic Acid Glycosyltransferase, for the Discovery of Gram-Positive Bacterial Inhibitors.  
M. Kattke, J. Gosschalk, R. Clubb, *UCLA*

5:30  Small-Molecule Inhibitors Against Type 1 Pili Selectively Target Uropathogenic *E. coli* in the Gut and Bladder.  

### 280 ASBMB Accreditation Workshop

**WORKSHOP**  #ASBMBed  
**5:00 PM – 5:45 PM**  CONVENTION CENTER, W185A  
Learn about the ASBMB Accreditation Program, its requirements, how to apply, and how to best prepare students for the certification exam. Members of the ASBMB Education and Professional Development committee will share their advice and answer questions about the program.

### 281 CRISPR-Based Versatile Tools and Their Major Application Area

**WORKSHOP**  #microbes  
**6:15 PM – 7:45 PM**  CONVENTION CENTER, W184BC  
**CHAIR:** M. Adli, J. Corn  
This workshop will present leading-edge CRISPR/Cas9-based technologies and their applications. The wide range of versatile CRISPR-based tools will be covered, with focus given to the design of experiments, downstream analysis and major pitfalls. Specific applications of CRISPR to genome-scale knockout screening and locus-specific epigenetic editing approaches will also be presented.

### 282 Academic Drug Discovery: Charting A Roadmap for Moving Basic Ideas Into the Clinic

**WORKSHOP**  #chembio  
**6:15 PM – 7:45 PM**  CONVENTION CENTER, W185BC  
**CHAIR:** Z-Y. Zhang, S. Wang  
So you have identified a biological target or a pathway. Now what? This workshop is designed to teach academic investigators how to navigate the challenging but highly rewarding process of small molecule drug discovery. The workshop will cover major techniques and steps in drug discovery, and present specific examples of moving targets and molecules through the drug-discovery process. The workshop leaders will share their best practices and lessons learned.

### 283 How to Get A Life in the Life Sciences

**WORKSHOP**  #profdev  
**6:15 PM – 7:45 PM**  CONVENTION CENTER, W186ABC  
**CHAIR:** W.T.Wickner, R. Schekman  
Every scientist can benefit from helpful and entertaining tips on how to navigate graduate school, postdoctoral positions, job hunts and steady funding while finding personal fulfillment. Two “chronologically gifted” biochemists, William Wickner of Dartmouth University and Nobel laureate Randy Schekman at the University of California, Berkeley, share how lifelong friendships grown in the lab and bold and feasible directions for your science can lead to long, fulfilling scientific careers.
Nothing Academic: A Night of Science-Themed Improv

SPECIAL EVENT #profdev

7:00 PM – 8:30 PM & 9:00 PM – 10:30 PM  THE COMEDY CLUBHOUSE, 1462 N.ASHLAND

What happens when improv comedians try to tackle the world of science? Come find out at The Comedy Clubhouse when three teams of comedians take a single scientifically-themed suggestion from the audience and improvise three completely different comedic performances. You’ve never seen a science presentation like this before!

• Cost- $10, Doors open 30 minutes prior to show start time.
• Patrons under the age of 18 must be accompanied by an adult.

Young Experimental Scientists Mixer

SPECIAL EVENT

9:00 PM – 11:00 PM  HILTON CHICAGO

The Young Experimental Scientists, Y.E.S., Mixer is hosted for the enjoyment of our young researchers. You must wear your badge and present ID to gain admittance. Dance, relax and network while enjoying complimentary snacks and soft drinks. Alcohol will not be served to anyone under the age of 21.

Win an Amazon gift card

Check your email after the meeting for a chance to win an Amazon gift card.

All you need to do is give us your feedback about the 2017 ASBMB Annual Meeting.

Contact meetings@asbmb.org to learn more.
TUESDAY
APRIL 25

400  **Avanti Award in Lipids**  
**AWARD LECTURE  #bigtalks**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:45 AM – 9:15 AM</td>
<td>CONVENTION CENTER, W183AB</td>
</tr>
<tr>
<td>8:45</td>
<td>Introduction.</td>
</tr>
<tr>
<td>8:50</td>
<td>400.1 <strong>Phosphoinositide Conversion in the Endolysosomal System.</strong> V. Haucke, K. Ketel, A. Wallroth, A.L. Marat, W. Lo, C. Schultz, Leibniz Institut für Molekulare Pharmakologie, Germany and EMBL, Germany</td>
</tr>
</tbody>
</table>

401  **Ruth Kirschstein Diversity in Science Award**  
**AWARD LECTURE  #bigtalks**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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</thead>
<tbody>
<tr>
<td>9:15 AM – 9:45 AM</td>
<td>CONVENTION CENTER, W183AB</td>
</tr>
<tr>
<td>9:15</td>
<td>Introduction.</td>
</tr>
<tr>
<td>9:20</td>
<td>401.1 <strong>From Dividing Cells to Helping Students Overcome Socio-Economic Barriers.</strong> D.N. Robinson, Johns Hopkins School of Medicine</td>
</tr>
</tbody>
</table>

402  **Organelle Trafficking and Signaling**  
**SYMPOSIUM  #cellbio**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:00 AM – 12:00 PM</td>
<td>CONVENTION CENTER, W183C</td>
</tr>
<tr>
<td>10:00</td>
<td>Unraveling the Mechanism of ER-Associated Organelle Fission. G.K. Voeltz, University of Colorado Boulder</td>
</tr>
<tr>
<td>10:30</td>
<td>Why Mammalian Cells Respire?. N.S. Chandel, Northwestern University Feinberg School of Medicine</td>
</tr>
<tr>
<td>11:00</td>
<td>Nuclear Envelope Rupture Is Induced by Actin-Based Nucleus Confinement. M. Hetzer, E. Hatch, The Salk Institute for Biological Studies and Fred Hutchinson Cancer Research Center</td>
</tr>
<tr>
<td>11:30</td>
<td>Dynamics of Autophagy and Mitophagy in Neurons. E.L. Holzbaur, Perelman School of Medicine and University of Pennsylvania</td>
</tr>
</tbody>
</table>

403  **Biochemical Basis of Cellular Processes**  
**SYMPOSIUM  #cellbio**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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</thead>
<tbody>
<tr>
<td>10:00 AM – 12:00 PM</td>
<td>CONVENTION CENTER, W184BC</td>
</tr>
<tr>
<td>10:00</td>
<td>Dynamic Regulation of DNA Methylation. B. Zhu, Institute of Biophysics, Chinese Academy of Sciences, People’s Republic of China</td>
</tr>
<tr>
<td>10:30</td>
<td>A Novel Enzymatic DNA Modification on Methylcytosine. G. Xu, Institute of Biochemistry and Cell Biology, Chinese Academy of Sciences, People’s Republic of China</td>
</tr>
<tr>
<td>11:00</td>
<td>Pyroptosis in Anti-Bacteria Immunity: Sensing and Execution. F. Shao, National Institute of Biological Sciences, Beijing, People’s Republic of China</td>
</tr>
<tr>
<td>11:30</td>
<td>Mitochondrial Pathway of Apoptosis. X. Wang, National Institute of Biological Sciences, Beijing, People’s Republic of China</td>
</tr>
</tbody>
</table>
**404 Antibiotic Resistance**

**ISSUES IN DEPTH**  
#antibiotics

10:00 AM – 12:00 PM  
CONVENTION CENTER, W185BC

**CHAIR:** K. Lewis

10:00 404.1 **Networks of Exchanging Antibiotic Resistance Between Environmental, Commensal, and Pathogenic Microbes.** G. Dantas, Washington University School of Medicine

10:30 404.2 **Remarkable Functional Convergence: Type I and II Toxin-Antitoxins Induce Multidrug Tolerance by (p)ppGpp-Dependent Mechanisms.** K. Gerdes, University of Copenhagen, Denmark

11:00 404.3 **Systems Chemical Biology: A Novel Approach to Antibiotic Discovery.** D.T. Hung, Harvard and MGH

11:30 404.4 **Modeling the Gut Microbiota with Mathematical Ecology.** J. Xavier, Memorial Sloan Kettering Cancer Center

**405 Glycobiology, Glycan Receptors and Functional Glycomics**

**SYMPOSIUM**  
#glyco

10:00 AM – 12:00 PM  
CONVENTION CENTER, W186ABC

**CHAIR:** N. M. Dahms

10:00 405.1 **Deciphering the ZIP Codes of a Cell.** N.M. Dahms, Medical College of Wisconsin

10:30 405.2 **Glycan-Binding Proteins as Microbial Detectors.** L.L. Kiessling, University of Wisconsin – Madison

11:00 405.3 **O-Glycan Recognition and Function in Mice and Humans.** R.D. Cummings, Beth Israel Deaconess Medical Center and Harvard Medical School

11:30 405.4 **Antibody Glycosylation: An Emerging Biomarker of Disease Activity/Protection.** G. Alter, Ragon Institute of MGH, MIT and Harvard

**406 Metal Homeostasis**

**SYMPOSIUM**  
#cellbio

10:00 AM – 12:00 PM  
CONVENTION CENTER, W187ABC

**CHAIR:** A. C. Rosenzweig

10:00 406.1 **Bacterial Copper Acquisition.** A.C. Rosenzweig, G.E. Kenney, L.M. Dassama, S.Y. Ro, Northwestern University

10:00 406.2 **Mechanisms of Zinc Metallostasis in Bacterial Pathogens.** D. Giedroc, D.A. Capdevila, J.E. Martin, K.A. Edmonds, H. Wu, Indiana University

10:00 406.3 **Metals and Immunity.** E.M. Nolan, Massachusetts Institute of Technology

10:00 406.4 **Regulation of Manganese Homeostasis and Detoxification by the Efflux Transporter SLC30A10.** S. Mukhopadhyay, The University of Texas at Austin

**407 ASBMB Meet the Speakers**

**SPECIAL EVENT**  
#profdev

12:30 PM – 1:00 PM  
CONVENTION CENTER, HALL F

Join us in the exhibit hall, across from ASBMB booth #1214. Meet up with the morning presenters for continued scientific discussion and networking in an informal environment.

**AS OF PRESS TIME, CONFIRMED SPEAKERS INCLUDE:**

N. Chandel, Northwestern University Feinberg School of Medicine; V. Haucke, Leibniz Institut für Molekulare Pharmakologie, Avanti Award in Lipids; M. Hetzer, Salk Institute for Biological Studies; E. Holzbaur, University of Pennsylvania Perelman School of Medicine; D. Robinson, Johns Hopkins School of Medicine, Ruth Kirschstein Diversity in Science Award; F. Shao, National Institute of Biological Sciences, Beijing; G. Voeltz, University of Colorado, Boulder; B. Zhu, Inst of Biophysics, Chinese Academy of Science
NIH and NSF Funding Opportunities

**WORKSHOP**  
**#profdev**  
**12:30 PM – 2:00 PM**  
CONVENTION CENTER, W185BC  
The Antibacterial Research and the Carb-X Initiative. T. Guina, A. Sheoran, NIAID  
Alzheimers Disease Research. A. Yang, NIA, NIH  
NSF Funding Opportunities. D. Rockcliffe, Chemistry of Life Processes, NSF

ASBMB Meet the Speakers

**SPECIAL EVENT**  
**#profdev**  
**1:30 PM – 2:00 PM**  
CONVENTION CENTER, HALL F  
Join us in the exhibit hall, across from ASBMB booth #1214. Meet up with the morning presenters for continued scientific discussion and networking in an informal environment.  
AS OF PRESS TIME, CONFIRMED SPEAKERS INCLUDE:  
N. Dahms, Medical College of Wisconsin; G. Dantas, Washington University School of Medicine; K. Gerdes, University of Copenhagen; S. Mukhopadhyay, UT, Austin; E. Nolan, MIT; A. Rosenzweig, Northwestern University

Microbiomes and Their Evolution During Infection and Disease

**SPOTLIGHT SESSION**  
**#microbes**  
**2:30 PM – 4:00 PM**  
CONVENTION CENTER, W183C  
**CHAIR:** R. Page

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Authors</th>
<th>Affiliations</th>
</tr>
</thead>
<tbody>
<tr>
<td>2:30</td>
<td>Chronic Diabetic Wounds: Longitudinal Profiling of the Evolving Microbiome and Metabolic Landscape in Diabetic Patients.</td>
<td>M.B. Ammons, A.L. Fuchs, B.P. Tripet, V. Copie, A.J. Weaver, A. Braaksma, E. Johnson, C. Yeoman</td>
<td>Montana State University and Bozeman Deaconess Health Hospital (944.9)</td>
</tr>
<tr>
<td>3:15</td>
<td>The Metatranscriptome of the Rhesus Macaque: Investigating Potential Causes of Idiopathic Chronic Diarrhea.</td>
<td>S.T. Westreich, A. Ardeshir, M.E. Kable, I. Korf, D.G. Lemay, University of California, Davis and USDA ARS Western Human Nutrition Research Center</td>
<td>(940.7)</td>
</tr>
<tr>
<td>3:45</td>
<td>Probiotics Alter Avian Serum Profile to Stimulate Energy Consumption and Change of Gene Expression in Immune Cells.</td>
<td>A. Ballou, R. Ali, M. Koci</td>
<td>NC State University (940.11)</td>
</tr>
</tbody>
</table>
Beyond the Code: Chemistry of Nucleotide and Amino Acid Modifications

SPOTLIGHT SESSION  #cellsignal

2:30 PM – 4:00 PM  CONVENTION CENTER, W184A

CHAIR: L. Saleh


2:45  A Shared Structural Recognition Element in mRNA Substrates of the tRNA Modifying Enzyme Pseudouridine Synthase 1. T.M. Carlile, T.A. Bell, M.F. Rojas-Duran, B. Zinshteyn, H. Shin, C. Mason, W.V. Gilbert, MIT (595.3)

3:00  In Vitro Development of Synthetic Chromatin Proteins That Function in Live Cells. K.A. Haynes, S. Tekel, D.A. Vargas, Arizona State University (922.8)

3:15  Deciphering the Logic of Natural Product Biosynthesis. B. Li, University of North Carolina at Chapel Hill (607.9)

3:30  New Roles for Dithiolopyrrolones in Disrupting Bacterial Metal Homeostasis and Inhibiting Metalloenzymes. A.N. Chan, A.L. Shiver, W.J. Wever, S.Z. Razvi, M.F. Traxler, University of North Carolina at Chapel Hill, University of California, San Francisco, University of North Carolina at Chapel Hill, Estelman School of Pharmacy, Duke University, University of California, Berkeley (766.15)

3:45  YTHDC2 Regulates Spermatogenesis Through Promoting the Translation of N6-Methyladenosine-Modified RNA. P.J. Hsu, Y. Zhu, H. Ma, Y. Cui, X. Shi, G. Luo, Z. Lu, H. Shi, Q. Dai, M. Clark, B. Shen, C. He, The University of Chicago, State Key Laboratory of Reproductive Medicine, Nanjing Medical University, People's Republic of China (595.10)

Molecular Mechanisms of Regulation in Proteolysis

SPOTLIGHT SESSION  #proteins

2:30 PM – 4:00 PM  CONVENTION CENTER, W184BC

CHAIR: E.S. Radisky

2:30  412.1  Substrate Conformational Dynamics in Proteolysis. E.S. Radisky, Mayo Clinic Cancer Ctr

2:45  Phosphorylation Regulates Apoptotic Caspase Function Through Diverse Molecular Mechanisms. J.A. Hardy, B.P. Serrano, S.J. Eron, University of Massachusetts (602.3)

3:00  Proteasome Activation via a Functional Switch of the Rpt6 C-Terminal Tail Following Chaperone-Dependent Assembly. S. Park, F. Li, V. Sokolova, University of Colorado Boulder (917.4)

3:15  Structure of hRpn13 at the Proteasome. X. Lu, F. Liu, U. Nowicka, V. Sridharan, M. Dyba, S.G. Tarasov, K.J. Walters, Center for Cancer Research, National Cancer Institute (603.5)

3:30  The Intrinsically Disordered Membrane Enzymes Selenoprotein S and Selenoprotein K. S. Rozovsky, J. Liu, Z. Zhang, University of Delaware (773.1)

3:45  The Cellular Demand for Protein Synthesis Influences the Ribosome Maintenance Program in Vivo. J.C. Price, Brigham Young University (759.4)

RNA: Synthesis, Regulation, and Processing

SPOTLIGHT SESSION  #RNA

2:30 PM – 4:00 PM  CONVENTION CENTER, W185A

CHAIR: C. Kaplan

2:30  413.1  Mechanism and Regulation of RNA Polymerase II. C.D. Kaplan, Texas A&M

3:00  Regulation of RNA Polymerase Translocation by the RNA and DNA Hybridization at the Upstream Edge of the Transcription Bubble. M. Kireeva, C. Trang, G. Matevosyan, L. Lubkowska, M. Kashlev, NCI (597.3)
3:15  Activation of Transcription-Coupled 5’-RNA Capping by TFIIH. M. Noe-Gonzalez, J. Conaway, R. Conaway, Stowers Institute and Kansas University Medical Center (907.1)
3:30  The Role of the Essential Splicing Factor Prp2 in Ribosome Biogenesis. S. Edwards, A. Hossain, T. Johnson, University of California and Los Angeles (596.13)
3:45  Nonstop Decay in C. elegans: Examination of a Possible Role for Small Noncoding RNAs. E.M. Youngman, Villanova University (757.21)

**Therapeutics: Targets and Design**

**SPOTLIGHT SESSION**  #chembio

2:30 PM – 4:00 PM  CONVENTION CENTER, W185BC

**CHAIR:** K. Dalby

2:30  Mechanism and in Vivo Activity of a Covalent Inhibitor of ERK Docking. K.N. Dalby, E.V. Anslyn, D. Zamora-Oliveares, T. Kaoud, UT Austin (608.13)
2:45  Elucidation of the Cell Death Pathways Induced by Aqueous-Stable Titanium(IV) Compounds as Potential Anticancer Agents. Y. Delgado, A. Vázquez, M. Kowaleff, M. Saxena, Z. Torres, A. Tinoco, University of Puerto Rico Rio Piedras Campus and City University of New York (609.12)
3:00  In Vivo Drug Discovery for Progressive Supranuclear Palsy Using a Novel Zebrafish Model. E.A. Burton, Q. Bai, University of Pittsburgh (609.13)
3:15  Insight Into the Mechanism and Structural Basis for Autoinhibition of PTEN by Phosphorylation of Its C-Terminal Tail. D.R. Dempsey, Z. Chen, S. Thomas, D. Hayward, D. Bolduc, P. Cole, Johns Hopkins University (771.1)
3:30  Trehalose-6-Phosphate Phosphatase Structure and Inhibitor Design. C. Harvey, C. Liu, D. Globisch, K. Janda, D. Dunaway-Mariano, K. Allen, Boston University, University of New Mexico and The Scripps Research Institute (923.5)
3:45  Carbohydrate-Linked Cisplatin Analogue: Reactivity Studies with RNA and DNA. S.D. Thalalla Gamage, N. Muthunayake, A. Sonousi, D. Crich, C. Chow, Wayne State University (608.8)

**The Integration of Metabolism and Epigenetics**

**SPOTLIGHT SESSION**  #metabolism

2:30 PM – 4:00 PM  CONVENTION CENTER, W186ABC

**CHAIR:** M. Hirschey

2:30  Epigenetic Control of Gene Expression by Lipid Metabolism. M. Hirschey, Duke University
2:45  Regulation of Histone Methylation via Methionine Metabolism. S.A. Haws, J.M. Denu, University of Wisconsin-Madison, Wisconsin Institute for Discovery and University of Wisconsin-Madison School of Medicine and Public Health (755.9)
3:00  Metabolic Regulation of Gene Expression by Histone Lysine $\beta$-Hydroxybutyrylation. D. Zhang, Z. Xie, D. Chung, Z. Tang, H. Huang, L. Dai, S. Qi, J. Li, G. Colak, Y. Chen, C. Peng, H. Ruan, D. Wang, L.M. Jensen, O. Kwon, S. Lee, S.D. Fletcher, M. Tan, D.B. Lombard, K.P. White, H. Zhao, J. Li, R.G. Roeder, Y. Yang, Y. Zhao, Medical University of South Carolina, Laboratory of Biochemistry and Molecular Biology, The Rockefeller University, State Key Laboratory of Drug Research, Shanghai Institute of Materia Medica, Chinese Academy of Sciences, People’s Republic of China, University of Minnesota Twin Cities, Yale University School of Medicine, University of Michigan, Kyungpook National University, Republic of Korea, Yale University and Yale School of Medicine (755.2)
3:15  Hepatic Fat Accumulation Regulates Carnitine Palmitoyltransferase I (Cpt1a) Expression Through Coordinated Epigenetic Mechanisms. L. Moody, P.M. Jung, A. Kriska, H. Chen, Y. Pan, University of Illinois Urbana Champaign (626.1)
3:30  Obesity-Mediated Regulation of the Cardiac Acetylome. S.S. Romanick, A. Hostler, K. Schlauch, D. Quilici, Y. Peng, B. Ferguson, University of Nevada Reno (602.14)
416 Intrinsic Disorder and Recognition

SPOTLIGHT SESSION  #proteins
2:30 PM – 4:00 PM  CONVENTION CENTER, W187A
CHAIR: B. Hill

2:30 Multidimensional Chemical Control of CRISPR-Cas9. C.L. Moore, B. Maji, A. Choudhary, M. Shoulders, MIT, Broad Institute and Harvard Medical School (909.5)

2:45 BECN Homologs and ATG14 Form a Metastable Coiled-Coil to Mediate Autophagy. S. Sinha, M. Su, Y. Li, B. Levine, C. Colbert, North Dakota State University, Howard Hughes Medical Research Institute and University of Texas Southwestern Medical Center (760.24)

3:00 Fis1 Activity in Pre- and Post-Assembly of the Yeast Mitochondrial Fission Machinery. M.C. Harwig, R.B. Hill, Medical College of Wisconsin (634.8)

3:15 The Conformation of Apolipoprotein E4 on Discoidal and Spherical High Density Lipoproteins Using Chemical Crosslinking and Fluorescence Spectroscopy. N. Bala, K. Taiwo, V. Narayanaswami, California State University, Long Beach (761.26)

3:30 Insights Into HuR RRMI-2 Tandem Domains Self-Association and mRNA Recognition. A.S. Pinheiro, C. Lixa, K.A. Jendiroba, L.T. Lima, M.T. de Magalhães, F.C. Almeida, Federal University of Rio de Janeiro, Brazil and Federal University of Minas Gerais, Brazil (998.5)

3:45 Toxic PR Poly-Dipeptides Encoded by the C9orf72 Repeat Expansion Target LC Domain Polymers. Y. Lin, University of Texas Southwestern Medical Center (760.4)

417 Nutrition Impact On Bacteria and Host Health: From Basic Science to Global View

SEBM SYMPOSIUM  #microbes
3:00 PM – 5:00 PM  CONVENTION CENTER, W184D
CHAIR: C. Allred

Guest Society: Society for Experimental Biology and Medicine

3:00 Chair’s Introduction.

3:10 Microbial Tryptophan Metabolites and Gut Health. A. Jayaraman, Texas A&M University


4:00 Legumes and gut health. M. Manary, Washington University

4:25 Diet Drives Colon Cancer Risk by its Effect on the Microbiota. S. O’Keefe, University of Pittsburg Medical Center

4:50 Discussion.

418 Advances in Glycobiology

SPOTLIGHT SESSION  #glyco
4:15 PM – 5:45 PM  CONVENTION CENTER, W183C
CHAIR: K. Ribbeck

4:15 418.1 Probing Microbial Interactions with the Mucus Barrier. K. Ribbeck, MIT

4:30 Bifidobacterium dentium Regulates Intestinal Mucus Production and Glycosylation. M.A. Engevik, B.K. Luk, C. Visuthranukul, J. Versalovic, Baylor College of Medicine, Texas Children’s Hospital and King Chulalongkorn Memorial Hospital, Thailand (954.5)
### Chemical Probes and Metabolite Biosensors

**SPOTLIGHT SESSION** #metabolism  
**4:15 PM – 5:45 PM**  
**CONVENTION CENTER, W184A**  
**CHAIR:** M. Hirschey

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<tr>
<th>Time</th>
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<th>Authors</th>
<th>Institution</th>
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<tbody>
<tr>
<td>4:15</td>
<td>Designing Highly Specific Protein-Based Small Molecule Biosensors</td>
<td>S. Raman, University of Wisconsin-Madison</td>
<td>(765.3)</td>
</tr>
<tr>
<td>4:30</td>
<td>Development of Algorithmic Techniques for Designing Electrochemical DNA Biosensors</td>
<td>A.J. Bonham, A.J. Bulow, Metropolitan State University of Denver</td>
<td>(767.2)</td>
</tr>
<tr>
<td>4:45</td>
<td>Development of Red Fluorescent Protein pH Sensors</td>
<td>M. Rajendran, E. Haynes, B. Claywell, U. Scales, C. Henning, Purdue University</td>
<td>(767.3)</td>
</tr>
<tr>
<td>5:00</td>
<td>Sensitive and Specific Detection of Ligands Using Engineered Riboswitches</td>
<td>J.P. Laney, D.P. Morse, United States Naval Academy</td>
<td>(907.4)</td>
</tr>
<tr>
<td>5:15</td>
<td>Bead-Based Enzymatic Assay On-A-Chip</td>
<td>S.J. Karnik, S. Cahoon, A. Bhushan, Illinois Institute of Technology</td>
<td>(924.5)</td>
</tr>
<tr>
<td>5:30</td>
<td>Lanthanide-Based FRET Biosensors for Time-Gated Imaging and Detection of Protein-Protein Interactions in Live Mammalian Cells</td>
<td>T. Chen, H. Pham, L. Miller, UIC</td>
<td>(767.6)</td>
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</table>

### Cancer Signaling and Therapeutics

**SPOTLIGHT SESSION** #cellsignal  
**4:15 PM – 5:45 PM**  
**CONVENTION CENTER, W184BC**  
**CHAIR:** K. Wood

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<tr>
<th>Time</th>
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<th>Institution</th>
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<tbody>
<tr>
<td>4:15</td>
<td>Leveraging Synthetic Lethality to Target Convergent Therapeutic Resistance</td>
<td>K.C. Wood, Duke University</td>
<td>(775.4)</td>
</tr>
<tr>
<td>4:30</td>
<td>CEBPD Is an Early Endoplasmic Reticulum Stress Response Gene Implicated in Breast Cancer Cell Survival</td>
<td>N. Sheshadri, S. Sharan, E. Sterneck, National Cancer Institute</td>
<td>(758.2)</td>
</tr>
<tr>
<td>4:45</td>
<td>Manipulating the Bone Marrow Microenvironment to Prevent Survival of AML Cells</td>
<td>R.M. Sterner, K.N. Kremer, A. Dudakovic, J.J. Westendorf, A.J. van Wijnen, K.E. Hedin, Mayo Clinic</td>
<td>(775.3)</td>
</tr>
<tr>
<td>5:00</td>
<td>Deconstructing the Peptide Specificity of TCR Recognition</td>
<td>T.P. Riley, J. Mendoza, L. Hellman, K. Garcia, B. Baker, University of Notre Dame and Stanford School of Medicine</td>
<td>(760.1)</td>
</tr>
<tr>
<td>5:15</td>
<td>Mortalin Modulates MEK/ERK Activity by Regulating the Physical Interaction Between MEK1/2 and Protein Phosphatase 1 Alpha</td>
<td>P. Wu, Medical College of Wisconsin</td>
<td>(775.1)</td>
</tr>
<tr>
<td>5:30</td>
<td>At the Crossroads Between TYR and SER/THR Signaling: A New Paradigm in the Regulation of PP2A by SRC Kinase</td>
<td>E. Sontag, J. Mendoza, R.J. Gomez, A. Hoffman, G. Taleski, M.D. Mazalouskas, S.K. Hanks, I. Frohner, E. Ogris, B.E. Wadowski, University of Newcastle, Australia, Vanderbilt University School of Medicine and Medical University of Vienna, Austria</td>
<td>(771.2)</td>
</tr>
</tbody>
</table>
## Chromatin Structure and Epigenetic Regulation

**SPOTLIGHT SESSION**  
#chromatin

**4:15 PM – 5:45 PM**  
CONVENTION CENTER, W185A

**CHAIR:** P. Grant

### 4:15

**421.1** The Replication Kinase Cdc7 Marks Histones to Regulate Biosynthesis Genes.  
P. Grant, University of Virginia School of Medicine

### 4:30

Chromatin Accessibility of the Dosage Compensated *Drosophila* Male X-Chromosome Is Established by a Context-Specific Role for the CLAMP Zinc Finger Protein.  
E. Larschan, J. Urban, G. Kuzu, Brown University (593.10)

### 4:45

Epigenetic Manipulation of Inactive X Chromosome for Rett Syndrome Therapeutics.  
S. Bhatnagar, University of Virginia School of Medicine (593.4)

### 5:00

Architecture of the Nucleosome Remodeling and Deacetylase (NuRD) Complex.  

### 5:15

Role of Chromatin Remodeling and Spacing Factor 1 in Histone H2A Ubiquitination Mediated Gene Silencing.  
H. Wang, Z. Zhang, A. E. Jones, M. B. Renfrow, C. Liu, W. An, J. Luo, W. Wu, Y. Kang, Y. Tong, University of Alabama at Birmingham, Nanyang Technological University, Singapore, University of Southern California, Chinese Academy of Sciences, People's Republic of China, and University of Toronto, Canada (594.3)

### 5:30

Epigenetic Regulation Through UHRF Proteins.  
S. B. Rothbart, R. M. Vaughan, E. M. Cornett, B. M. Dickson, Van Andel Research Institute (594.3)

## Lipid Transport and Processing

**SPOTLIGHT SESSION**  
#lipids

**4:15 PM – 5:45 PM**  
CONVENTION CENTER, W186ABC

**CHAIR:** A. Radhakrishnan

### 4:15

Probing the Lipid Composition at the Site of Influenza Virus Assembly and Budding with High-Resolution SIMS.  
M. L. Kraft, A. N. Yeager, P. K. Weber, J. Zimmerberg, University of Illinois at Urbana-Champaign, Lawrence Livermore National Laboratory, National Institute of Child Health and Human Development, National Institutes of Health and Eunice Kennedy Shriver National Institute of Child Health and Human Development (629.20)

### 4:30

Macrophage Catabolism of Aggregated Lipoproteins Using a Novel Extracellular Compartment Regulates Lipid Accumulation During Atherosclerosis.  

### 4:45

A Novel Hemolysin with Anti-Cancer and Anti-Fungal Properties Binds to Serum Glycoproteins and Cholesterol.  

### 5:00

Identification of NPC1 as the Target of UI8666A, an Inhibitor of Lysosomal Cholesterol Export and Ebola Infection.  
F. Lu, M. Brown, J. Goldstein, University of Texas Southwestern Medical Center (630.17)

### 5:15

Ceramide-1-Phosphate: Characterizing a Fluorescent Lipid and Discovering New Binding Proteins.  
C. M. Shirey, R. V. Stahelin, University of Notre Dame and Indiana University School of Medicine-South Bend (629.24)

### 5:30

Macrophage Cholesterol Efflux and Atherosclerosis in Psoriasis: A Role for microRNA-33.  
D. Karunakaran, G. Dwevidi, K. Rayner, University of Ottawa Heart Institute, Canada (947.7)
**Molecular Machines of Protein Synthesis and Degradation**

**SPOTLIGHT SESSION**  #proteins

**4:15 PM – 5:45 PM**  CONVENTION CENTER, W187A

**CHAIR:** K. Walters

- **4:15**  ALS and Ubiquitin-2: Effects of ALS Mutations on Ubiquitin-2 Structure and Function  C. Castaneda, T. Dao, Syracuse University  (914.11)
- **4:30**  Repeat Expanded Ataxin-1 mRNA and Protein Is Co-Regulated at PML Bodies  D. Fanslow, A. Cogswell, C. Srbojny, A. Garza-Gongora, E. Smith, S. Kosak, Northwestern University  (915.7)
- **4:45**  Inter-Domain Interactions in Nascent Polypeptides Interfere with Productive Protein Folding  K. Liu, K. Maciuba, C. Kaiser, Johns Hopkins University  (604.10)
- **5:00**  A Neuronal-Specific Surface-Exposed Membrane Proteasome Complex Modulates Neuronal Signaling Through Extracellular Signaling Peptides  K.V. Ramachandran, S.S. Margolis, Johns Hopkins School of Medicine  (915.4)
- **5:15**  Nitrogen Starvation and Rapamycin Both Induce Autophagic Degradation of Proteasome Complexes  J. Roelofs, K.A. Waite, G. Vontz, A. De La Mota-Peynado, Kansas State University  (917.6)
- **5:30**  Multivalent Interactions Between a Ubiquitin Ligase and Its Substrates Mediate Their Recruitment to Liquid Membrane-Less Organelles  T. Mittag, J. Bouchard, E. Martin, J. Otero, S. Marada, S. Ogden, St. Jude Children’s Research Hospital  (916.3)

**Protein and Enzyme Allostery**

**SPOTLIGHT SESSION**  #enzymes

**4:15 PM – 5:45 PM**  CONVENTION CENTER, W187B

**CHAIR:** W. Peti

- **4:15**  Using Dynamics and Structure to Understand Allostery in Signaling Enzymes  W. Peti, University of Arizona  (607.2)
- **4:30**  Allosteric Landscape of a Stress-Inducible Human Hsp70 Molecular Chaperone  W. Meng, E.M. Clerico, N. McArthur, L.M. Giersch, University of Massachusetts and Amherst  (604.14)
- **4:45**  A Common Mechanism of Proteasome Impairment by Neurodegenerative Disease-Associated Oligomers  T.A. Thibaudeau, R. Anderson, D.M. Smith, West Virginia University and School of Medicine  (763.8)
- **5:00**  Phospholipase A₂: A Unique Paradigm of Allosteric Regulation by Membranes  V. Mouchlis, J. McCammon, E. Dennis, UC San Diego  (765.9)
- **5:15**  Correlation of Fitness Landscapes from Three Orthologous TIM Barrels Originates from Sequence and Structure Constraints  Y.H. Chan, S.V. Venek, K.B. Zeldovich, C.R. Matthews, UMass Medical School  (761.27)
- **5:30**  Allosteric Regulation and Enzymatic Mechanism of YopJ Family of Bacterial Effectors  J. Song, Z. Zhang, K. Ma, L. Gao, W. Ma, University of California, Riverside  (765.4)

**Lipidic Cubic Phase Crystallography**

**WORKSHOP**  #profdev

**6:15 PM – 7:45 PM**  CONVENTION CENTER, W184BC

**CHAIR:** A. Kruse, A. Manjlik

Lipidic cubic phase crystallography and related methods have transformed membrane-protein structural biology. They have led us to most of the known structures of G-protein-coupled receptors, as well as structures of many other membrane proteins, enzymes and transporters. This workshop will focus on how to crystallize membrane proteins by the lipidic cubic phase method and will include a live hands-on demonstration of the technique.
Interested in publishing your research in the Journal of Biological Chemistry? Make sure you are presenting your research rigorously, clearly and compellingly! The JBC editors discuss important aspects authors need to consider when preparing their manuscripts for submission. Topics to be discussed include clarity of the text, including title and abstract, data presentation, database compliance, and transparency.

This workshop will teach attendees how to answer important questions about enzyme mechanisms by designing the right experiments and interpreting them quantitatively. It will present basic foundations and applications of kinetic analysis, then cover topics ranging from chemical kinetics and enzymology to pharmacokinetics and cell biology. It will demonstrate the use of KinTek computer simulation software to fit multiple data sets simultaneously, including kinetic and equilibrium measurements. Attendees will learn how to perform a wide range of experiments and interpret them rigorously, without simplifying approximations and errors inherent in fitting data using equations. The workshop will be taught by Kenneth Johnson at The University of Texas and founder of KinTek Corporation, a leader in precision stepped-flow and quench-flow instruments for rapid transient reaction kinetics.

Join us for lively conversation focusing on the importance of mentors and sponsors at the various stages of career development and factors that affect the success of mentoring relationships. ASBMB members and biochemistry attendees welcome.
ASBMB-Merck Award
AWARD LECTURE  #bigtalks
8:45 AM – 9:15 AM  CONVENTION CENTER, W183AB  MERCK
8:45  Introduction.
8:50  523.1  Proteostasis Function and Disfunction: The Delicate Art of Maintaining a Healthy Proteome.  J. Frydman, Stanford University

Delano Award for Computational Biosciences
AWARD LECTURE  #bigtalks
9:15 AM – 9:45 AM  CONVENTION CENTER, W183AB
9:15  Introduction.
9:20  524.1  Structure-Based Discovery of New Chemotypes Conferring New Biology.  B. Shoichet, University of California, San Francisco

Low Complexity Domain Proteins and the Making of Germ Cells
SYMPOSIUM  #proteins
10:00 AM – 12:00 PM  CONVENTION CENTER, W183C
10:00  525.1  RNA Granule Organization.  R. Lehmann, T. Trcek, M. Grosch, H. Shroff, T. Lionnet, Skirball Institute, NYU School of Medicine, HHMI, National Institute of Biomedical Imaging and Bioengineering, Janelia Research Campus and Howard Hughes Medical Institute
10:30  525.2  Organelles Without Membranes: Intrinsically Disordered Proteins Bring Order to the Cytoplasm.  G. Seydoux, J. Smith, D. Calidas, H. Schmidt, D. Rasoloson, Johns Hopkins University School of Medicine and HHMI
11:00  525.3  A Liquid Crystalline Interface Between Chromosomes Regulates Meiotic Recombination.  A.F. Dernburg, S. Köhler, L. Zhang, W.T. Stauffer, J.D. Robinson, O. Rog, University of California, Berkeley, HHMI and University of Utah

Molecular Quality Control
SYMPOSIUM  #cellbio
10:00 AM – 12:05 PM  CONVENTION CENTER, W184BC
CHAIR: D. Ron
10:00  526.1  Regulation of Translational Fidelity and Neurodegeneration.  S.L. Ackerman, UCSD and HHMI
10:25  526.2  A Versatile Chaperone Network Promoting the Aggregation and Disaggregation of Misfolded Proteins.  B. Bukau, N. Nillegoda, A. Wentink, S. Ungelenk, C. Ho, A. Mogk, Zentrum für Molekulare Biologie der Universität Heidelberg, Germany
10:50  526.3  Structures and Functions of the Ribosome Quality Control Complex or RQC.  A. Frost, University of California, San Francisco
11:15  526.4  RNA Decay and Quality Control by the Eukaryotic RNA Exosome.  C.D. Lima, Memorial Sloan Kettering Cancer Center/HHMI
11:40  526.5  Tuning an Endoplasmic Reticulum Chaperone to the Cell's Needs.  D. Ron, University of Cambridge, United Kingdom
## New Insights in Regulated Lipid Metabolism

**SYMPOSIUM #lipids**

**10:00 AM – 12:00 PM**  
**CONVENTION CENTER, W185BC**

**CHAIR:** R. Zechner

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Speakers</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:00</td>
<td>527.1</td>
<td>The Role of Intracellular Lipolysis in Thermogenesis and Metabolic Disease.</td>
<td>R. Zechner, M. Schweiger, R. Breinbauer, R. Zimmermann, University of Graz, Austria and Graz University of Technology, Austria</td>
</tr>
<tr>
<td>10:30</td>
<td>527.2</td>
<td>New Insights Into Intravascular Lipolysis and New Causes of Hypertriglyceridemia.</td>
<td>A. Beigneux, L. Fong, M. Ploug, UCLA and Finsen Laboratory, Denmark</td>
</tr>
<tr>
<td>11:00</td>
<td>527.3</td>
<td>Novel Mechanisms of Regulation of Bioactive Sphingolipids in Cancer Biology.</td>
<td>L.M. Obeid, C. Senkal, M. Pulkoski-Gross, Stony Brook University School of Medicine and Stony Brook University</td>
</tr>
<tr>
<td>11:30</td>
<td>527.4</td>
<td>Geranylgeranyl-Regulated, ER-to-Golgi Transport of UBIADI: Implications for Cholesterol Homeostasis and Schnyder Corneal Dystrophy</td>
<td>R.A. DeBose-Boyd, UT Southwestern Medical Center</td>
</tr>
</tbody>
</table>

## Redox Signaling and the Metabolome

**SYMPOSIUM #metabolism**

**10:00 AM – 12:00 PM**  
**CONVENTION CENTER, W186ABC**

**CHAIR:** R. Banerjee

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Speakers</th>
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<tbody>
<tr>
<td>10:00</td>
<td>528.1</td>
<td>Mechanism and Control in Radical SAM Enzymes.</td>
<td>J.B. Broderick, Montana State University</td>
</tr>
<tr>
<td>11:00</td>
<td>528.3</td>
<td>Redox Control of the Metabolome and the Aging Process.</td>
<td>V. Gladyshev, Harvard Medical School and Brigham &amp; Women's Hospital</td>
</tr>
<tr>
<td>11:30</td>
<td>528.4</td>
<td>Signaling Through Hydrogen Sulfide.</td>
<td>R. Banerjee, University of Michigan, Medical School</td>
</tr>
</tbody>
</table>

## ASBMB Meet the Speakers

**SPECIAL EVENT #profdev**

**12:30 PM – 1:00 PM**  
**CONVENTION CENTER, SKYLINE BALLROOM**

Join us in the exhibit hall, across from ASBMB booth #1214. Meet up with the morning presenters for continued scientific discussion and networking in an informal environment.

AS OF PRESS TIME, CONFIRMED SPEAKERS INCLUDE:

- A. Amon, MIT, HHMI; R. DeBose-Boyd, UT Southwestern Medical Center at Dallas; A. Dernburg, UC, Berkeley; R. Lehmann, HHMI, NYC;
- G. Seydoux, Johns Hopkins University School of Medicine; HHM; B. Shoichet, UCSF, Delano Award for Computational Sciences; R. Zechner, Institute of Molecular Biosciences, Karl Franzens Universität Graz

## ASBMB Meet the Speakers

**SPECIAL EVENT #profdev**

**1:30 PM – 2:00 PM**  
**CONVENTION CENTER, SKYLINE BALLROOM**

Join us in the exhibit hall, across from ASBMB booth #1214. Meet up with the morning presenters for continued scientific discussion and networking in an informal environment.

AS OF PRESS TIME, CONFIRMED SPEAKERS INCLUDE:

- S. Ackerman, UCSD, HHMI; R. Banerjee, University of Michigan Medical School; B. Bukau, Zentrum für Molekulare Biologie der Universität Heidelberg; A. Frost, UCSF, C. Lima, Memorial Sloan Kettering Cancer Center; D. Ron, University of Cambridge; D. Sherman, University of Michigan
EB2017 Career Resource Center (CRC) Events

Resume Critiquing available by appointment, April 22 – 26

<table>
<thead>
<tr>
<th>Day, Month</th>
<th>Time</th>
<th>Location</th>
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<tbody>
<tr>
<td>Saturday, April 22</td>
<td>REGISTRATION AREA</td>
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<tr>
<td>Sunday, April 23</td>
<td>9:00 AM – 5:00 PM</td>
<td>EXHIBIT HALL, F2</td>
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<tr>
<td>Monday, April 24</td>
<td>9:00 AM – 5:00 PM</td>
<td>EXHIBIT HALL, F2</td>
</tr>
<tr>
<td>Tuesday, April 25</td>
<td>9:00 AM – 4:00 PM</td>
<td>EXHIBIT HALL, F2</td>
</tr>
<tr>
<td>Wednesday, April 26</td>
<td>9:00 AM – 12:00 PM</td>
<td>SKYLINE BALL ROOM W375A</td>
</tr>
</tbody>
</table>

The FASEB Office of MARC and Professional Development Programs in association with the Experimental Biology 2017 Management Committee will sponsor career development seminars and NIH Grant Seminar Workshops in the Career Resource Center located in Hall F2 (Rooms CRC 1-4). There is no fee or pre-registration associated with the workshops and seminars.

Check the EB2017 app or visit the Career Resource Center onsite for the most current events schedule.

Workshops, located in the Exhibit Hall, F2

SUNDAY APRIL 23

9:00 AM – 10:00 AM
CRC-1 Networking: Optimizing Your Time at EB2017
PRESENTER: J. Tringali
You surely have heard that networking is a key component of the successful job search. The term itself often conjures up negative thoughts and reactions to the uninitiated, sometimes to the point of paralysis. Professional conferences (such as EB 2017) provide endless networking opportunities. If, however, your perception of networking means tackling someone at the coffee station while thrusting your CV in his/her hands, you may want to stop in on this session. The practice of networking has become so much easier with the advent of the internet. We will discuss what you hope to get out of your presence at the meeting, how to set objectives beforehand, and how to meet those objectives once you arrive (while minimizing anxiety).

9:30 AM – 10:30 AM
CRC-2 How to Choose Your Ideal Career
PRESENTER: B. Lindstaedt
Do you want to find a career path that you’ll enjoy and find rewarding? Of course! But HOW do you find such a path, especially since there are so many different directions scientists can go with their careers?

9:00 AM – 10:00 AM
CRC-4 Get Up With Something on Your Mind
PRESENTER: H. Adams
Planning for academic/career/personal success is a process—a mode of striving to excel at any and all endeavors one undertakes. It is an ongoing process of planning, reviewing, refining, adjusting and/or changing goals, strategies and tactics to realize planned outcomes - achievement, success, recognition, rewards, power, etc. This seminar is designed to encourage individual responsibility for: 1) taking charge of one’s own success; 2) focusing on being proactive; 3) being open and responsive to change; 4) applying strategies to assess one’s skills, interests, and values on an ongoing basis; and 5) building support systems through effective utilization of mentoring and networking. Key topics: The Success Mind-set, Defining Purpose, Performance Curve, The Personal Audit, Academic/Career/Planning for Academic/Career/Life Success.
There are more than FIFTY career options available to biomedical sciences PhD's. If you'd like to see a list of these career options, while learning about how to select the best option for you, then don’t miss this thought-provoking and interactive workshop! Here you will learn about a logical, step-by-step process for exploring your career options and deciding which will provide the best fit for your own set of skills, values and interests.

10:00 AM – 11:00 AM

CRC-3  Negotiation Strategies for Scientists
PRESENTER:  D. Behrens
This session introduces effective methods of negotiating with potential employers. Topics: The basic elements of successful negotiation, contexts of gender and culture, avoiding common pitfalls, leveraging your strengths, handling multiple offers, and closing the deal.

10:30 AM – 11:30 AM

CRC-1  Understanding Search Committees & Finding Job Announcements
PRESENTER:  A. Green
Are Postdocs Always Essential? What do search committees look for? How do I find academic jobs offered in my field, or within a specific geographical area? Answers to these and other questions presented by Andrew Green, a veteran of the academic job search and numerous search committees.

11:00 AM - 12:00 PM

CRC-2  But I have no Skills! Exploring Myths and Exploring Career Options for PhDs
PRESENTER:  J. Lombardo
Are the skills you developed in graduate training really useful outside of the academic lab? Many PhD candidates and postdocs exploring careers beyond the academy assume -incorrectly-that employers will not find them or their skills attractive. In this session you will have the opportunity to identify skills that you currently possess, and also to find career fields that might be a good fit for these skills.

11:00 AM – 12:00 PM

CRC-4  Making Mistakes When Speaking: How to Handle Them
PRESENTER:  J. Blumenthal
Much attention, time and money are spent on polishing our interview behaviors. But when it comes to the real thing, we frequently find ourselves saying afterwards, “I can’t believe I said that or did this.”

Dr. Blumenthal will teach you how to identify “triggers”, antecedents to behaviors that cause us to say things or behave in ways we wish we didn't. She will teach you how to identify triggers before they happen and increase your chance of demonstrating the right behaviors for winning the job.

1:00 PM – 2:00 PM

PRESENTER:  B. Lindstaedt
In this seminar, you will learn how to prepare resumes and cover letters so you will be ready to search for research jobs in the biotech/pharma industry. Then, you will learn how to find and connect with scientists working at companies. Finally, you will learn how to execute job search strategies necessary for success on the biotech/pharma job market. Each seminar can be taken separately but together they provide comprehensive information about the industry job search process. After this seminar you will understand how to conduct the four job hunting techniques that comprise a comprehensive job search in the biotech industry.

1:00 PM – 2:00 PM

CRC-3  Creating Effective CV’s, Cover Letters, Research & Teaching Statements
PRESENTER:  A. Green
Most of the cuts in the applicant pool are made solely on the basis of your written application materials. Do yours represent you in the strongest possible fashion? How should a cover letter and CV for Stanford differ from one addressed to faculty at San Jose State? And what exactly is a Statement of Teaching Philosophy? Advice will be provided on creating these documents and more for the academic job search.

1:00 PM – 2:00 PM

CRC-4  Networking With Strangers Is Required for Your Future
PRESENTER:  J. Blumenthal
Networking is a crucial dimension of a job offer; from developing a resume to interviewing to the job offer. Where do I begin? What do I take for granted? How do I communicate the right behaviors for the job? And to whom? How much of the employer's business do I really have to know? To be at the right place at the right time, sometimes it takes just one person. But who is this person?

In this seminar, you will learn how to move in the right direction and identify and approach the right people to help you obtain a job offer. You will learn essential behaviors that promote your case and that can be used quite favorably.
1:00 PM – 2:30 PM

CRC-2  Handshakes, Eye Contact, Small Talk: Networking Successfully as a Student or Postdoc
PRESENTER: N. Saul

In this interactive session, we’ll learn how to initiate, organize and maintain your network to promote your academic and professional success. You will practice starting conversations about your professional interests and goals, and we will discuss professional etiquette and strategies to network. You will also sketch your own networking plan for a conference.

2:30 PM – 3:30 PM

CRC-4  Networking: A Required Life Skill
PRESENTER: H. Adams

To succeed in today’s competitive world of work, who you know can be as critical as what you know. Successfully networking, to develop contacts, is a required skill. Networking involves 1) making contacts, 2) establishing cordial relationships, and 3) ultimately bonding to mutually support each other and share information. This seminar explores skills and techniques germane to successful networking. Key topics to be covered include: 1) Dimensions of Networking; 2) Networking to enhance one’s career/professional development; 3) Networking concerns: How? When? Where? Why? 4) Tips for Successful Networking; 5) Do’s and Don’ts of Networking.

3:00 PM – 4:00 PM

CRC-1  Job Hunting in Biotech Part 2 of 3: Interviewing for Scientist Positions
PRESENTER: B. Lindstaedt

This seminar is designed to help you improve your interview skills so that you will be better prepared to land a scientist position in industry. Each seminar can be taken separately but together they provide comprehensive information about the industry job search process.

At the end of the seminar, you will be able to:
• Respond effectively to the most common questions asked during industry interviews
• Answer behavior-based questions in an organized manner
• Begin and end the interview experience with poise and professionalism.

3:30 PM – 4:30 PM

CRC-2  Networking: Optimizing Your Time at EB2017
PRESENTER: J. Tringali

You surely have heard that networking is a key component of the successful job search. The term itself often conjures up negative thoughts and reactions to the uninitiated, sometimes to the point of paralysis. Professional conferences (such as EB 2016) provide endless networking opportunities. If, however, your perception of networking means tackling someone at the coffee station while thrusting your CV in his/her hands, you may want to stop in on this session. The practice of networking has become so much easier with the advent of the internet. We will discuss what you hope to get out of your presence at the meeting, how to set objectives beforehand, and how to meet those objectives once you arrive (while minimizing anxiety).

3:30 PM – 4:30 PM

CRC-3  Making the Grade: Job Talk/Chalk Talk
PRESENTER: D. Behrens

Participants will learn to plan, structure and deliver an effective job talk. This seminar will discuss key elements of the job talk and how to capture the interest of a diverse (faculty, administrators, students) audience.

4:00 PM – 5:00 PM

CRC-4  Nailing the Job Talk & Interview Prep
PRESENTER: A. Green

Going Live: Conference Interviews, On-Campus Interviews, The All-Important Job Talk, and Negotiating the Offer.

MONDAY APRIL 24

9:00 AM – 10:00 AM

CRC-1  Beyond the Bench: Preparing for Your Career Transition in the Life Sciences
PRESENTER: J. Tringali

Is there a way to move your skills from the bench to a related career? There is, assuming one is focused and willing to invest some time in making the switch. We will explore different paths to alternative scientific careers.

9:00 AM – 10:00 AM

CRC-4  Goal Setting, Prioritizing, Time Management
PRESENTER: H. Adams

Most students have dreams and aspirations regarding academic, career and life ambitions. However, too often many fall short of realizing their dreams for lack of established goals and prioritized action steps. So they are left with questions such as these: 1) what am I going to do with the rest of my life? 2) What are my academic/career goals and objectives? And 3) How do I use my time wisely to get from where I am now to where I want to be in the future?
This seminar is designed to answer these questions in the context of goal setting, prioritizing, time, and stress management. Key topics: Decoding the Goals Setting Process, Prioritizing to Determine what is Important, Translating Goals into Time Based Action Steps, Time Management and Avoiding Procrastination, Handling Stress and Anxiety.

9:00 AM - 10:30 AM

CRC-2 NIH (K) Awards

This presentation will focus on the NIH’s Career Development Awards (K) including the most recent K99/00 Pathways to Independence Award (for postdoctoral scientists) and other K awards targeted to individuals with research doctoral degrees (Ph.D. and equivalent) and clinical doctoral degrees (M.D. and equivalent). Among the K awards discussed will be the K01 Mentored Research Scientist Development Award, the K02 Independent Scientist Award, the K22 Career Transition Award, the K08 Mentored Clinical Scientist Development Award, the K23 Mentored Patient Oriented Career Development Award, the K24 Mid-Career patient Oriented Career Award, and K25 Mentored Quantitative Scientist Career Development Award. The interactive discussion will give attendees an opportunity to ask questions of and obtain insight from an NIH representative on these and other awards available for beginning investigators.

10:00 AM - 11:30 AM

CRC-3 Interviewing While Pregnant: Successful Strategies

PRESENTER:  N. Saul

Students/postdocs who are job/postdoc seeking pregnant can find it difficult to know when and how to disclose their pregnancy during a hiring process. The decision of how and when to discuss a pregnancy a personal one; based on a candidate's personal values, how visible their pregnancy is, their tolerance for risk, their awareness of how family friendly their potential employer is, and their level of confidence about their ability to negotiate this situation skillfully.

In this interactive session, we'll give you the information and framework to determine the best time to disclose your pregnancy during the hiring process, as well as the language to discuss your pregnancy professionally. So whether you or someone you know is presently pregnant, you are thinking about expanding your family in the future, or plan to lead a team in the future and would like to know how to manage this skillfully, this session is for you!

By the end of this session, you will be able to:

• Describe factors that make it challenging to know when and how to disclose your pregnancy during a hiring process
• Explain the protections and limits of The Pregnancy Discrimination Act (PDA)/ Title VII of the Civil Rights Act of 1964
• Distinguish the five stages of a hiring process, and formulate a plan about what stage to discuss your pregnancy during the hiring process
• Practice the professionally appropriate language to disclose your pregnancy to an employer

10:30 AM - 11:30 AM

CRC-4 Identifying Your Options using ScienceCareers.org, LinkedIn & More

PRESENTER: A. Green

This presentation is designed to provide you with strategies and resources for beginning to think about what kinds of professional options outside of academia might be a good match for your skills and interests, and how to gain access to additional information about those career possibilities that will help clarify which options warrant further interest and investigation.

11:00 AM - 12:00 PM

CRC-2 Developing Your Core Message/ “Elevator Pitch”

PRESENTER: J. Lombardo

Your core message statement is a brief spoken statement (30-second mini-abstract) about you that lets people know who you are as a professional, what you do well, and what you expect to contribute. It is a well-prepared answer to the question, “Tell me a little bit about yourself.” A positive core message statement will enhance your professional presence and stature, boost self-confidence, and reduce anxiety. It helps you establish your identity as a professional scientist, and it helps open doors for connection, collaboration, and employment. This seminar will provide guidance in a safe place to develop and practice your statement.

1:00 PM - 2:00 PM


PRESENTER: B. Lindstaedt

See Sunday’s listing for description.
**EB2017 Career Resource Center (CRC) Events**

**MONDAY continued**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Presenter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:00 PM – 2:00 PM</td>
<td>Successful Behaviors for Winning an Interview</td>
<td>J. Blumenthal</td>
<td>Eye contacts, arriving on time—these are given behaviors for any interview of any type and everyone knows them. The successful behaviors for winning an interview are those that categorize you as a high risk or low risk for the next recruitment step. In this seminar, you will learn what behaviors are important to exhibit on an interview, and how employers evaluate these behaviors to determine whether or not you are a low risk and move you on to the next recruitment step, or a high risk and don’t.</td>
</tr>
<tr>
<td>1:00 PM – 2:00 PM</td>
<td>Building Your Skills, Networking &amp; Informational Interviews</td>
<td>A. Green</td>
<td>You’ve begun to identify some potential new career paths, but how do you build on these sparks of interest, learn more about the day-to-day content of a given field, and find individuals working in that career who can answer your questions and help you build a network in your emergent profession. This presentation will discuss how to utilize LinkedIn, professional associations, and other networking opportunities to increase your knowledge base and create opportunities for informational interviews.</td>
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<tr>
<td>1:00 PM – 2:30 PM</td>
<td>NIH Fellowship (F) Awards</td>
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<td>This presentation will focus on the NIH’s Ruth L. Kirschstein National Research Service Awards (NRSA). The NRSA research training fellowship (F) awards are targeted to individuals with or seeking research doctoral degrees (Ph.D. and equivalent) and clinical doctoral degrees (M.D. and equivalent). Among the F awards discussed will be the F30, NRSA Individual Predoctoral MD/PhD or Other Dual-Doctoral Degree Fellowship Award, the F31 NRSA Individual Predoctoral Fellowship, the F31 NRSA Individual Predoctoral Fellowship to Promote Diversity in Health-Related Research Award, the F32 NRSA Individual Postdoctoral Fellowship Award, and the NRSA Individual Senior Fellowship Award. The interactive discussion will give attendees an opportunity to ask questions of and obtain insight from an NIH representative on these and other awards available for pre- and postdoctoral fellows and senior investigators.</td>
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<tr>
<td>2:30 PM – 3:30 PM</td>
<td>Job Search in Academia &amp; Industry: Timelines and Effective Strategies</td>
<td>D. Behrens</td>
<td>Are you on the market for both academic and industry jobs, but aren’t quite sure where to start? Learn strategies for successfully navigating the two-track job search. Topics: Organizing your search, timelines/logistics, researching employer organizations, presenting your qualifications and evaluating job offers.</td>
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<tr>
<td>2:30 PM – 3:30 PM</td>
<td>Ten Tough Industrial Interview Questions (and Ten Pretty Good Responses)</td>
<td>J. Tringali</td>
<td>You’ve been invited to interview with that drug development company that you’ve always wanted to work for. You’ve soaked up the position description, and are confident in your ability to do the job, as well as answer any/all technical questions during the interview process. The day is yours... until that first question catches you by surprise and your confidence begins to wilt. Be prepared for those non-technical questions that you will almost certainly hear at some point, know why they are asked, and learn what good (if not great) responses to those questions might be in this workshop.</td>
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<tr>
<td>2:30 PM – 3:30 PM</td>
<td>Making the Case for Graduate School</td>
<td>H. Adams</td>
<td>Advanced degree level training has emerged as a key requirement for garnering positions of leadership in academia, government, and industry and for career in today’s workplace. Beyond this, an advanced degree signal scholarship, maturity, and the capacity to do rigorous work; all attributes that can provide an edge in the workplace. This seminar explores graduate education in the context of: 1) a career enhancement strategy; 2) graduate study opportunities/options; 3) how-to negotiate the graduate school admission and financial aid process, and 4) placing graduate studies in one’s overall academic/career/life plans. Key topics: Making the Case for Graduate School, The Application/Admissions Process, funding for Graduate Work, and Putting the Pieces Together for a Smart Application.</td>
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**Ten Ways to Get Lucky in the Job Search**

**PRESENTERS:** P. Clifford and J. Lombardo

Although it is important to have a plan for your career progression, it is just as important to take advantage of unexpected events along the way. This seminar will suggest specific ways to foster chance occurrences that may influence your job search. We will examine ten practical suggestions to prepare you to make happenstance work positively for you.

**Job Hunting in Biotech Part 2 of 3: Interviewing for Scientist Positions**

**PRESENTER:** B. Lindstaedt

See Sunday's listing for description.

**Making the Grade: Job Talk/Chalk Talk**

**PRESENTER:** D. Behrens

See Sunday's listing for description.

**Attitude & Behaviors: How are you Perceived?**

**PRESENTER:** J. Blumenthal

Every person carries within them thoughts, feelings, and emotions that influence the way we are perceived by others, and the way we behave. This interaction (perceptions of others and our behavior) is so very complex, and happens so quickly, that perceptions are not necessarily at a conscious level and therefore opinions about you can be formed before you even have a chance to make any corrections to your attitude or behavior. This is a serious consequence during the job search, and a consequence we want to do without.

Dr. Blumenthal will teach you how to present yourself in your resume, on the interview, and subsequent follow ups, including the job offer. She will teach you what goes on behind the scenes regarding attitudes and behaviors so that you have more leverage on your side. The end result is a positive consequence increasing the likelihood of job interviews and a job offer.

**Attitudes in Academic and Employment Achievement**

**PRESENTERS:** J. Blumenthal and J. Lombardo

Attitude is one of the strongest non-verbal determinants of academic and employment achievement especially in competitive settings, yet it is rarely addressed as an important behavior for applicants to focus on. Attitudes are complex circular designs since each established attitude creates a perception, which establishes an attitude, and the cycle continues. Attitude and dyadic interactions are known to be complex. Add group and panel interviews to this, and attitudes of the applicant can catapult the individual to a successful outcome, or discontinue the applicant’s competition early in the process. The authors will present a behavioral analysis of an attitude, teach how to modify or change attitudes for success and effectiveness, and present cases they experienced pertaining to attitudes in academic and employment competition. Attendees will learn how to generalize the material to their own social function opportunities that can provide additional benefits to competition in their respective settings. They will learn highly effective attitudes and how to develop them for competitive job search and educational promotion situations for professionals.

**What You Seek is What You Get**

**PRESENTER:** H. Adams

It is generally agreed that sharing in a mentoring relationship can boost one’s career/professional/technical growth and development. One common concern of some professionals in today’s workplace regarding mentoring is this: “Since I am not privileged to have formal mentoring available to me, how do I find and choose a mentor on my own?” This seminar provides an overview of essential strategies for identifying, screening, selecting, and using a mentor(s). Key topics: Decoding the Language of Mentoring, Establishing Mentoring Needs and Expectations, Identifying, Screening, and Selecting a Mentor, Building a Mentorship Alliance, Developing Mentorship Goals and Action Steps.

**Translating Your Credentials on Paper (CV=>Resume) and in Person**

**PRESENTER:** A. Green

Now that you’ve completed the exploration phase, and honed in on your new professional areas of interest, how do you present yourself on paper and in-person as a compelling, credible candidate. This presentation focuses on how to
transform your academic CV into an effective resume, as well as, how to write a strong cover letter and prepare for future interviews.

9:00 AM - 10:30 AM
CRC-2 NIH (K) Awards
See Monday’s listing for description.

10:30 AM – 11:30 AM
Job Hunting in Biotech Part 3 of 3: Compensation Negotiation for Scientist Positions
PRESENTER: B. Lindstaedt.
See Monday’s listing for description.

10:30 AM – 11:30 AM
CRC-4 But I have no Skills! Exploding Myths and Exploring Career Options for PhDs
PRESENTER: J. Lombardo
See Sunday’s listing for description.

1:00 PM – 2:00 PM
CRC-1 How to Choose Your Ideal Career
PRESENTER: B. Lindstaedt
See Sunday’s listing for description.

1:00 PM – 2:00 PM
CRC-4 Navigating Doctoral Work Protocols/Milestones/Requirements
PRESENTER: H. Adams
Success in graduate school starts with goal setting and the formation of an action plan to achieve desired results - obtaining the degree sought. The graduate study plan should delineate 1) what is to be accomplished in terms of expectations, degree requirements, and program milestones; 2) action steps that establish priorities for tasks to be completed; 3) process for implementing action steps; and 4) timeframe for meeting program requirements and milestones. Session participants will be guided through exercises and provided with templates for developing a graduate program plan. Session topics: Planning in the context of the Graduate School Process, Establishing Realistic Program Goals, Objectives, and Milestones, the Planning Process-Writing and Implementing a Graduate Degree Plan, and Charting Milestones to Monitor Progress and Refine Actions Steps.

1:00 PM - 2:30 PM
CRC-2 NIH Fellowship (F) Awards
See Monday’s listing for description.

1:00 PM – 2:30 PM
CRC-3 Talking About Yourself: How to Interview Well
PRESENTER: N. Saul
In this session, we will help you learn how to interview successfully, by looking at the interview process from employer’s perspective. We will discuss the overall hiring process and the all-day interview format, as well as the steps to prepare for an interview, effectively use the different types of interview questions to both present your skills and experience, and assess the employer’s needs, and criteria to ultimately determine if the position is a good fit for you.

2:30 PM – 3:00 PM
CRC-4 Selling Yourself to the Life Sciences Industry
PRESENTER: J. Tringali
The industrial employer is often looking for a different set of skills, attitudes, and interview responses than those sought by academic or government research institutions. In this workshop, we will explore the who, what and why of the pharmaceutical and biotechnology industries as they pertain to their hiring processes. Discussions will focus on the development and positioning of your marketing message in order to improve the odds of a successful industry job search.

3:00 PM – 4:00 PM
CRC-1 Global Interview Skills: A Practice Workshop for International Candidates
PRESENTER: D. Behrens
This interview practice workshop is customized for international job candidates. The key topics are: The four central questions in virtually every employment interview, understanding cultural and communication dynamics, the STAR method, and how to use “small talk” for big results.

3:00 PM – 4:00 PM
CRC-2 The Strategic Postdoc: How to Find & Leverage Your Postdoc Experience
PRESENTER: A. Green
Many PhDs just kind of fall in to a postdoc, rather than thinking about it from a strategic perspective. Your postdoc is never an end in itself; rather it’s a means to another end whether that goal is a faculty position at a research university, a small college, national lab, or perhaps an industry job. Learn how to find postdoc opportunities that will best prepare you for that next step, and how to use your postdoc experience to facilitate the transition to your next position.
2017 ASBMB career development opportunities

Webinars

Careers beyond the bench in industry
May 11

Building your C.V. to get “known”ticed
June 14

Interviewing, negotiating and salaries
July – date TBD

No registration fee!

Space is limited. Register at www.asbmb.org/webinars

Online resources

• Short tutorials on career topics such as informational interviews
• Videos describing the types of careers open to Ph.D.s
• Online course, The Art of Science Communication

www.asbmb.org/careers

Workshops

Interactive Mentoring Activities for Grantsmanship Enhancement
June 22–24 | Washington, D.C.
Assistant professors and postdocs transitioning into independent faculty positions receive feedback on their research proposals and mentoring. Apply by May 5.

Save the date: Catalyze Your Career
Sept. 21–22 | Portland, Ore.
Learn about careers open to Ph.D.s; improve your communication skills, application materials and interview skills; network; and plan for your career.

Save the date:
Preparing Science Professionals
Sept. 29–30 | Lexington, Ky.
Gain insight into different STEM career paths and take part in interactive training in communication, outreach and professional development.

Save the date: Catalyze Your Career
Learn about careers open to Ph.D.s; improve your communication skills, application materials and interview skills; network; and plan for your career.

More information at www.asbmb.org/workshops
## ASBMB Posters

### SUNDAY

**ASBMB Poster Sessions**

**EXHIBIT HALL**

POSTER SET UP BY: 9:00 am  
POSTER DISPLAY: 9:00 am – 4:00 pm  
POSTER REMOVAL: 4:00 – 6:00 pm

**Poster manning: times:**

ODD BOARD NUMBERS: 12:00 – 1:15 pm  
EVEN BOARD NUMBERS: 1:15 – 2:30 pm

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<td>Drug Screening and Development</td>
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<td>Learning Tools in Molecular Biology and Biochemistry Undergraduate Education</td>
<td>B297-B306</td>
<td>Protein and Peptide Chemistry</td>
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<td>B307-B312</td>
<td>Systems Biology Technologies and Applications</td>
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<td>Experimental Biology and Medicine</td>
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<td>Microbial Systems and Parasitology</td>
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<td>RNA Structure, Folding and Dynamics</td>
<td>B418-B420</td>
<td>Bacterial Communication</td>
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<td>Mechanisms and Regulation of Protein Synthesis</td>
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<td>Microbe-Host Interactions</td>
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<td>Mitochondria in Health and Disease</td>
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SUNDAY
APRIL 23

587
Undergraduate Education (ASBMB)

B1 587.1 A Multiweek Tyrosinase Inhibitor Synthesis and Analysis Project: A Capstone Experiment for the Undergraduate Biochemistry Laboratory Course. P.S. Merz, C.N. Streu, R.D. Reif, K.Y. Neiles, A.J. Schech, St. Mary’s College of Maryland, Albion College and University of Mary Washington

B2 587.2 Research and Writing to Promote Critical Thinking in Undergraduate Education. R.P. Rogers, Wentworth Institute of Technology


B4 587.4 Improving STEM Student Retention via Early Research Engagement: A Pilot. P.G. Bouyer, M. Watters, Valparaiso University

B5 587.5 Teaching Chemical Biology at a Primarily Undergraduate Institution. A.M. Danowitz, Mercyhurst University

B6 587.6 Using an Alternate Reality Learning Experience (ARLE) to Teach Molecular Biology Techniques and Concepts in a Genetics Laboratory. C.L. Clauson-Kozina, J.D. Borden, S. Rheinschmidt, G. Kunzeweiler, Saint Leo University


B8 587.8 What the Biochemistry Education Research Literature Can Tell University-Level Biochemistry Instructors. F.K. Lang, G.M. Bodner, Purdue University

B9 587.9 Integration of Literature-Based Activities to Enhance the Learning of Content, Scientific Process, and Quantitative Analysis in Biochemistry Courses. H. Masuda, Indiana University Kokomo

B10 587.10 Teaching Cell Signaling Through Research: The Freshman Research Initiative at the University of Texas at Austin. G. Clark, S. Rodenbusch, S. Roux, University of Texas at Austin

B11 587.11 Execution and Assessment of a Mindset Intervention in an Introductory Biochemistry Class. D.J. Hall, Lawrence University

B12 587.12 Introduction of Enzymatic Polymer Degradation to Enhance the Undergraduate Polymer Chemistry Curriculum. A.E. Neely, N.Y. Davis, M.H. Weiland, Armstrong State University

B13 587.13 Northwest Biosciences Consortium RCN-UBE: Organization and Development of a Faculty Network Leadership Team. A. Kruchten, E. Baumgartner, A. Beadles-Bohling, J. Brown, J. Duncan, L. Kayes, S. Kiser, S. Seidel, W. Shriner, S. Stavrianas, C. Tillberg, The College of Saint Scholastica, Western Oregon University, University of Portland, Linfield College, Willamette University, Oregon State University, Lane Community College, Pacific Lutheran University and Mount Hood Community College


B15 587.15 Phylogenetic Analysis of RuBisCO: An Active Learning Strategy for Teaching Plant Evolution. M. Van Stry, Lane College

B50 631.2 Stressing Interdisciplinarity to Mold the Undergraduate Experience. C.M. Keller, B.E. Bridges, J.N. Roney, D.R. Dries, Juniata College

588
Learning Tools in Molecular Biology and Biochemistry Undergraduate Education

B16 588.1 A Process for Defining and Validating Learning Competencies for Course-Based Undergraduate Research Experiences in a Biochemistry Laboratory Course. S.M. Irby, N.J. Pelaez, T.R. Anderson, Purdue University

B17 588.2 A Model for a Scientific Literature and Data Analysis Driven Undergraduate Course. K.K. Resendes, Westminster College

B18 588.3 Improving Student Understanding of Pre-Requisite Knowledge and Long Term Understanding of Biochemical Concepts. A.T. Taylor, W.R. Novak, Wabash College

B19 588.4 Transition to a Course-Based Undergraduate Research Experience (CURE). P.A. Craig, J.L. Mills, R. Roberts, M. Pikaart, C. Daubner, S. Irby, T. Anderson, Rochester Institute of Technology, Ursinus College, Hope College, St. Mary’s University and Purdue University

B20 588.5 How Four Research Scientists Integrate Methods, Mechanisms, Context, Analogies, and Theory to Communicate Explanations About Protein Folding and Dynamics. K.A. Jeffery, N. Pelaez, T.R. Anderson, Purdue University


B22 588.7 Variation in the Effectiveness of Clicker Use Based on Cohort Composition in a Small Upper Division Cell and Molecular Biology Course. K.K. Resendes, Westminster College

B23 588.8 Experiences of Undergraduate Students Identifying Proteins of Unknown Function as Part of a Teaching Laboratory in a Biochemistry Course. S. Daubner, J. Beckman, J. Beltran Gastelum, S. Mallet, E. Vogt, St. Mary’s University


B27 588.12 Modeling Interdisciplinary Collaborations Through a Course-Based Undergraduate Research Experience (CURE). R. Roberts, J. Koepe, S. Price, B. Allwein, T. Anderson, S. Daubner, S. Irby, J. Mills, M. Pikaart, P. Craig, Ursinus College, SUNY College at Oswego, Purdue University, St. Mary’s University San Antonio, Rochester Institute of Technology and Hope College
589
Expanding Undergraduate Research Opportunities


590
Experimental Biology and Medicine


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Genome Dynamics: DNA Replication, Repair and Recombination

B43 591.1 DDI1- and DDI2-Dependent Removal of Replication Termination Factor Domain Containing 1 (RTFDC1) from Replication Forks Is Necessary for Proper Response to Replication Stress. M.C. Kottmann, B. Conti, F.P. Lach, A. Smogorzewska, The Rockefeller University

B59 592.7 The Epsilon Subunit of DNA Polymerase Ill in the Bacterial Response to Quinolones. Z. Whatley, N. Sy, S. DiDomenico, A. Finck, Gettysburg College

B60 592.8 Investigating the Mechanism of Trans-Leision Synthesis by Human DNA Polymerase Kappa. T.B. Allen, Z. Younger, B. Sampoli Benitez, Texas A&M University

B61 592.9 Role of Exol Nuclease in Telomere DNA Degradation in yku70/yku80 Mutants of S. cerevisiae. J.A. Ream, L.K. Lewis, Texas State University
596 RNA: Processing, Transport, and Regulatory Mechanisms

B115 596.1 Nuclear Export Factor 3 Regulates Localization of SnORnas. M. Li, J. Lee, A. Sletten, K. Pyles, J. Schaffer, Washington University in St. Louis School of Medicine

B116 596.2 Nuclear Phosphoinositide Signalling Coupled Variant Poly(A) Polymerase Star-PAR Regulates Metastatic Invasion. S. Ap, R.S. Laishram, Rajiv Gandhi Centre for Biotechnology, India

B117 596.3 Withdrawn.


597 RNA Polymerases

B128 597.1 P-TEFb Regulates Oocyte Maturation and Embryonic Genome Activation by Pol II CTD Phosphorylation and Ribosomal RNA Processing in Mammals. D.I. Jin, R.K. Ogani, T. Lin, J.E. Lee, S.Y. Kim, Chungnam National University, Republic of Korea

B129 597.2 Early Elongation Control of RNA Polymerase II Transcription by TFIIS. S. Peck, M. Fox, W. Smith-Kinnaman, H. Gao, Y. Liu, A. Mosley, Indiana University School of Medicine

598 RNA Binding Proteins

B130 598.1 Regulation of RNA Polymerase Translocation by the RNA and DNA Hybridization at the Upstream Edge of the Transcription Bubble. M. Kireeva, C. Trang, G. Matevosyan, L. Lukbiowska, M. Kashlev, NC

B131 598.4 PAF53 Is Essential in Mammalian Cells: CRISPR/Cas9 Fails to Eliminate PAF53 Expression. L. Rothblum, E. Chang, K. Rothblum, OUHSC

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599 RNA Structure, Folding and Dynamics

B140 599.1 Thermodynamic Analysis of a 4×4 Internal Loop in Magnesium Riboswitch. E. Gilbertson, Colorado College

B141 599.2 Structural Probing of the Cap-Independent Vascular Endothelial Growth Factor Messenger RNA. W. Huang, H. Scott, W. Merrick, D. Bhattacharyya, S. Basu, D. Taylor, Case Western Reserve University and Kent State University


B143 599.4 Unique Structures in the 3′ UTR of Blackcurrant Reversion Nepovirus Genomic RNA 1 Promote Translation Initiation. L. D. Baquerro-Galvis, E. Shields, M. E. Filbin-Wong, Metropolitan State University of Denver

B144 599.5 Thermodynamic Examination of the Bulged-G Motif in the 23S Ribosomal RNA. Z. Aman, Colorado College

B145 599.6 A Cellular Non-Coding RNA Activator of Human 2′-5′-Oligoadenylate Synthetase 1. B. M. Calderon, G. L. Conn, Emory University

600 Mechanisms and Regulation of Protein Synthesis

B146 600.1 Analysis of Eukaryotic Translation Initiation Factor (eIF) Phosphorylation by Mass Spectrometry. K. Beglinger, N. Villa, A. Andaya, J. Leary, C. Fraser, University of California, Davis

B147 600.2 Regulation of Protein Translation Initiation by Epigenetics. M. K. Holz, Yeshiva University

B148 600.3 Phosphorylation of eIF2 Directs Multiple Mechanisms of Preferential Translation for Cell Adaptation to Environmental Stress. R. C. Wek, S. K. Young, J. A. Wily, M. E. Fusakio, Indiana University School of Medicine

B149 600.4 Protein Synthesis Regulation by Soy Isoflavonones Metabolite Equol in Metastatic Breast Cancer Cells. A. M. Cruz-Collazo, C. de la Parra, R. J. Schneider, S. M. Dharmawardhane, University of Puerto Rico - Medical Sciences Campus, Puerto Rico and New York University School of Medicine

B150 600.5 Antimicrobial Peptide Turns the Ribosome Into a Release Factor Trap. T. Florin, C. Maracci, M. Graf, F. Karki, D. Klepacki, M. Y. Rodnina, D. N. Wilson, N. Vázquez-Laslop, A. S. Mankin, University of Illinois at Chicago, Max Plank Institute for Biophysical Chemistry, Germany, University of Munich, Germany and University of Hamburg, Germany

B151 600.6 Mediating Protein Synthesis in Developing Neurons: Ntrin Receptor Deleted in Colorectal Cancer (DCC) Binds Eukaryotic Ribosomes to Prevent Translation of Messages Independent of Initiation Mechanism. M. E. Filbin-Wong, T. Gonen, J. S. Kieft, Metropolitan State University of Denver, Howard Hughes Medical Institute and University of Colorado School of Medicine

B152 600.7 Characterization of CD38 mRNA, Protein, and Enzyme Activity in the Cell Types of the Heart. J. Boslett, J. L. Zweier, Ohio State University

B153 600.8 Differentiation of Human Keratinocytes Requires Translational Control by the eIF2 Kinase GCN2. A. Collier, R. Wek, D. Spandau, Indiana University School of Medicine

B154 600.9 The N-Terminus of Secis Binding Protein 2 Is Required for Processive Selenocysteine Incorporation in Selenoprotein P. M. H. Pinkerton, M. Vetick, S. P. Shetty, P. R. Copeland, Rutgers University

B155 600.10 Messenger RNA Stability Drives the Expression of Antibiotic Resistance Methyltransferase Independently of Ribosome Scalling. K. Los, M. Yap, St. Louis University School of Medicine

B156 600.11 Regulation of Protein Synthesis by Post-Translational Modification of Eukaryotic Translation Elongation Factor IA. P. Sharma, M. K. Mateyak, D. He, W. B. Perez, T. G. Kinzy, Rutgers-RWJ Medical School

B157 600.12 IL-6 Modulates Cardiac Muscle Proteostasis and Anti-Oxidative Capacity Post-Burn. A. E. Ayadi, Y. Wang, A. Prasai, M. Wetzel, A. Gourly, C. Porter, D. N. Herndon, C. Finnerty, University of Texas Medical Branch and Shriners Hospital for Children


601 Protein Interactions and Binding (I)

B160 601.1 Effect of Transient Helicity of cMyb on Its Binding Affinity to the Kix Domain of CBP/p300. A. Posapati, W. Borchers, M. D. Carbtree, S. L. Shamsas, J. Clarke, G. W. Daughdrill, University of South Florida and University of Cambridge, United Kingdom

B161 601.2 Importance of the C-Terminal Histidine Residues of Helicobacter pylori GROE5 for Toll-Like Receptor 4 Binding and Interleukin-8 Cytokine Production. L. Chow, H. Lee, Y. Su, B. Huang, F. Hsieh, College of Medicine and National Taiwan University, Taiwan

B162 601.3 Distinct Liver X Receptor Alpha Residues at the Protein-Protein Interface Mediate Ligand Dependent Transactivation in Heterodimeric Contexts. S. Bedi, S. D. Rider-Jr, H. A. Hostetler, Wright State University

B163 601.4 Predictive Models of Peptide RMS Fluctuations in the Context of HLA-A*02:01 Through Sequence Alone. C. Ayres, T. Riley, S. Corcelli, B. Baker, University of Notre Dame

B164 601.5 CD47 Is Required for Activation and Clustering of the TCR/CD3/Intraflagellar Transport Complex to the Immune Synapse. A. Noguor, S. Kaur, S. P. Singh, D. D. Roberts, National Institutes of Health, National Cancer Institute, Virginia Commonwealth University, National Institutes of Health and National Institute of Allergy and Infectious Diseases

B165 601.6 Biophysical and Structural Characterization of Antigen Recognition by the Allotype-Active HCV1406 TCR. Y. M. Wang, B. M. Baker, University of Notre Dame

B166 601.7 Effect of AllostERIC Changes in MERS 3CL Protease Enzymatic Activity and Dimerization. L. S. Gonzalez, B. Anson, A. Mesecar, Purdue/Truman and Purdue University

B167 601.8 Molecular Dynamics Simulations Support Multiple Binding Sites for Phospholamban on SERCA. N. Smolin, S. L. Robia, Loyola University Chicago


602  Protein Modifications

B170  601.11  Activation of the H-NOX Redox Sensor in Vibrio cholerae by a Zinc Ligand Switch Mechanism.  R. Mukhopadhyay, E.T. Yuki, New Mexico State University

B171  601.12  Regulation of Ankyrin-Repeat and SOCS-Box Protein 9 (ASB9) in Ovarian Follicles and Identification of Binding Partners.  G. Benoit, J.G. Lussier, K. Ndiaye, University of Toronto, Canada

B172  601.13  Determination of Pair-Wise Protein Interactions Between Sp7 and Drosophila melanogaster SAGA Subunits.  E.E. Colon Acosta, V. Weake, R. Stegeman, A. Harris, University of Puerto Rico, Arecibo Campus, Puerto Rico and Purdue University

B173  601.14  The Impact of T Cell Receptor Docking Geometry on T Cell Signaling.  J. Devlin, D. Harris, N. Singh, S. Smith, D. Kranz, B. Baker, University of Notre Dame and University of Illinois

603  Protein Structure and Biophysics (I)

B189  603.1  Influenza Hemagglutinin Fusion Domain by Advanced NMR Using Novel Orthogonal Refinement, BICS Curvature Measurements and Native Lipid Environments.  S.T. Smrt, University of Illinois Chicago

B190  603.2  Structural Differences Associated With DNA Binding of p53 Family Member Proteins.  G.R. Mavodza, Y. Fang, Z. Sherif, Howard University


B192  603.4  Insights Into the Mechanism of Protein Folding Loss Upon Covalent Modification by Homocysteine Thiocarbonate.  G.S. Sharma, L.R. Singh, Dr. B. R. Ambedkar Centre for Biomedical Research and University of Delhi, India

B193  603.5  Structure of hRpn13 at the Proteasome.  X. Lu, F. Liu, U. Nowicka, V. Sridharan, M. Dyba, S.G. Tarasov, K.J. Walters, Center for Cancer Research, National Cancer Institute

B194  603.6  A Conformationally Gated Model for Serotonin 5-HT1B Receptor Agonist Transport by P-Glycoprotein.  L.A. Wilt, K.P. Sigdel, D. Nguyen, G.M. King, A.G. Roberts, University of Georgia and University of Missouri

B195  603.7  Significance of Charged Residues in the Catalytic Sites of Escherichia coli ATP Synthase.  Z. Ahmad, A.T. Still University

B196  603.8  Structural Insights Into Oxalate Biosynthetic Component.  S. Rhee, J. Oh, S. Kim, Seoul Nat’l University, Republic of Korea

B197  603.9  Solution Structure of the Transmembrane Nogo-B Receptor and Insight Into Its Topological Orientation by Small Angle X-Ray Scattering Analysis.  J. Holcomb, N. Spellman, W. Shang, Q. Miao, Z. Yang, Wayne State University School of Medicine, BiocAT, Argonne National Laboratory and Medical College of Wisconsin

B198  603.10  The Importance of a Salt Bridge in FNR Transcription Factor Activity.  S.G. Kazmouz, L.J. Badang, L.J. Moore, Merrimack College

B199  603.11  Thermodynamics of the Gamma B Crystallin Protein Demonstrated by T1/T2 NMR Experiments.  K. Umphred-Wilson, A. Fadden, J. Zanet, K. Mathews, G. Thurston, J. Mills, L.V. Michel, Rochester Institute of Technology


B201  603.13  Unique Solutions to a Common Problem: Understanding How I-Crel Homologs Recognize the Same DNA Target Sequence.  C.R. Polkingham, B. Kaiser, N. Wylie, M. Tang, R. Ruff, Seattle University

B202  603.14  Polar Subdomain Alterations Lead to β-Helix Aggregation.  D. Sweeting, D. Grillie, T. Weaver, University of Wisconsin La Crosse


B204  603.16  Labilization of the Cobalt-Carbon Bond in Vitamin B12 Bound to Adenosyltransferase.  G.C. Campanello, U. Twahir, T. Brondul, K. Warrnice, R. Banerjee, University of Michigan, Emory University and University of Wisconsin
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B214 604.2 Understanding the Influence of Translation-Elongation Kinetics on Protein Structure and Function. E.P. O’Brien, Penn State University

B215 604.3 The Structural Basis for Polypeptide Translocation by the HSP104 Disaggregase. D.R. Southworth, A. Yokom, S. Gates, M. Jackerel, J. Shorter, University of Michigan and University of Pennsylvania

B216 604.4 Engineering Potentiated Hsp104 Variants with Enhanced Substrate-Specificity to Counter Neurodegeneration. K.L. Mack, J. Shorter, Perelman School of Medicine at the University of Pennsylvania

B217 604.5 Inorganic Polyphosphate: A Mediator of Protein Folding in Osteoblasts via Interaction with Cyclophilin B. M. Khong, L. Li, C.Y. Lang, J.A. Tanner, School of Biomedical Sciences, Li Ka Shing Faculty of Medicine, The University of Hong Kong, Hong Kong, Neuroscience Research Institute, Peking University, People's Republic of China

B218 604.6 Chaperoning the Proteome. W.A. Houry, University of Toronto, Canada

B219 604.7 Redox Modification of Fes1 and Its Role in Cellular Oxidative Stress Response. E. Nicklow, C. Sevier, Cornell University


B221 604.9 Characterization of Sup35, Rnq1, and Ure2 Cotranslational Prion Aggregation in Saccharomyces cerevisiae. B.T. Allwein, Ursinus College

B222 604.10 Inter-Domain Interactions in Nascent Polypeptides Interfere with Productive Protein Folding. K. Liu, K. Maciuba, C. Kaiser, Johns Hopkins University

B223 604.11 Defining Functional Variation of Diverse Hsp104 Homologues. Z. March, J. Shorter, Perelman School of Medicine at the University of Pennsylvania


B225 604.13 The Role of Rr-Resident Lectin Chaperone UGT1 in MHC Class I Peptide Loading. N. Arshad, P. Cresswell, Yale University School of Medicine


B227 604.15 Functional Characterization of Natural Single Nucleotide Polymorphisms Found on HSPA1A, the Major Stress Inducible Gene, in Humans. P. Nguyen, B. Kdeiss, S. Ord, K. Hess, R. Oliverio, N. Nikolaidis, California State University, Fullerton

B228 604.16 Dual Function of the Trigger Factor Chaperone in Nascent Protein Folding. C. Kaiser, K. Maciuba, K. Liu, Johns Hopkins University

B229 604.17 Defining Interactomes of Wild-Type Versus Misfolding Type I Collagen Variants in Osteogenesis Imperfecta. D.N. Doan, A.S. DiChiara, A. Del Rosario, M.D. Shoulders, MIT

B230 604.18 Evolution and Natural Variation of HSPA1A, the Major Stress Inducible Gene, in Humans. P. Nguyen, B. Kdeiss, S. Ord, K. Hess, R. Oliverio, N. Nikolaidis, California State University, Fullerton

B231 604.19 Identification of a Pharmaceutical Therapeutic for Nod2, a Protein Mutated in Crohn’s Disease, Through Development of a Screen Using Split GFP Complementation. H.C. Wastely, C. Hou, C. Grimes, University of Delaware

B232 604.20 Loss of Sil1, an ER Co-Chaperone, Causes an Age-Dependent Collapse of Skeletal Muscle Proteostasis, Affecting Pathways Critical for Muscle Physiology. V.P. Ichhaporia, P. Vogel, S. Frase, L. Horner, L.M. Hendershot, St. Jude Children’s Research Hospital and The University of Tennessee Health Science Center

B233 604.21 New Insights from High-Throughput Biophysical Screening of Protein-Sequence and Coding-Sequence Libraries. B. Allen, Penn State University
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B239 606.2 Metal Drives Chemistry: Dual-Function of Acireductone Dioxygenase Enzymes. A.R. Deshpande, K. Wagenpfel, T.C. Pochapsky, G. Petsko, D. Ring, Brandeis University, Allen Pharaoceuticals and Weil Cornell Medical School

B240 606.3 Inhibition of Acetyl Cholinesterase Extracted from Five Parts of the Brain by 5,6 Dihydroxytryptamine. M.H. Osman, Medical Research Institute, Egypt

B241 606.4 Defining Energetic Homeostasis in Toxoplasma gondii. R.D. Murphy, A. Dhara, A.P. Sinai, M.S. Gentry, University of Kentucky


B244 606.7 HLA-DM Senses Peptide-MHC Class II Interactions Throughout the Peptide Binding Groove. E. Reyes-Vargas, A.P. Barker, Z. Zhou, X. He, P.E. Jensen, University of Utah and ARUP Laboratories

B245 606.8 Examining the Mechanism of Egt2 in Ergothioneine Biosynthesis. K.R. Kathuria, S. Irani, P. Liu, Y. Zhang, The University of Texas at Austin and Boston University


B247 606.10 Investigating the Catalytic Cycle and Active Site Residues of the Biodesulfurizing Enzyme, Dibenzothiophene Monoxygenase, DszC. S.A. Jirde, L. Gonzalez-Osorio, K. Eberle, J. Vey, California State University, Northridge

B248 606.11 The E. coli and Human Nudix Hydrolases NudC and NUDT12 CleaveDamaged NADH. A. Ray, B.A. Beaupre, G.R. Moran, D.N. Frick, University of Wisconsin-Madison

B249 606.12 Salt-Dependent Protein Splicing of the Intein in the Haloquadratum walsbyi DNA Polymerase. D.A. Reidy, College of the Holy Cross


B253 606.16 Structural and Biochemical Analyses of Alcohol Dehydrogenase E Enzymes from Entamoeba invadens IP-K, E. invadens VK-1 NS, and E. dispers. M. Gabrielle, J. Leito, A. Espinosa, Roger Williams University

B254 606.17 Role of Cys292 in Coupling ATP Hydrolysis to RNA Unwinding Catalyzed by the Hepatitis C Virus Helicase. M.M. Yurakhimovich, D. Frick, C. Marohonic, University of Wisconsin-Milwaukee and Abbott Laboratories

B255 606.18 Purification and Characterization of Flavin Reductase, DszD, from Rhodococcus erythropolis. N. Mendoza, California State University and Northridge

B256 606.19 Conditional Protein Splicing of Inteins from Extremophiles. A. Gomez, K.V. Mills, College of the Holy Cross

B257 606.20 Investigating Metallocofactor Assembly and Enzymatic Capability In the Novel Mn/Fe Lipid-Binding Oxidases. E.K. Miller, N.E. Trivelas, College of the Holy Cross

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B258 607.1 Functional Characterization of Three GH10 Xylanases. J. Park, E. Glasgow, B.G. Fox, Winthrop University and University of Wisconsin - Madison

B259 607.2 Using Dynamics and Structure to Understand Allostery in Signaling Enzymes. W. Peti, University of Arizona

B260 607.3 Understanding the AllostERIC Control of Kinase Activation by Phosphorylation-Regulated Protein Dynamics. D.B. Iverson, N. Ahn, University of Colorado and Boulder

B261 607.4 Probing Carrier Domain Movement and Location During Catalytic Turnover by Pyruvate Carboxylase. M. St. Maurice, Y. Liu, J.H. Hakala, Marquette University

B262 607.5 Measuring the Positioning and Translocation of the Swinging-Arm Domain of Pyruvate Carboxylase. J.H. Hakala, M. St. Maurice, Marquette University

B263 607.6 Unmixing Enzyme Allostery. A. P. Fitzpatrick, Princeton University and University of Texas Health Science Center


B265 607.8 A Structure-Based Mechanism for Oxidative Decarboxylation Reactions Mediated by Amino Acids and Heme Propionates. A. I. Celis, Montana State University

B266 607.9 Deciphering the Logic of Natural Product Biosynthesis. B. L. University of North Carolina at Chapel Hill

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B267 608.1 An Essential Oil Blend Specifically Enhances Immune Responses in Human Cancerous Co-Cultures. X. Han, T. Parker, doTERRA International

B268 608.2 Drugging the Undruggable Steroid Receptor Coactivators. J. Wang, Baylor College of Medicine

B269 608.3 Characterization of a Cardiac Drug-Inactivating Enzyme from the Prominent Human Gut Microbe, Eggerthella lenta. L.J. Bisanz, P. Turnbaugh, E.P. Balskus, Harvard University and UCSF


B271 608.5 PTEN Regulation by WW2P2. Z. Chen, D. Dempsey, W. Xu, X. Li, D. Dempsey, P. Devreotes, C. Wolberger, S. Gabelli, P. Cole, Johns Hopkins University

B272 608.6 Inorganic Arsenic Bioaccessibility/Bioavailability from Cooked Rice Using in Vitro Digestion/Caco-2 Cell Model. Y. Lee, S. Lee, Korea University, Republic of Korea

B273 608.7 Total Synthesis, Antileishmanial and Anticancer Activity of the Acetylenic Fatty Acids 6-Hexadecenoyl, 10-Phenyl-6-Decenoic, and 10-Cyclohexenyl-6-Decenoic Acids. E. Alvarez, N. Carballa, C. Morales, Y. Delgado, A. Tinoco, R. Reguera, R. Alvarez, B. Balafia, University of Puerto Rico, Rio Piedras Campus, Puerto Rico, University of Leon and Vegazania Campus, Spain
Drug Screening and Development


B282 609.2 Determining the LC_{50} of a Novel Metap Inhibitor in Lung Carcinoma Cells. A.P. Addison, N.F. Hayden, E. Perli, E. Erwin, G. Chow, L. Yu, S. Bhalla, N. Condic, O. Olaleye, R. Rosell, University of St. Thomas and Texas Southern University


B284 609.4 Assessing the Effects of ErbB2 Kinase Inhibition in Conjunction with Broad Spectrum Anti-Cancer Treatments. C. Tremper, A.R. Matha, C.E. Taylor, Mercyhurst University

B285 609.5 Identification of Yeast Deletions Strains That Alter the Efficacy of Antifungal Drugs. E. Bataba, N.D. Serratore, S.D. Briggs, Georgia State University and Purdue University

B286 609.6 The PepSavi-M5 Pipeline for Natural Product Bioactive Peptide Discovery. C.L. Kirkpatrick, D. Pritchard, N. Parsley, T. Liu, D.W. Hoskin, L.N. Shaw, L.M. Hicks, University of North Carolina, Chapel Hill, Dalfousie University, Canada and University of South Florida

B287 609.7 A Cell-Based inhibitor Screening Platform for S-Adenosylmethionine Synthetase. G. Parungso, M. Dzibak, R. Blumenthal, R. Viola, The University of Toledo

B288 609.8 Viable Strategy for Inhibition of Death Receptor 5 Signaling by Disrupting Receptor-Receptor Interactions. N. Vunnam, C. Lo, B.D. Grant, D.D. Thomas, J.N. Sachs, University of Minnesota

B289 609.9 Improving the Sensitivity of P-Glycoprotein to Drug-Like Inhibitors in ATPase Assays and ESR Studies. G. Chen, J. Ballou-Crawford, J.G. Wise, P.D. Vogel, Dept. of Biological Sciences and the Center for Drug Discovery, Design and Delivery and Southern Methodist University


B291 609.11 Inhibition of Tumor Necrosis Factor Receptor 1 Signaling by Small Molecules. C. Lo, N. Vunnam, A. Lewis, T. Chiu, B. Brummel, T. Schaaf, B. Grant, P. Bawaskar, D. Thomas, J. Sachs, University of Minnesota, Fluorescence Innovations Inc and Photonic Pharma LLC


B293 609.13 In Vivo Drug Discovery for Progressive Supranuclear Palsy Using a Novel Zebrafish Model. E.A. Burton, Q. Bai, University of Pittsburgh

B294 609.14 Acetaminophen Hepatotoxicity Testing Using 3D Rat Hepatocyte Cultures. V. Paliwal, M. Clapham, Milwaukee Sch. Engineering and Drake University

B295 609.15 The Antimicrobial Property of the Acetone Extract of Cola acuminata. B.J. Thomas, C.M. Telles, Southern University and A&M College

B296 609.16 Determining the Correlation Between Drosohelia melanogaster Tolune Exposure and the Resulting Toxicity Effects on Fly Survival and Fecundity. V. Trivino, M. MacGregor, T. Nguyen, B. Nunez, Z. Lodhra, L. Castillo, B. Luu, R. Rosell, E. Ledesma, University of St. Thomas

610 Protein and Peptide Chemistry

B297 610.1 Enzyme-Catalyzed Expressed Protein Ligation. S. Henager, N. Chu, Z. Chen, D. Bolduc, D. Dempsey, Y. Hwang, J. Wells, P. Cole, Johns Hopkins University and University of California at San Francisco

B298 610.2 Effect of BLEACHING PRODUCTS on Proteins of Teeth. R. Frazier, A. Panah, K. Keenan, Stokhand University

B299 610.3 Effect of BLEACHING PRODUCTS on the Collagen of Teeth. C. Cavallaro, C. Schiillo, K. Keenan, Stokhand University


B301 610.5 Disruption of the Dopamine D1/D2 Heteromer Using Synthetic Peptides. M. Champion, A. Baraka, H. Evans, D. Heyl-Clegg, Eastern Michigan University

B302 610.6 Analysis of the Stability of Natural and Unnatural Amino Acids in Extraterrestrial Conditions. C. Mannmoser, B. Brown, S. Dhar, T. Rowe, Valparaiso University and Ivy Tech Community College

B303 610.7 Characterizing the Impact of the Highly Endosmolytic Cell-Penetrating Peptide, dTAT, on Human Cells. J. Kondow, Texas A&M University

B304 610.8 Peptide Mediated Intracellular Delivery of Quantum Dots for Live-Cell Imaging. C.I. Rivera Vera, University of Illinois at Chicago

B305 610.9 An Interdisciplinary Investigation of Antimicrobial Peptides. R.R. Wadhwa, R. Stevens-Truss, Kalamazoo College

B306 610.10 Targeting mER and GLP1R for the Treatment of Atherosclerosis and Type II Diabetes. J. Du, J.P. Issa, K. Kumar, Tufts University
611 Systems Biology Technologies and Applications

B307 611.1 Therapeutic Targeting of MLL Degradation Pathways in MLL-Rearranged Leukemia. K. Liang, A.G. Volk, J.S. Haug, S.A. Marshall, A.R. Woodfin, E.T. Bartoum, J.M. Gilmore, L. Flores, M.P. Washburn, K.D. Sullivan, J.M. Espinosa, J. Cannova, J. Zhang, E.R. Smith, J.D. Crispino, A. Shilatifard, Department of Biochemistry and Molecular Genetics, Northwestern University Feinberg School of Medicine, Stowers Institute for Medical Research, Division of Hematology and Oncology, Northwestern University Feinberg School of Medicine, Department of Pathology and Laboratory Medicine, The University of Kansas Medical Center, Linda Cric Institute for Down Syndrome & Department of Pharmacology, University of Colorado, Oncology Institute, Loyola University Chicago, Department of Pathology, Loyola University Chicago, Robert H. Lurie Comprehensive Cancer Center and Northwestern University Feinberg School of Medicine


B310 611.4 Optimization of Reconstituted High Density Lipoprotein (HDL) Nanoparticles (NPs) for Short-Interfering RNA (siRNA) Delivery. L. Mooberry, N. Sabnis, A. Lacko, University of North Texas Health Science Center

B311 611.5 Delivery of siRNA Using Cationic Polymeric Nucleic Acids to Understand the Localization and Function of GABAAergic Neurotransmission in Planaria. K. Klassen, H. Ginter, S. Shankar, L. Ramakrishnan, St. Cloud State University

B312 611.6 Using CRISPR Technology to Edit the F508 Deletion of the Cystic Fibrosis Transmembrane Regulator Gene. K. Heavenor, J. Roecklein-Canfield, Simmons College

612 Genomics

B313 612.1 HLA-DQ1 Alpha and Beta Genotypes Associated with Non-Celiac Gluten Sensitivity. M. Maki, D. Caporale, University of Wisconsin-Stevens Point

B314 612.2 Molecular Genotyping of Transposable Element Insertions in a Population of Uniform Mu Events. G.A. Arroyo Martinez, N. Springer, University of Puerto Rico at Ponce and University of Minnesota

B315 612.3 DC STAMP Domain: Intercompatibility Between SPE-42 and Other Proteins. I.S. Okeke, University of Alabama at Birmingham


B317 612.5 Characterization of a Plasmid Isolated from Enterococcus faecalis Found in the Fecal Material of a Blue Whale. R. McLaughlin, R. Kopanic, Gateway Technical College

B318 612.6 Validation of Single Nucleotide Polymorphisms in Physcomitrella patens. K. Adler, K.A. Hicks, Kenyan College

B319 612.7 Analysis of the Rates of Transcriptional Coupling and Translational Fusion Between Hydroxylation and Redoxsubstrin Genes of Alkane Monoxygenase in Bacterial Genomes. H. Masuda, M. Rikard, P.R. Tupa, Indiana University Kokomo

B320 612.8 Unique Transposon Genome Rearrangements Identified in Elizabethtangia anophelis Outbreak Strains in the Midwest U.S.. R. Flores, N. Torres, J. Matts, J. Gustafson, P. Canaan, P. Hoyt, Oklahoma State University


613 Pharmacogenomics and Toxicogenomics

B323 613.11 An Investigation of the Oxidatively Damaged Transcriptome in the Human Neural Cells. P. Kharel, V. Gadeppalli, A. Chattopadhyay, J. McDonough, S. Basu, Kent State University, Virginia Commonwealth University and University of Pittsburgh

614 Signal Transduction and Cellular Regulation

B328 614.1 Assessing Social Phenotypes of M. xanthus Following Homologous Recombination of Arg-Kinase Genes. M. Grady, D. Fraga, S. Kratt, College of Wooster

B329 614.2 CARMA2sh and Its Psoriasis-Linked Variants Regulate Inflammatory Pathways in Human Keratinocytes. I. Scudiero, P. Mazzone, G. Telesio, M. Pizzulo, P. Vito, Biogem S.c.a.r.l., Italy and Università degli Studi del Sannio, Italy

B330 614.3 Melatonin Modifies Peripheral Blood Cell Oscillators in Humans. E. Kostovski, E. Frigato, A. Dahm, G. Skretting, M. Mowinkel, P.O. Iversen, C. Bertolucci, Clinical Medicine, University of Oslo, Norway, Sunnans Rehabilitation Hospital, Norway, University of Ferrara, Italy, Oslo University Hospital, Norway, Akershus University Hospital, Norway and University of Oslo, Norway
615 Growth Factor and Cytokine Signaling

B366 615.1 Signaling Pathways Involved in Tributyltin-Induced Increases in Interleukin 6 Production by Lymphocytes. N. Hamza, S. Brown, M. Whalen, Tennessee State University

B367 615.2 Role of MAPKs and NFkB in Tributyltin-Stimulated Interleukin 1 Beta Secretion and Production from Human Immune Cells. M. Boules, S. Brown, M. Whalen, Tennessee State University

B368 615.3 Involvement of MAPK Signaling Pathways in Tributyltin-Induced Increases in Interleukin 1 Beta and Interleukin 6 mRNA in Human Lymphocytes. S.D. Brown, M. Boules, N. Hamza, M. Whalen, Tennessee State University

B369 615.4 Methionine Sulfoximine Reduces Proinflammatory Cytokine Release by Murine Macrophages. T. Peters, A. Jambekar, W. Brusilow, Wayne State University

B370 615.5 A Single EGF Molecule Activates a Preformed EGFR Dimer: A Single-Molecule Multicolor TIRF Microscopy Study. E. Saita, D. Mong, I.N. Maruyama, OIST, Japan

B371 615.6 Pentabromophenol, a Brominated Flame Retardant Derivate, Suppresses TGF-β Signaling by Sequester TGF-β Receptor from Cell Surface and Further Degradation Through a Caveolae-Mediated Endocytosis. P. Yang, C. Chen, National Sun Yat-sen University, Taiwan

B372 615.7 Skeletal Muscle-Derived Cytokines Regulate Myogenesis by Modulating Cell Cycle Withdrawal. D. Kim, N. Singh, J. Chen, University of Illinois at Urbana Champaign

B373 615.8 Epidermal Growth Factor Receptor Family Signaling in the Regenerating Axolotl Lung. T.B. Jensen, P. Giunta, N.G. Schultz, H. Wong, J. Monaghan, Northeastern University

B374 615.9 Differential Activation of Class I Phosphoinositide 3-Kinase by Growth Factors. D. Ghosh, S.-L. Liu, P. Cho, University of Illinois at Chicago

616 Hormone and Nuclear Hormone Signaling

B375 616.1 A Novel Interaction Between β-Arrestins and Nuclear Steroid Receptors. M.G. Petrello, J.A. Cidlowski, NIH/NIEHS

B376 616.2 Steroid Hormone Receptor Gene Expression as a Marker for Phenothiazine Induced Endocrine Disruption and Stress in Mummichog, Fundulus heteroclitus. J.M. Laperche, J.B. Chiari, R. Patel, C.L. McGinnis, Quinnipiac University

B377 616.3 Glucocorticoid-Driven Transcriptionomes in Airway Epithelial Cell Models: Commonalities, Differences and Functional Insights. M.M. Mostafa, C.F. Rider, R. Newton, University of Calgary, Canada and University of British Columbia, Canada

B378 616.4 Bile Acid Binding Protein STARD5 Suppresses Doxorubicin-Mediated Apoptosis in H1792 Lung Adenocarcinoma Cells. B.J. Clark, S.M. Dougherty, B.G. Hill, C.M. Kline, University of Louisville School of Medicine

B379 616.5 Endogenous Ligand for Orphan Nuclear Receptor NR2E3 Forms a Light-Sensitive Retinal Transcription System. B. Connor, Y. Lee, Johns Hopkins University

B380 616.6 Examining the Effects of Aldosterone on Putative Target Genes in Mouse Collecting Duct Cells. B. Nolan, K. Solcosinski, M.L. Gurnz, D. Zies, University of Mary Washington and University of Florida

617 Plant Hormones and Signaling

B381 617.1 Unraveling White Lupin’s Signal Transduction in Response to Phosphorus Deficiency Using iTRAQ Labeling, Phosphopeptide Enrichment, and Tandem Mass Spectrometry. M. Amadi, J. Cole, K. Li, R.J. Chalkley, A. Burlingame, University of California, San Francisco

B382 617.2 Cracking the Interorganellar Communication Codes. A.J. de Souza, J. Svozil, J. Wang, Y. Xiao, W. Gruissem, K. Deheusch, UC Riverside, ETH Zurich, Switzerland and UC Davis

B383 617.3 Expression of E3-Ubiquitin Ligase Genes in P. patens During Sexual Reproduction. E.W. Abrash, K.A. Hicks, Kenyon College

B384 617.4 Identification of a Novel Gene in the Shade Avoidance Response in Plants. N. Wershoven, E. Giddings, A.E. Clark, C. Palmer, Castleton University

B385 617.5 Phosphatic Acid-Protein Phosphatase 2A Interactions Regulate Haloptropic Bending in Rice. E. Han, D. Petrella, J. Lin, A. DeLong, J.J. Blakeslee, The Ohio State University and Brown University

B386 617.6 Characterizing of the Novel Gene At2g33660 in the Abiotic Stress Response in Arabidopsis. A.E. Miller Clark, N. Wershoven, C. Palmer, Castleton University

618 Extracellular Matrix and Cell Signaling

B387 618.1 Thrombomodulin Promotes Cell Adhesion and Migration and Enhances Angiogenesis Through Interaction with Fibronectin. H. Wu, Y. Hsu, G. Shi, National Cheng Kung University, Taiwan

B388 618.2 Biliary Epithelial Cell and Macrophage Cross-Talk Is Important to Cyst Progression. M.C. Munteanu, P. Sivasami, B. Ferencz, R.S. Mansat, N. Poudel, T. Watnick, F. Lupu, M. Hinsdale, Oklahoma State University, Oklahoma Medical Research Foundation and University of Maryland School of Medicine


B390 618.4 Controlled BMP2 Release from Keratin-Based Hydrogels Modulates Osteoinduction. L.C. Olson, S.L. Hsiao, J. M. Saul, D. J. Cohen, I. Kajan, Z. Schwartz, B.D. Boyan, Virginia Commonwealth University, Miami University, University of Texas Health Science Center at San Antonio and Georgia Institute of Technology

619 G Proteins and Small GTPases

B391 619.1 Bioluminescent Assay for GTPases Allows Measurement of GTPase, GAP, and GEF Activities. S. Mondal, K. Hsiao, S. Goueli, Promega Corporation

B392 619.2 Antidepressant Treatment Increases cAMP Signaling by Translocating Ga, from Lipid Rafts and Increasing Association with Type 6 Adenylyl Cyclase (AC6) Independent of Action at Monoamine Transporters. J.M. Schappi, M. Rasnack, University of Illinois at Chicago

B393 619.3 DAPLE Links Heterotrimic G Proteins to Wnt Signaling During Vertebrate Development. A. Mariniv, V. DiGiacomo, A. Leyme, M. Garcia-Marcos, Boston University School of Medicine

B394 619.4 Translocation of the Non-Receptor Protein GIV/Girdin to the Plasma Membrane Activates Heterotrimeric G Proteins. A. Leyme, K. Parag-Sharma, V. DiGiacomo, A. Mariniv, S. Broselid, M. Garcia-Marcos, Boston University


B397 619.7 Cardiovascular Development Defects Produced by Combined Loss of Rgs5 and Oxidizable CaMKII Due to Defective notch Signaling. B. Chakravarti, J. Yang, A. Ahlers, Z. Luo, H.A. Flaherty, D. Meyerholz, M.E. Anderson, R.A. Fisher, University of Iowa, Iowa State University and Johns Hopkins University School of Medicine


B399 619.9 Dissecting the Roles of ARHGEFs in Eosinophil Polarization. F. Botros, K. Turton, D. Mosher, University of Wisconsin-Madison

B400 619.10 Inhibition of Constitutively Active Gx1 by Molecules Targeted at R231. M. Schumacher, J. Carroll, S.D. Anderson, P. Santos, Y. Thu, H. Nguyen, K. Bohlen, M. Poch, B.T. Andersen, R.P. Kyllräddam, Benedictine University and Western University of Health Sciences

B401 619.11 Determinants in the C-Terminal Region of Gx12 and Gx13 Allow Distinct Mechanisms of Cell Growth Signaling. T.L. Fleming, T.E. Meigs, University of North Carolina Asheville


B406 619.16 The Molecular Mechanisms of Prostaglandin E2 Receptor 3 and its Associated G Protein, G2, in the Pancreatic ß-Cell. M.D. Schaid, J. Wisinski, E. Laudre, M. Kimple, University of Wisconsin-Madison

B407 619.17 Finding the Differential Interaction of Active vs Inactive Small Molecular Weight GTPases. P. Petersen, R.C. Piper, University of Iowa

B408 619.18 Determining the Structure of Oncogenic NRas Mutants. M. Ojeda, D. Reid, C. Matos, Agnes Scott College and Northeastern University

B409 619.19 The C-Terminal Tail of TCL Localizes the GTPase to the Plasma Membrane of HeLa Cells. B. Tader, R.R. Florke, M.J. Hamann, Bemidji State University

B410 619.20 Investigating the Influence of the Rho-Family GTPase TCL/Rhoj on Vesicular Trafficking. T. Olson, S. Taylor, M.J. Hamann, Bemidji State University

B411 619.21 GTP-Loading Activity of TC10/TCL Chimeras Underscores Important Allosteric Regulatory Regions of TCL. G. Young, R.R. Florke, M.J. Hamann, Bemidji State University

B412 619.22 Transition State Mimic of Intrinsic Hydrolysis in Ras GTPase. A.Y. Ortiz, Northeastern University

B413 619.23 The Golgi Arf-GEFs Gea1 and Gea2 Integrate Signals to Coordinate Vesicle Formation. M.A. Gustafson, J. Fromme, Cornell University

620 Microbial Systems and Parasitology

B414 620.1 Variants in the Toll-Interacting Protein Gene (rs5743899) and Susceptibility to Plasmodium falciparum Malaria Infection in West Africa. I. Farid, R.J. Funwei, S. Agyiring, T. Snyder, C. Falade, O. Ojurongbe, B.N. Thomas, Rochester Institute of Technology and Ladoke Akintola University of Technology, Nigeria

B415 620.2 Functional Characterization of Apically Localized Calmodulins That Regulate Motility and Cell Invasion in Toxoplasma gondii. S. Long, Washington University in St Louis


B417 620.4 Characterization and Partial Purification of an Inhibitory Factor Secreted by Bacillus anthracis and Aeromonas jandaei. J. McCartney, J. Nesemeier, N. Peterson, North Central College

621 Bacterial Communication

B418 621.1 Recognition and Selectivity of Peptide Pheromones by ComR in the Regulation of Natural Competence Among Streptococcus Species. G. Prehna, E. Shanker, D.A. Morrison, A. Talagaz, S. Nessler, M.J. Federle, University of Illinois Chicago and University of Paris-Sud, France

B419 621.2 Construction of a System for the Study of Protein-Induced Membrane Tubules A. González Rivera, K.T. Forest, University of Wisconsin-Madison


622 Microbe-Host Interactions


B422 622.2 Investigation Into a Cell-Density Dependent Pathway in Aerococcus urinae. E.E. Hilt, T.M. Halverson, K.L. Visick, A.J. Wolfe, Loyola University Chicago

B423 622.3 Collagen Mimetic Peptides as Probes for Bacterial Infection. A. Ellison, F. Dempwolf, K. Kears, R. Raines, University of Wisconsin-Madison and Indiana University


B425 622.5 RRSP Exhibits Novel Proteolytic Activity. M. Lam, M. Biancuzzi, K.J. Satchell, Northwestern University and Northwestern University Feinberg School of Medicine


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ASBMB POSTERS  SUNDAY continued


B428  622.8  Investigation of Controlled Expression of MS2 Lysis Protein.  K.A. Raselske, A.J. Piefer, Huttuck College

B429  622.9  Metabolic Immunomodulation of Macrophage Polarization by Pseudomonas aeruginosa Biofilms. M.B. Ammons, A.L. Fuchs, B.P. Tripet, V. Copie, Montana State University

B430  622.10  Relationship of Vpx and APOBEC3A.  M.S. Montasser, N.Y. Nayef, M. Afzal, University of Kuwait, Kuwait

B431  622.11  Effects of Curcumin on Vesicular Stomatitis Virus (VSV) Infection and Dicer-1 Expression. J. Ahmed, Y. Tan, S. Ambegaokar, Ohio Wesleyan University

B432  622.12  A New Link Between Stress and Infection. N. Sule, S. Pasupuleti, N. Kohli, R. Menon, L. Dangott, M. Manson, A. Jayaraman, Texas A&M University and Texas A&M Health Science Center

B433  622.13  Isolating and Characterizing Predatory Bacteria from the Built Environment. L.C. Zappia, L.E. Williams, Providence College

B434  622.14  Escherichio coli tRNA Induces Mammalian Cell Migration and Socialization. A.K. Buechler, H. Zhao, D.J. Lieu, S.R. Blanke, S.A. Martinis, Providence College

B435  622.15  Subversion of Host Vesicular Trafficking by Phosphoinositide-Binding Bacterial Proteins. C. Pike, S. Lein, R. Neunuebel, University of Delaware

623  Plant-Microbe Interactions

B436  623.1  Photosynthetic Apparatus and Biochemical Parameters in Tomato and Squash Crops Infected by Cucumber Mosaic Virus (CMV) Infection. M.S. Montasser, N.Y. Nayef, M. Afzal, University of Kuwait, Kuwait

B437  623.2  Metagenomic Analysis of Bacterial Communities in the Rhizosphere of Leguminous Crops and Trees. C. Ahrenhoerster, G. Prasad, B. Martinez-Vaz, Hamline University and University of Wisconsin-Milwaukee

B438  623.3  Structural Basis for Regulation of Rhizobial Nodulation and Symbiosis Gene Expression by the Regulatory Protein NoiR.  S. Lee, J. Jez, Washington University in St. Louis


B440  623.5  Analysis of Bacterial Micro-Biome on Potato Tubers Treated with Sprout Regulator I,4-Dimethylathphalatene. R.A. Diaz, R.N. Patel, M.A. Campbell, Penn State Behrend


B442  623.7  Isolation of Bio Energy Crop Phylosphere Bacteria from Switchgrass. M.A. Sleda, L. Dangott, M. Manson, A. Jayaraman, Texas A&M University and Texas A&M Health Science Center

B443  623.8  Expression and Purification of a Novel Calcium Binding Protein Necessary for Phytophagophagosis in Xanthomonas Strain. K.M. Margin, J.C. Quay, G.V. Minsavage, J.B. Jones, J.C. Hurlbert, Winthrop University and University of Florida

B444  623.9  The Characterization of Septoria lycopersici Pathogenicity in Micro Tom Tomatoes. K.E. Allen, J. Zwieseler-Vollick, Lawrence Technological University

624  Metabolism and Bioenergetics


B446  624.2  Cardiac Myocyte KLFS Regulates Adiposity via Alteration of Cardiac FGF21. C.J. Pol, N.M. Pollak, M.J. Jurczak, I. Karagiannides, P. Ntzioti, D.A. Scebo, I. Atlantis, G.I. Shulman, I.J. Goldberg, K. Droostat, LKSM Temple University, University of Graw Austria, Yale University School of Medicine, David Geffen School of Medicine at UCLA, NYU School of Medicine, Columbia University and NYU-Longang School of Medicine

B447  624.3  Decreased Insulin Signaling Causes Loss of FKF-2 and Impaired Glycolysis in the Heart. K. Humphries, L. Bockus, C. Eyster, Oklahoma Medical Research Foundation

B448  624.4  Protein Modifying Enzyme Atel Controls Cellular Warburg Effects. C. Jiang, M. Birindam, D. Patel, A. Kumar, W. Morgan, T. Lampidis, F. Fontanesi, A. Barrientos, F. Zhang, Miller School of Medicine and University of Miami

B449  624.5  UCPI Is Essential for Mitochondrial Structural Integrity and Function in Brown Adipose Tissue. C.L. Riley, C. Bean, D. Boutz, S. Kohno, G. Tioli, M. Genova, L. Scorrano, E.L. Mills, University of Texas Austin, University of Padova, Italy, University of Colorado Denver and University of Bologna, Italy

B450  624.6  Genetic and Functional Characterization of the Enzymes of Nicotinic Acid Degradation in Bocillus niacinii. T. To, M.J. Snider, The College of Wooster

B451  624.7  Enhanced Spare Respiratory Capacity in Extremophile Fish Following Exposure to Hydrogen Sulfide. C.R. Hospita, M. Tobler, J.H. Shaw, Oklahoma State University and Kansas State University

B452  624.8  Knockout of p53 Decreases Cardiac Injury by Reducing Ros Generation During Ischemia-Reperfusion. E. Lesnfsky, J. Thompson, Y. Hu, Q. Chen, McGuire VAMC and Pauley Heart Center-VCU

625  Metabolic Networks and Regulation

B453  625.1  Hepatic Fat Accumulation Regulates Carnitine Palmitoyltransferase I (Cptla) Expression Through Coordinated Epigenetic Mechanisms. L. Moody, P.M. Jung, A. Kriska, H. Chen, Y. Pan, University of Illinois Urbana Champaign

B454  625.2  Administration of Naxiowntong to db/db Mice Inhibits the Development of Diabetic Nephropathy. S. Yang, M. Liu, P. Su, J. Han, Nankai University, People’s Republic of China

B455  625.3  The Chemical Biology of Cellular Iron Pools in Prokaryotes. F. Quinter, N. Bolaji, J. Wolford, P. Lindahl, University of South Carolina and Texas A&M University


626  Amino Acid Metabolism

B457  626.1  Identifying a Source of Beta-Alanine and Its Broader Implications in Arabidopsis thaliana by GC/MS. M. Perrett, M. Gotthard, A. Ludwig, K.A. Rouhier, Keryon College

B458  626.2  Glutaminase Acts in Osteoblasts to Regulate Bone Formation. C.M. Kaner, Y. Yu, J. Tang, Duke University
627 Nucleotide Metabolism

627.1 Purine Salvage Drives the Efficacy of an Adenosine Analog Inhibitor of Leishmania RNA Virus 1 (LRV1). J.I. Robinson, F.M. Kuhlmann, S.M. Beverley, Washington University School of Medicine

627.2 Molecular Basis of TyrA Substrate Specificity Underlying the Evolution of Alternative Tyrosine Biosynthetic Pathways. C. Schenck, C. Holland, M. Schneider, J. Jez, H. Maeda, University of Wisconsin-Madison and Washington University in St. Louis

627.3 Does Sensitivity to FACs Result in Higher Resistance Against Herbivory?. A. Conner, L. Grissett, J. Stratmann, University of South Carolina

627.4 cDNA Cloning and Characterization of UDP-Glucosyltransferase from Indigofera tinctoria. S. Inoue, R. Morita, S.T. Thuk, B.K. Sarangi, Y. Minami, Okayama University of Science, Japan and CSIR-NEERI, India

627.5 Tyrosine Biosynthesis Revisited: Characterization of Novel Arogenate Dehydrogenases from Arabidopsis thaliana. C. Binkley, M. McCool, T. Maurer, K.A. Rouhier, Kenyon College

627.6 Cloning and Characterization of Putative Histidinol-Phosphatase Not Called by S. Ellis, St. Cloud State University

627.7 Characterization of Mutant Sunflower Acetoacetyl CoA Thiolase. J. Dyer, Montana State University

627.8 Identifying the Metal That Activates the Prenyltransferase That Catalyzes Formation of Geranyl Diphosphate in the Diatom Phaeodactylum tricornutum. H. Tran, T. Savage, University of Maryland, Baltimore County

627.9 Understanding Plant Energy Sensing and Homeostasis. S. Williams, J. Yen, G. Gillaspy, University of Wisconsin-Madison, University of Maryland, Baltimore County and Homeostasis. S. Williams, J. Yen, G. Gillaspy, University of Wisconsin-Madison, University of Maryland, Baltimore County

627.10 Withdrawn.

629 Lipids and Membranes

629.1 Independent Measurements of Lipids in Mixed Cell Populations. A. Stoeckelman, K. Estrada, N. Wolins, Bethel University and Washington University

629.2 Structure of Human Niemann-Pick C1 (NPC1) Protein and NPC1-NPC2 Complex. X. Li, Rockefeller University

629.3 Monitoring Live Cell Membrane Lipid Encounter Dynamics with DNA Probe. M. You, University of South Carolina

629.4 OlyA--- A Tool to Study Sphingomyelin-Cholesterol Interactions in Plasma Membranes. S. Endapally, A. Radhakrishnan, UT Southwestern Medical Center

629.5 Role of Na-H Exchanger-2 in Experimental Colitis: Mechanism of Regulation of Expression. I. Khan, A.A. Soleiman, F. Thameem, Kuwait University, Kuwait

629.6 Repurposing P-Glycoprotein Inhibitors as Modifiers of Spingolipid Metabolism --- Therapeutic Implications in Cancer. M.C. Cabot, East Carolina University and Brody School of Medicine


629.8 Different Lipids in Synaptic Vesicle and Synaptosome Membrane. K.T. Lewis, K.R. Maddipati, A.R. Naik, B.P. Jena, Wayne State University

629.9 Control of PH4 Turner by Endogenous OSBP for Fast Cholesterol Transport at Membrane Contact Sites. B. Mesmin, J. Bigay, S. Policidori, S. Lasca-Gervais, B. Antomy, Institut de Pharmacologie Moléculaire et Cellulaire - CNRS, France and Université Nice Sophia Antipolis, France

629.10 Lipoprotein Lipase Regulates the Expression of Genes Responsible for Cellular Cholesterol Uptake and Efflux in Human and Mouse Macrophages. K. Moctar, K.R. Madhwan, A.J. Kim, J.D. Medh, California State University Northridge

629.11 Cardiopin Content Has a Stronger Influence Than Acyl Chain Composition on Select Membrane Properties of Biomimetic Mitochondrial Membranes. E.R. Pennington, A. Fox, E.M. Sullivan, A. Kennedy, D.A. Brown, T.N. Zeczycki, S.R. Shaikh, East Carolina University, Brody School of Medicine, East Carolina Diabetes and Obesity Institute, East Carolina University, East Carolina University and Virginia Tech Corporate Research Center

629.12 Lysosome Enlargement in PIKfyve Inhibited Cells Proceeds Through Homotypic Lysosome Fusion Rather Than Growth of Individual Lysosomes. G. Saffi, Ryerson University, Canada


629.14 Impact of Altering the Headgroup-Acylated Glycerophospholipid Levels on Echerichia coli Cells Deficient in Phosphatidylserine and Phosphatidylethanolamine. O. Oke, T.A. Garrett, Vassar College

629.15 Styrene-Maleic Acid (SMA) Nanodisc Technology: A Novel Approach for Isolation and Purification of the Infectious Prion Protein (PrPSc). M. Esmali, X. Wang, B. Tancowny, H. Wille, M. Overduin, University of Alberta, Canada
B494 629.16 Tracking the Flow of Carbon Toward Oil Synthesis in an Emerging Crop Lesquerella (Physaria fendleri). J. Cocurron, E. Tsogbaatar, A. Alonso, The Ohio State University

B495 629.17 Stereochemical Characterization of Acyl-Phosphatidylglycerol and bis-(Monocacylglycerol)Phosphate Using Nuclear Magnetic Resonance. C.S. Peros, T.A. Garrett, Vassar College

B496 629.18 Withdrawn.


B498 629.20 Probing the Lipid Composition at the Site of Influenza Virus Assembly and Budding with High-Resolution SIMS. M.L. Kraft, A.N. Yeager, P.K. Weber, J. Zimmerman, University of Illinois at Urbana-Champaign, Lawrence Livermore National Laboratory, National Institute of Child Health and Human Development, National Institutes of Health and Ennie Kennedy Shriver National Institute of Child Health and Human Development

B499 629.21 Phosphorylation of the Glycerol 3-Phosphate Acyltransferase Gpt2 Regulates the Timing of TAG Mobilization upon Growth Resumption. M. Tavassoli, B. Nagler, B. Shabits, A. Lopez-Vilalobos, K. Atenusahaan, V. Zaremberg, University of Calgary, Canada, and Institute of Molecular Biosciences, Austria


B501 629.23 Liver X Receptor (LXR) Activation Decreases Chronic Myelogenous Leukemia Cell Viability and Alters the Expression of Antiapoptotic and Cholesterol Genes. C.J. Andersen, L. Dupree, A. Doerr, L. Cenon-Rivera, K. Murray, N. Ragonesi, Fairfield University

B502 629.24 Ceramide-1-Phosphate: Characterizing a Fluorescent Lipid and Discovering New Binding Proteins. C.M. Shirey, R.V. Stahelin, University of Notre Dame and Indiana University School of Medicine-South Bend

B503 629.25 Identification of Sphingolipid Metabolism Perturbations in Endothelial Cells Induced by the Acid Sphingomyelinate Inhibitor Imipramine Using Stable Isotope Labeling and Targeted Lipidomics. E. Berdysheva, M.J. Justice, J. Bronova, K.S. Schweitzer, I. Petrecha, National Jewish Health

B504 629.26 Disruption of Sphingolipid Biosynthesis Blocks Phagocytosis of Candida albicans. F.G. Tafesse, Oregon Health & Science University (OH&SU)
631 Cell and Organelle Dynamics

B528 630.20 Computational Modeling of Human Fatty Acid Transport Protein 2. V.M. Perez, B.L. Punia, T. Helikar, C.C. DiRusso, P.N. Black, University of Nebraska-Lincoln

B529 631.1 Dissecting Comorbidity Between Parkinson's Disease and Melanoma in a Cell Culture Model. D. Dele-Oni, A. Bose, G. Petsko, University of Massachusetts Dartmouth and Weill Cornell Medicine

B530 631.2 See session 587, Undergraduate Education (ASBMB), for presentation information.

B531 631.3 Syntaphilin Regulates Mitochondrial Dynamics and Tumor Cell Invasion. M. Caino, D.C. Altieri, The Wistar Institute

632 Nuclear Dynamics

B532 632.1 Investigating the Spatiotemporal Distribution Patterns of PCID2 Between the Nucleus and the Centrosome. R.K. Flores, K.K. Resendes, Westminster College

B533 632.2 The Disruption of Nuclear Export and Protein Localization with 5-Fluorouracil. A. Nickle, M. Bischak, K. Higby, K.K. Resendes, Westminster College

633 Endoplasmic Reticulum


B535 633.2 Host Control of Gag Localization in a Yeast Retrotransposon System. K.L. McGlone, J.B. Keeny, Juniata College

B536 633.3 Clustering of IRE1α in the Mammalian ER Membrane Is Independent of Its Enzymatic Activities. D. Ricci, I. Marroco, J. Vargas, D. Eletto, M. Dibos, S. Boyle, T. Iwamoto, Y. Argon, Children's Hospital of Philadelphia, University of Pennsylvania, Sapienza University of Rome, and University of Salerno

B537 633.4 ER Stress and Molecular Targets of Platinum Anticancer Compounds. R. Cunningham, V. DeRose, University of Oregon

634 Mitochondria in Health and Disease

B538 634.1 AMPK Negatively Regulates Mitophagy in the Heart. A. Kaminaris, S. Kobayashi, G. McStay, Q. Liang, New York Institute of Technology College of Osteopathic Medicine

B539 634.2 Effects of Deceased Mitochondrial Ca2+ Uptake in an in Vitro Model of Parkinson's Disease. N. de la Rosa-González, A. Lee, M. Joiner, University of Puerto Rico at Ponce and University of Iowa

B540 634.3 Cardiac Mitochondrial Phospholipid Acyl Chains Are Remodeled in Murine Obesity but Do Not Impair Supercomplex Formation, Respiratory Enzyme Activity, or Respiration. E.M. Sullivan, A. Fix, M.J. Crouch, G.C. Sparagna, T.N. Zeczcyhti, D.A. Brown, S.R. Shaikh, East Carolina University, Brody School of Medicine, East Carolina Diabetes and Obesity Institute, East Carolina University, East Carolina University, University of Colorado Denver Anschutz Medical Campus and Virginia Polytechnic Institute

B541 634.4 Functional Insights on the Human Adenine Nucleotide Translocator Interactome. M. Acoba, Y. Lu, S. Kandasamy, T. Huang, R. Nirujogi, A. Pandey, S.M. Claypool, Johns Hopkins University School of Medicine and National Taiwan University Hospital and National Taiwan University Cancer Center, Taiwan

B542 634.5 Overexpression of Manganese Superoxide Dismutase in Mouse Liver Leads to Defects in Oxidative Phosphorylation. S. Steyl, Appalachian State University


B544 634.7 Single, Long Molecule PCR for the Detection of Rare Mutations in Mitochondrial DNA. H. Li, S. Annis, D. Woods, J. Tilly, K. Khraipko, Northeastern University

B545 634.8 Fis1 Activity in Pre- and Post-Assembly of the Yeast Mitochondrial Fission Machinery. M.C. Harwig, R.B. Hill, Medical College of Wisconsin

B546 634.9 A Potential Role for Mitochondrial Ca2+ Uptake During B Cell Activation. A. Torres-Quintanilla, E. Gonzalez-Castillo, G. Garcia-Rivas, Tecnológico de Monterrey, Mexico

B547 634.10 Withdrawn.

B548 634.11 Identification of Regulators of Lysosome Formation. G.T. Le, N. Jackson, N. Shaikh, A. Shearon, H. Fares, University of Arizona

B549 634.12 Monitoring Organelle-Specific Responses to Amphotericin B in Mammalian Cells and Candida albicans Biofilms. C. Tourville, G. Rigden, D. Lewis, S. Hartsel, University of Wisconsin-Eau Claire
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750  
Education and Professional Development Through the Academic and Career Pipeline

B1 750.1 Assessing Accreditation at the ASBMB: Surveying Our Constituency.  J.T. Tansey, L. Carastro, D.M. Dean, P. Kennedy, D. Martin, A.J. Wolfson, J.J. Provost, Otterbein University, The University of Tampa, The University of Saint Joseph, The Virginia Polytechnic Institute, St. Mary’s University of Minnesota, Wellesley College and The University of San Diego

B2 750.2 An Effective Workshop Model for Graduate Student and Postdoctoral Fellow Career Development.  S. Feeney, J.M. Barrall, J.M. Hendershot, G. Hunt, E.A. Siebrasse, University of California at Davis, The University of Texas Medical Branch, Cayman Chemical Company and American Society for Biochemistry and Molecular Biology

B3 750.3 Use of Eyetracking Technology to Determine Biochemistry Expert-Novice Differences in Reading Metabolic Pathways.  K. Linenberger Cortes, Kennesaw State University

B4 750.4 Support and Expectations for Biochemistry and Molecular Biology Faculty Promotion and Tenure at PUI Institutions.  K.L. Cortes, R.L. Angotti, J.J. Provost, M.A. Benore, Kennesaw State University, University of Washington Bothell, University of San Diego and University of Michigan Dearborn

B5 750.5 MAMS — A Biochemistry and Molecular Biology Rich Bridge Program to Health Professional School.  M.A. Taylor, Pacific Northwest University of Health Sciences and Heritage University

B6 750.6 First Year Medical Student Authorship of Clinical Cases.  R.C. Bateman, Jr., P. Chastain, M. Stebar, WCU College of Osteopathic Medicine and UI College of Medicine at Rockford

B7 750.7 Mental Health Crisis in Graduate Education: The Data and Intervention Strategies.  T.M. Evans, L. Bira, J. Beltran-Gastelum, L. Weiss, N. Vanderford, UT Health San Antonio, St. Mary’s University and University of Kentucky

B8 750.8 Using Collaborative Problem Sets to Facilitate Learning in the Online Thermodynamics Classroom.  D. Dean, University of Saint Joseph

B9 750.9 Mentorship Training for Postdoctoral Researchers: Results from a Four Week Intervention Program.  C.G. Pena, T. Evans, S. Mustafa, L. Moreno, L. McManus, UT Health

B10 750.10 The Women in Science Undergraduate Organization at Otterbein University: Best Practices and Outreach Efforts.  T.B. Hyst, H.M. Bailey, J.T. Tansey, Otterbein University

B11 750.11 A Potential Solution to the Continuing Problem of Not Enough NIH RO1 Funding to Minority Investigators.  J.J. Guers, J. Gwathmey, G. Haddad, D.E. Vatner, S.F. Vatner, Rutgers University - New Jersey Medical School and Howard University

751

Engaging and Retaining STEM Students in the Learning Process


B13 751.2 Predictors of Success on the MCAT for Post-Baccalaureate Pre-Medicine Students.  Y. Dobrydenova, L. Schwartz, GWU School of Medicine and Health Sciences

B14 751.3 Design and Implementation of an Experiential Learning Workshop for Upper-Level Undergraduate Science Majors.  S.J. Connelly, R. Johnson, J.L. Mills, Rochester Institute of Technology

B15 751.4 Modeling a Protein Story (MAPS): A Project-Based Learning Program Connecting Gene and Protein Sequence and Structure-Function Relationships with Physical Models.  D.H. Munzenmaier, Milwaukee School of Engineering


B17 751.6 Withdrawn.

B18 751.7 Making Connections: Impact of Primary Literature Assignments on Lecture and Laboratory Learning.  K.R. Miller, University of Mount Union

B19 751.8 Promoting Rural Student Enthusiasm for STEM by Establishing a Model Biotechnology Company in Their High School.  M. Koci, B. Boiler, R. Ali, A. Orders, NC State University and Bertie Early College High School

B20 751.9 IONiC VIPEr: Online Resources for an Active Classroom in Bioorganic Chemistry.  S. Smith, A. Bentley, H.J. Eggpley, E. Jamierson, A.R. Johnson, C. Nataro, J. Raker, B.A. Reisner, J.L. Stewart, L.A. Watson, N.B. Williams, University of Michigan-Dearborn, Lewis and Clark College, DePaul University, Smith College, Harvey Mudd College, Lafayette College, University of South Florida, James Madison University, Hope College, Earlham College, Claremont McKenna, Pitzer and Scripps Colleges

B21 751.10 Integrating Research Experiences Into Introductory Biology Laboratories to Engage Undergraduate Students in STEM Learning.  D. Zies, M. Stebar, D. Baker, University of Mary Washington

B22 751.11 Scientific Community Outreach in Central Texas.  J.A. Bondoc, J. Ream, Texas State University

B23 751.12 Observations and Practical Tips on Metal Affinity Chromatography and Protein Refolding Techniques.  C.N. Tovar, J.A. Mullins, O.O. Odlumuga, Stephen F. Austin State University

B24 751.13 A Topic-Based Approach for Teaching Metabolism in a Flipped Classroom.  K.E. Johnson, Xavier University of Louisiana

B25 751.14 Flipped Classroom Approaches Lead to No Improvement in Learning Outcomes or Student Perceptions.  J.A. Arnott, S.L. Planey, The Commonwealth Medical College

B26 751.15 Proxies for Success — How Application Changes Correlate to PhD Path Pursuit for a Small Diversity Research Program.  C.R. Shadding, D. Whittington, Washington University in St. Louis - School of Medicine, Strategic Evaluations, Inc.

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Laboratory Courses

B27 752.1 Measurement of BCAA in Milks and Supplements with an Enzyme Assay: Confirmation of Results with HPLC.  K. Keenan, D. Do, K. Ngo, Stockton University and Absegami’s High School

B28 752.2 A POGIL Based Laboratory Manual for Undergraduate Biochemistry.  A. Wright, B. Davis, A. Kryza, Marymount University, Shenandoah University and Bellarmine University

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753 DNA Replication

B38 753.1 A Novel Reductase-Independent Role of Nuclear Ribonucleotide Reductase. Y. Aye, Cornell U & Weill Cornell Med

B39 753.2 Bypass and Misincorporation of DNA Polymerases at DNA-Peptide Crosslinks. C. A. Sedgeman, F.P. Guengerich, Vanderbilt University

B40 753.3 Defining Lagging-Strand Polymerase Dynamics in Vivo. D. Smith, New York University

B41 753.4 Mechanism of DNA Binding by Human DNA Ligase I. T. Jurkiw, P. O'Brien, University of Michigan

B42 753.5 An Evolutionary Conserved DNA Replication Stress Response in Planarian R. Tirgar, U. Shamoosh, L. Akpaa, N. Sawyer, E. Nam, University of Saint Thomas

B43 753.6 Single Amino Acid Substitutions Affect the Stability of the Dimer Interface of the E. coli β Clamp. J. Baez, Calgote University

B44 753.7 Acetylpurazine Thiosemicarbazone Inhibiting Topoisomerase II. L.C. Ngo, G. Stolts, Tennessee Technological University

754 DNA Damage

B45 754.1 Assessing DNA Cross-Linking and Repair in Human Leukemia Cells. P.M. Le, J.T. Millard, Coby College

B46 754.2 Determination of Escherichia coli Genes Important for DNA Repair Following Alkylation. C. Joshi, A. Aiken, E. Nash, K. Wong, A. Carlson, B. Leifer, M. Muenter, P. Beuning, Northeastern University

B47 754.3 Effects of DNA Bending on T=C CPD Deamination. K. Wang, J. Taylor, Washington University in St. Louis

B48 754.4 A Dipyrimidine Sequence Library for Determining the Sequence Dependence of UV-Induced Cyclobutane Pyrimidine Dimer Formation. C. Lu, J.-S. Taylor, Washington University in St. Louis


B50 754.6 Determination of E. coli Cellular Factors That Contribute to Survival upon Exposure to the Alkylating Agent Benzyl Bromide. A. Aiken, S. Bellou, K. Wong, E. Nash, C. Kramer, B. Leifer, M. Muenter, P. Beuning, Northeastern University

B51 754.7 Identification of the Dimer Exchange Interface of the Bacterial DNA Damage Response Protein UmuD. D.A. Murison, R. Timson, P. Beuning, Northeastern University


B53 754.9 Inhibition of Kynurenine Signaling Decreases Glioblastoma Multiforme Genomic Instability and Sensitizes Cells to Chemotherapeutic Treatment. M.R. Reed, L. Maddakuri, E. Helm, A.C.L. Bostian, M.K. Zafar, R.L. Eoff, University of Arkansas for Medical Sciences, University of Central Arkansas and Arkansas State University

755 Histone Modifications

B54 755.1 Chemical Tools to Study the Molecular Mechanisms of the CoREST Complex-Chromatin Interactions. M. Wu, D. Hayward, J.H. Kalin, Y. Song, J.W. Schwabe, P.A. Cole, Johns Hopkins University School of Medicine and University of Leicester, United Kingdom

B55 755.2 Metabolic Regulation of Gene Expression by Histone Lysine β-Hydroxybutyrylation. D. Zhang, Z. Xie, D. Chung, Z. Tang, H. Huang, L. Dai, S. Qi, J. Li, G. Colak, Y. Chen, C. Peng, H. Ruan, D. Wang, L.M. Jensen, O. Kwon, S. Lee, S.D. Fletcher, M. Tan, D.B. Lombard, K.P. White, H. Zhao, J. Li, R.G. Roeder, X. Yang, Y. Zhao, Medical University of South Carolina, Laboratory of Biochemistry and Molecular Biology, The Rockefeller University, State Key Laboratory of Drug Research, Shanghai Institute of Materia Medica, Chinese Academy of Sciences, People’s Republic of China, University of Minnesota Twin Cities, Yale University School of Medicine, University of Michigan, Kyungpook National University, Republic of Korea, Yale University and Yale School of Medicine


B57 755.4 Systematic Mutational Analysis of Mixed Lineage Leukemia 3 (MLL3) Histone Methyltransferase Active Site Suggests Single Phe/tyr Switch Position to Regulate Product Specificity. A. Canning, N. Alices-Velazquez, M. Cosgrove, SUNY Upstate Medical University

B58 755.5 Discovering Selectivity in BET Bromodomain Epigenetic Regulation. M. Olp, Medical College of Wisconsin


B60 755.7 Biological Function and Histone Recognition of Family IV Bromodomain-Containing Proteins. J.T. Lloyd, A. Poplawski, M.Y. Lubula, S. Carlson, J. Gay, K.C. Glass, Albany College of Pharmacy and Health Sciences (Vermont Campus)
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Transcriptional Regulation (I)

B72 756.1  Biochemical Analysis of the Zinc Uptake Regulator (Zur) from Klebsiella oxytoca.  L. Khacheryan, Y. Xie, G. Gallas, J. Hernandez, Midwestern University

B73 756.2  Biochemical Analysis of Zinc Transporter Regulator from Klebsiella oxytoca: In Vitro and In Vivo Effects on Protein Function.  Y. Xie, L. Khacheryan, G. Gallas, J. Hernandez, Midwestern University

B74 756.3  Upregulation of CYP17A1 by Sp1-Mediated DNA Demethylation Confers Thermolabile Resistance Through DHEA-Mediated Protection in Gliona.  T. Hsu, Taipei Medical University, Taiwan

B75 756.4  The Sp1 in Astrocyte Plays an Important Role in Neurogenesis.  J. Huang, W. Chang, Department of Biotechnology and Bioindustry Science, NCKU, Taiwan, Graduate Institute of Medical Sciences, College of Medicine, Taipei Medical University, Taipei Taiwan

B76 756.5  Transcriptional Regulation by Mediator Kinases During Starvation or Proliferation.  J.D. Rubin, R.D. Dowell, D.J. Taatsje, University of Colorado Boulder

B77 756.6  Heme Induces HAP4 Transcription and Mitochondrial Respiration.  T. Zhang, A. Vancura, St.John's University

B78 756.7  Zinc-Dependent Transcriptional Regulation in Paracoccidioides brasiliensis.  D.P. Neupane, New Mexico State University

B79 756.8  Stat3 Is A Upstream Regulator of Granulysin That Triggers the Minor Zygotic Gene Activation in Mouse Preimplantation Embryo.  H. Ou-Yang, S. Wu, L. Sun, C. Chen, Institute of Biotechnology, National Taiwan University, Taiwan, Department of Animal Science and Technology, National Taiwan University, Taiwan, Department of Life Sciences and National Chung Hsing University, Taiwan

B80 756.9  Using Artificial Transcription Factors to Induce Differentiation into Cardiomyocytes.  E.A. Heiderscheit, A. Eguchi, M.J. Wleklinski, M.C. Spurgat, A.Z. Ansari, University of Wisconsin - Madison

B81 756.10  The Role of Noncoding Genetic Elements in the Transcriptional Regulation of the Voltage-Gated Sodium Channels SCN1A and SCN8A.  G.S. Inglis, A. Escayg, Emory University

B82 756.11  An Analysis of Cycling DOF Factor-Like Genes and Their Expression in Physcomitrella patens.  J.C. Pang, K.A. Hicks, Kenyon College

B83 756.12  O-GlcnAc Regulates Erythroid Genes Controlled by GATA-1.  Z. Zhang, S. Graw, E. Tan, D.C. Koestler, K.R. Peterson, C. Lawson, The University of Kansas Medical Center

B84 756.13  Elucidating a Putative Enhancer Element for the Human LAT Gene.  G. Ghanim, T.S. Finco, Agnes Scott College

B85 756.14  Rdl Expression Impacts Circadian Rhythm and Locomotion in Drosophila melanogaster.  S. MacDonald, R.P. Rogers, Wentworth Institute of Technology

B86 756.15  Molecular Characterization of HLH, A Global Regulator of Vibrio vulnificus Virulence Genes.  S. Choi, Z. Lee, Y. Bang, K. Jang, Seoul National University, Republic of Korea, and UT Southwestern Medical Center

B87 756.16  Smad4-Dependent TGF-β Signaling Directly Up-Regulates Notch Receptor in Cerebrovascular Endothelial Cells.  Y. Lan, X. Cheng, Institute of Biotechnology, People’s Republic of China, Institute of Biotechnology, People’s Republic of China

B88 756.17  Regulation of Cellular Proliferation in B-Cell Acute Lymphoblastic Leukemia by Ikaros.  E. Dovat, J.L. Payne, C. Song, D. Desai, Pennsylvania State University and Pennsylvania State University College of Medicine

B89 756.18  Transcriptional Regulation of Cell Cycle Progression in T-Cell Leukemia.  J.L. Payne, M. Saliman, E. Dovat, M. Kapadia, C. Song, D. Dovat, Loma Linda University School of Medicine and Penn State College of Medicine

B90 756.19  MSK-1 Mediated Histone H3 Phosphorylation is Critical for Ethanol-Induced Inhibition of IL-2 Gene Transcription in CD4+ T Lymphocytes.  S. Ghare, S. Yoshi-Barve, C. McClain, S. Barve, University of Louisville and Robley Rex VAMC

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Monday

B99 757.3 miRNA-Mediated Crosstalk Between Wnt3a and TGFβ3 in Osteoblast Differentiation. S. Fushimi, T. Nohno, S. Nishimatsu, N. Katase, K. Terada, M. Katsuyama, M. Demura, K. Saijoh, H. Nagatsuka, H. Katsuyama, Kawasaki Medical School, Japan, Okayama University, Japan and Kanazawa University, Japan

B100 757.4 Non-Coding RNA Editing Involved in Adipose Dysfunction During Aging. A. Seidler, A. Marcelo, J. Page, N. Santanam, Marshall University, Marshall University School of Medicine and Cheyney University

B101 757.5 “Listening In” — The Cross-Talk Between Mother and Infant Through Exosomal microRNAs in Breast Milk. J. D. Kraft, I. Altosarai, University of Ottawa, Canada

B102 757.6 Functional Characterization of Diabetes-Induced Long Non-Coding RNA Dmns3os in Macrophages. S.C. Das, M.A. Reddy, P. Senapati, M. Wang, L. Lanting, H. Oh, S. Devajari, R. Natarajan, City of Hope, Texas Children's Hospital, Houston

B103 757.7 Developing a Method to Identify and Study the Transcriptome of miRNAs Important in Myogenesis. G. Salant, J. Goodrich, J. Kugel, University of Colorado, Boulder


B105 757.9 Regena/NOT2 Is Essential for Gene Silencing by microRNAs. T. Zbormik, K. Andersen, S. Bowden, C. Reinke, Linfield College

B106 757.10 A Novel Long Non-Coding RNA Modulates Macrophage Phenotype During Diet-Induced Obesity. K. Stapleton, Z. Chen, M. Reddy, L. Lanting, A. Leung, J. Dieulieu, R. Natarajan, City of Hope and University of Maryland

B107 757.11 The Neuroprotective Role of miR-1017, a 3′ Tailed Mirtron. M. de Cruz, A. Flynt, University of Southern Mississippi

B108 757.12 Haematological and miRNAs (let-7g, miR-2, miR-141) Expression Modulation Profile in Serum Samples of Human Prostate Cancer. A.B. James, A.O. Fadala, O.A. Magbagbeola, A. Oturu, O.O. Kolawole, A. Ogunjimi, T. Oshodi, M. Habebe, F.O. Onawoga, E.O. Ajobage, University of Lagos, Nigeria, and Afe Babalola University/University of Lagos, Nigeria


B110 757.14 Transcriptome-Wide Mapping of the miR-122 Targetome Revealed Its Mechanistic Role in the Maintenance of Liver Homeostasis. J.M. Barajas, J. Luna, K. Teng, R. Darnell, K. Ghoshal, The Ohio State University and The Rockefeller University


B112 757.16 Alteration of miR-186 Expression Modifies Inflammatory Markers in Normal Epithelial and Prostate Cancer Cell Models. S. Suman, D.Z. Jones-Reed, H.L. Schmidt, G.J. Clark, C. Kline, S. Barve, K.S. Kimbro, L.R. Kidd, University of Louisville and North Carolina State University

B113 757.17 Investigation of PAX3-FOXO1 Effect on NEAT1 Expression in Alveolar Rhabdomyosarcoma Cells. V.A. George, B. McDaniel, K.E. Johanson, Xavier University of Louisiana

B114 757.18 MicroRNA-506-3p as a Differentiation Agent for Neuroblastoma. M. Sousaress, L. Du, Texas State University


B117 757.21 Nonstop Decay in C. elegans: Examination of a Possible Role for Small Noncoding RNAs. E.M. Youngman, Villanova University

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Protein Chemistry, Synthesis and Turnover

B118 758.1 Positive Charge in the n-Region of the Signal Peptide Contributes to Efficient Post-Translational Translocation of Small Secretory Proteins. M. Liu, J. Sun, Y. Xiong, J. Cui, H. Guo, Tianjin Medical University General Hospital, People's Republic of China, and The University of Michigan


B120 758.3 A Bifunctional Fusion Enzyme with DNA Polymerase and dUTPase Activities. A.K. Dash, M. Bhamidipati, M.B. Rashid, University of Houston-Clear Lake

B121 758.4 The Molecular Basis of Rapid and Selective Diffusion in the Nuclear Pore Complex. S. Sparks, R. Hayama, M.P. Rout, D. Cowburn, Albert Einstein College of Medicine and Rockefeller University

B122 758.5 Llama Hemoglobin Binding to Heterologous Haptoglobin. O.A. Vanderpyke, K. Troutman, N. Kellam, C. Dunn, Albany State University

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Biochemistry and Biophysics of Proteins and Translation

B123 759.1 Extra-Ribosomal Function of Bacterial Ribosomes: Modulation of Enzyme Activities. A. Shekhtman, C. DePloix, S. Majumder, S. Reverdodso, University at Albany and State University of New York

B124 759.2 in Vivo and in Vitro Studies of RRF (Ribosome Recycling Factor) Revealed That Its Major Function Is to Release mRNA from the Post-Termination Complex and Not Splitting of the Ribosomal Subunits. F. Quaglia, H. Kaji, A. Kaji, Y. Inakuchi, Thomas Jefferson University, University of Pennsylvania and Teikyo University, Japan

B125 759.3 Assembly and Disassembly of the Hibernating Bacterial 100S Ribosome. A. Basu, Saint Louis University

B126 759.4 The Cellular Demand for Protein Synthesis Influences the Ribosome Maintenance Program in Vivo. J.C. Price, Brigham Young University

B127 759.5 Differential tRNA™ Expression Regulates Translation Rate of a Biofilm Master Regulator During Bacillus subtilis Biofilm Development. G. Di Cecco, J. Greenwich, Y. Chai, Northeastern University

B128 759.6 A Non-Canonical Function of Leucyl tRNA Synthetase Negatively Regulates Skeletal Myogenesis. K. Son, N. Khanna, A. Banerjee, S. Martinis, J. Chen, University of Illinois at Urbana-Champaign


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Protein Interactions and Binding (I)
B133 760.4 Toxic PR Poly-Dipeptides Encoded by the C9orf72 Repeat Expansion Target LC Domain Polymers. Y. Lin, University of Texas Southwestern Medical Center

B134 760.5 Identification of Different Binding Partners of the F-BAR Proteins Cdc62 Interacting Protein 4 (ClIP4) and Formin Binding Protein 17 (FBP17) in Cortical Neurons. M.E. McDermott, R.J. Taylor, K.L. Taylor, E.W. Dent, University of Wisconsin-Madison, University of Wisconsin School of Medicine and Public Health


B136 760.7 Lactoferrin Interacts with SPLUNC1 to Ameliorate Lipopolysaccharide-Induced Inflammation of Human Nasal Epithelial Cells. C. Chen, Y. Tsou, H. Chen, National Chung Hsing University, Taiwan and Do-Yeh University, Taiwan

B137 760.8 Affinity and Structural Characterization of Human AT Hook Motif Variants. K. Dobkins, K.L. Buchmueller, Furman University

B138 760.9 Analysis of Complex Interactions Between the Essential Subunits, Paml6, Tim44, and Tim50, of the Hsp70-Based Mitochondrial Protein Import Machinery. N.L. Yan, S. Ting, B. Schilke, E.A. Craig, University of Wisconsin

B139 760.10 Examining How Allosteric Mutations Affect Ligand Binding and Specificity on Dihydrofolate Reductase. M. Alfonso, M. Okondo, N.M. Goodey, Montclair State University

B140 761.1 Novel Bryostatin-1 Targets: Mammalian Unc13-1 and Unc13-2 Isoforms. F.A. Blanco, S. Pany, A.A. Ghosh, Y. Wang, J. Wang, University of Texas Southwestern Medical Center and University of Wisconsin-La Crosse State University

B141 761.2 Carboxyl-Terminus of TFG Regulates Directional Movement of COP II Transport Carriers. S. Block, M. Hanna, A. Audhya, University of Wisconsin-Madison

B142 761.13 Probing the Pal-Peptidoglycan Interaction. S. Phadke, S. Stanton, J. Pierce, C. LaClair, C. Hall, L. Michel, Rochester Institute of Technology

B143 761.14 The Role of a Flexible Loop in Metal Transfer Between Periplasmic Zinc Proteins. S.H. Fullam, New Mexico State University

B144 761.15 Determining Histone Deacetylase 8 Substrates Using Non-Natural Amino Acids. J. Lopez, S. Haynes, J. Majmudar, B. Martin, C. Fierke, University of Michigan

B145 761.16 Endocytosis of Phosphorothioate Antisense Oligonucleotides (ASO) by the Stabilin Receptors. A. Egger, B. Kellar, C.M. Miller, E.N. Harris, University of Nebraska-Lincoln

B146 761.17 Identifying Serine Proteases Involved in HMPV F Cleavage. J.T. Kinder, University of Kentucky

B147 760.18 Molecular Mechanisms Associated with Early Onset Primary Dystonia (DYT16) Caused by Mutations in PACT. S.B. Burnett, L. Vaughn, R. Patel, University of South Carolina

B148 760.19 Determination of DNA Binding Interactions for Individual Constructs of the PICKLE Protein’s DNA Binding Domain in Arabidopsis thaliana. K.J. Enrzen, K.K. Ho, J. Ogas, Viterbo University and Purdue University

B149 760.20 Cellular Protein P32/gC1qR Recruits PKC to Viral Protein ICP34.5 and Facilitates HSV Nuclear Egress. C. Zhang, S. Wu, Y. Wang, L. Zhang, S. Pan, Y. Liu, M. Yang, D. Chen, J. Wang, B. He, Y. Cao, Nankai University, People’s Republic of China, and University of Illinois

B150 760.21 Generation of TYRO3 Receptor Tyrosine Kinase Clones to Study Interactions with SH2 Domain Proteins in the Retinal Pigment Epithelium. L. Harns, S. Shelby, Florida Southern College

B151 760.22 Multiple Approach to Determine Protein-Protein Binding Affinity of Calcineurin Homologous Protein Isosforms 1 and 2 and the Sodium Hydrogen Exchanger Isoform I. C.N. Marshall, M.A. Wallert, M.A. Wallert, J.J. Provost, University of San Diego and Bemidji State University

B152 760.23 Bacteriophytochromes in Myxobacteria: Implications for Light-Control of Cell Development. G.C. Tracy, K.D. Gallagher, J.D. Varela, D. Bizhga, P. Duong, A. Nugent, E.A. Stojiljovic, Northeastern Illinois University

B153 760.24 BECN Homologs and ATG14 Form a Metastable Coiled-Coil to Mediate Autophagy. S. Sinha, M. Su, Y. Li, B. Levine, C. Colbert, North Dakota State University, Howard Hughes Medical Research Institute and University of Texas Southwestern Medical Center

B154 761.1 Detecting Lipid Induced Structural Changes of Marburg Virus VP40 Protein Using Hydrogen-Deuterium Exchange Mass Spectrometry (HDX-MS). K.J. Wijesinghe, S. Urata, S. Li, R.V. Stahelin, University of Notre Dame, University of California-San Diego and Indiana University School of Medicine-South Bend

B155 761.2 Destabilization of the Non-Polar Subdomain of Hemolysin A Inhibits Hemolysis. M.R. Brunner, D. Grizzle, T.M. Weaver, University of Wisconsin-La Crosse

B156 761.3 Testing c-Type Heme Sources for Nontypeable Haemophilus influenzae. S. Stanton, J. Pierce, V. Sgheiza, K.L. Bren, L. Michel, Rochester Institute of Technology and University of Rochester

B157 761.4 Probing the Role of Allosteroy in Rho and Ras GTPases. K. Marcus, B. Ma, R. Nussinov, C. Mattos, Northeastern University and National Cancer Institute

B158 761.5 Characterizing the Interactions Between Mg2+ and a Periplasmic Lipoprotein Involved in Mg2+ Homeostasis in Salmonella enterica. T.J. Davie, J.F. May, University of Wisconsin-La Crosse

B159 761.6 Structural and Functional Insights into the Receptor Ligand Binding. H.R. Schmidt, A.C. Kruse, Harvard Medical School

B160 761.7 Purification and Structural Analysis of an Uncharacterized Lytic Protein in Epstein-Barr Virus. M.D. Scheidt, K. Gorres, University of Wisconsin-La Crosse

B161 761.8 Characterization of the Ordered Domain of an Epstein Barr Viral Tegument Protein. M.E. Marlowe, K. Gorres, University of Wisconsin-La Crosse

B162 761.9 Structural Characterization of a Periplasmic Lipoprotein Associated with Magnesium Homeostasis in Salmonella enterica. D.M. Rasmussen, C. Varneed, B. Bhattacharyya, J. May, University of Wisconsin-La Crosse

B163 761.10 Using Biophysical Characterization to Explore Suppressor of IKKepsilon Structure. M.L. Machek, F. Shikwana, S.I. Graham, I.D. Minzer, R. Wey, R. Cruz, E. Bell, J.K. Bell, University of San Diego and Westview High School

B164 761.11 Structural and Biochemical Characterization of a Periplasmic Lipoprotein with a Role in Adaptation of Salmonella to Magnesium Limitation. J.F. May, D.M. Rasmussen, T.J. Davie, C. Varneed, E.A. Groisman, B. Bhattacharyya, University of Wisconsin-La Crosse, Yale School of Medicine and Yale Microbial Sciences Institute

B165 761.12 Stability and Structure of C19orf10 as Assessed by Circular Dichroism. V. Bortnov, D.S. Aniss, D.R. McCasin, D.F. Mosher, University of Wisconsin

B166 761.13 Evaluating the Role of Corynebacterium matruchotii MdAa in Oral Biofilm Formation. R. Tingar, T.T. Luong, H. Ton-That, University of Saint Thomas and The University of Texas Health Science Center at Houston-McGovern Medical School

B167 761.14 Evolutionary Fine-Tuning of Conformational Ensembles in FimH During Host-Pathogen Interactions. V. Kalas, J.S. Pinkner, T.J. Hannan, M.E. Hibbing, J.W. Janetka, S.J. Hultgren, Washington University in St. Louis

B168 761.15 Thermodynamic Partitioning Forces at the Membrane Protein Interface. R. Mahalakshmi, Indian Institute of Science Education and Research, India
ASBMB POSTERS MONDAY continued

B169 761.16 Pinpointing the Divergence of Quaternary Structure in the Lysolecithin Biosynthetic Pathway. G. Pearce, S. Wasik, J. Keown, University of Canterbury, New Zealand and University of Auckland, New Zealand

B170 761.17 Molecular Insights into the Structural Stability and Biological Activity of T4 Bacteriophage DNA Polymerase Processivity Factor. V. Jain, M.I. Singh, IISER Bhopal, India

B171 761.18 Toward the Structure of PES-PPE4-EspG3 Heterotrimmer from Mycobacterium smegmatis to Elucidate PE-PPE Dimer Recognition by Cognate EspG. Z. Williamson, W. Ciocca, R. Reed, K. Korotkov, University of Kentucky and Eastern Kentucky University


B173 761.20 Structural and Functional Characterization of an F17-Like CUP Adhesive from Uropathogenic E. coli Isolate UT819. R.D. Klein, C. Spaulding, S. Hultgren, Washington University in St. Louis School of Medicine

B174 761.21 Complex Structure of the Disulfide Bond-Dimerized PDZ-RhoGEF and CXCRC2 PDZ-Binding Motif: A New Mode of PDZ DimORIZATION. N.S. Spellman, J. Holcomb, A. Niu, V. Choudhary, J. Brunzelle, C. Li, Z. Yang, Wayne State University, Life Sciences Collaborative Access Team and Georgia State University

B175 761.22 Characterization of the Role for the N-Terminal Domain on SII Activities as a Nucleotide Exchange Factor and Reductase. K.A. Pareja, C. Siviere, Cornell University

B176 761.23 An Alternative Structural Model of Activation for the Anti-Anti-α Factor PhyX and Interaction with the Anti-α Factor Neps. J.L. Luebke, D.S. Eaton, J.R. Sachleben, S. Crosson, University of Chicago


B178 761.25 Cooperative Binding of Cinnamon Polyphenols as Activators of Sirtuin-1 Protein in the Insulin Signaling Pathway. M. Brennemen, T. Mahfouz, A. Stackeert, Ohio Northern University

B179 761.26 The Conformation of Apolipoprotein E4 on Discoidal and Spherical High Density Lipoproteins Using Chemical Crosslinking and Fluorescence Spectroscopy. N. Bala, K. Taiwo, V. Narayanaswami, California State University, Long Beach

B180 761.27 Correlation of Fitness Landscapes from Three Orthologous TIM Barrels Originates from Sequence and Structure Constraints. Y.H. Chan, S.V. Venek, K.B. Zeldovich, C.R. Matthews, UMass Medical School

762 Protein Dynamics and Fluctuations

B181 762.1 A Discrete SERCA N-Domain Loop Plays a Role in Pump Structural Dynamics and Functional Regulation. O.N. Raguimova, N. Smolin, E. Bova, A.V. Zima, S.L. Robia, Loyola University Chicago

B182 762.2 Salt-Dependent Protein Splicing in Extreme Halophiles. C.J. Janton, J.N. Reitter, K.V. Mills, College of the Holy Cross

B183 762.3 Stress-Triggered Self-Association of an Enzyme Reverses Its Catalytic Activity. H. Yoo, R. Goyal, D. Drummond, University of Chicago

B184 762.4 NMR Studies of Ubc9 Mutant Identify Structural Basis for SUMO Target Selection. W.J. Placzek, M. Bjornsti, R.H. Whitaker, C. Wright, J. Onwuir, The University of Alabama at Birmingham

B185 762.5 Altered Protein Dynamics Modified the Chemical Step in Thymidylate Synthase. A.K. Ghosh, T. Abeysinghe, A. Kohan, The University of Iowa

B186 762.6 Conformational Motions Impacting Function in an Enzyme Superfamily. C. Narayanan, D.N. Bernard, K. Baha, O.P. Choudhary, C.S. Chennebhotla, P.K. Agarwal, N. Doucet, INRS - University of Quebec, Canada, University of Knoxville

B187 762.7 Modeling Dynamics in the D-Amino Acid Oxidase Protein. L. Kueffer, W. Beyers, University of Wisconsin - Stevens Point

B188 762.8 The Effects of Nucleosides on the Conformational Flexibility and Stability of Glutamate Dehydrogenase. S. Tran, J.K. Bell, E. Bell, University of San Diego

B189 762.9 Dynamics Underlying Cytochrome P450cam Regioselectivity via 2D IR Spectroscopy. M. Thielges, E. Basom, Indiana University

B190 762.10 Conformational Changes in Palladin Actin-Binding Domains Measured by Fluorescent Resonance Energy Transfer. S. Womack, R. Vattepu, M.R. Beck, Wichita State University

B191 762.11 Structure, Dynamics and Folding of an Immunoglobulin-Like Domain of Actin Binding Protein Palladin. R. Vattepu, M.R. Beck, Wichita State University

B192 763.1 ATf6 Activation Remodels the Endoplasmic Reticulum Proteinostasis Network to Restore Proteinostasis of Pathogenic GABAa Receptors. Y. Fu, Case Western Reserve University

B193 763.2 Characterization of Anti-SOD1 Antibodies and Detection of Intermediary SOD1 Oligomers. R.S. Atassi, R. Malik, C. Corrales, L. Tzepa, N. Cashman, G. Bitan, University of California, Los Angeles (UCLA), Strasbourg University, France and University of British Columbia (UBC), Canada

B194 763.3 Engineering Hsp104 Variants to Counter Protein Misfolding. M. Jackrel, J. Shorter, University of Pennsylvania

B195 763.4 Copper-Zinc Superoxide Dismutase as a Convenient System for Assessment of Safety Margins in Vitro. R. Malik, C. Corrales, R.S. Atassi, J.S. Valentine, T. Schrader, F. Kläner, G. Bitan, UCLA and Duisburg-Essen University, Germany

B196 763.5 Investigation of Cellular Signaling and Epigenetic Dynamics via Optogenetic Control of Nuclear Cytoplasmic Distribution. H. Yuermefendi, B. Kuhlman, University of North Carolina at Chapel Hill

B197 763.6 Role of Folding Intermediates in Initiating Aggregation of the Prion Protein. R. Moulick, R. Goluguri, J.B. Udgaonkar, NCBS and IFR, India

B198 763.7 Protein Aggregation in Ehrliechia chaffeensis During Infection of Mammalian Cells. M. Zolkiewski, D. Kuczynska-Wasink, C. Cheng, R.R. Ganta, Kansas State University, University of Gdańsk, Poland and Vanderbilt University Medical Center

B199 763.8 A Common Mechanism of Proteinase Impairment by Neurodegenerative Disease-Associated Oligomers. T.A. Thibaudeau, R. Anderson, D.M. Smith, West Virginia University, School of Medicine

B200 763.9 Host vs Virus: HSV Has Evolved to Evade Host Antiviral Mechanisms by Manipulating the Host Proteinostasis Machinery. S. Wellner, M. Adalaka, University of Connecticut School of Medicine

B201 763.10 Translation of Heat Shock Proteins Is Regulated by Poly(A)-Binding Protein Assembly. C.D. Katanski, J. Riback, E. Pilipenko, D.A. Drummond, University of Chicago

B202 763.11 Identifying and Ameliorating Complex Collagen Misfolding Defects. M.D. Shoulders, Massachusetts Institute of Technology
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**Enzyme Mechanisms, Kinetics and Energetics (II)**  

**B207 764.1**  Effects of Isotopic Substitution in Enzyme and Co-Factor on Enzyme Catalyzed Hydride Transfer. C. Ranasinghe, P. Pagano, Q. Guo, C. Cheatum, A. Kohen, The University of Iowa

**B208 764.2**  Reactivity of Neuroglobin with H2S. M. Ruetz, J. Kumutima, M. Filipovic, N. Lehnert, R. Banerjee, University of Michigan and University of Bordeaux, France

**B209 764.3**  Mechanism of Nickel-Substituted Rubredoxin, a Neuroglobin Analog. C. Cheatum, A. Kohen, The University of Iowa

**B210 764.4**  Spectroscopic Insight Into the Mechanism of Nickel-Substituted Rubredoxin, a Bioinspired Hydrogenase Mimic. M.J. Stevenson, J.W. Slater, S.C. Marguet, H.S. Shafsaat, The Ohio State University

**B211 764.5**  Temperature and Pressure Dependence of the Activity of Inteins from Extreme Thermophiles. H.Y. Comeau, J.D. Long, I.V. Pierre, J.N. Reiter, K.V. Mills, College of the Holy Cross

**B212 764.6**  Insights into Radical SAM Enzyme Mechanism from Lysine-2,3-Aminomutase and an S-Adenosyl-L-Methionine Analog. A. Byer, J. Broderick, Montana State University

**B213 764.7**  Expression, Purification, and Characterization of Codon Optimized and Mutant Variations of DszB from *N. asteroides*. J.J. Gumpf, K. Idrizzi, L. Watkins, James Madison University

**B214 764.8**  Substrate Specificity of the Novel Serine Hydrolase, LipN, Implicated in the Virulence of *Mycobacterium tuberculosis*. D. Schemenauer, R. Johnson, Butler University

**B215 764.9**  Elucidating the Mechanism of Thiol Oxidase Activity of a B12-Trafficking Protein Z. Li, A. Shankaranathan, M. Ruetz, N. Lesniak, M. Koutmos, R. Banerjee, University of Michigan and Uniformed Services University of the Health Sciences

**B216 764.10**  Specificity Studies of the Aromatic Desulfinase, 2-(2′-Hydroxyphenyl)Benzensulfinate Desulfinase from *Nocardia asteroides* A3H1. D.M. Hoang, E. Smith, L. Watkins, James Madison University

**B217 764.11**  Evaluating the Catalytic Role of a Conserved Glutamate Residue in Triosephosphate Isomerase from *Trypanosoma brucei brucei*. C.B. Khoury, N. Seangmany, T.C. Chang, J.P. Schwans, California State University, Long Beach

**B218 764.12**  Investigating Dialkyl Aryl Phosphates as Selective Butylrycholinesterase Inhibitors. J.P. Schwans, J. Gonzalez, T. Tran, J. Ochoa, N. Nakayama, S. McCoy, E.J. Sorin, California State University Long Beach

**B219 764.13**  Sulfide Oxidation and Transfer Catalyzed by a Bacterial Persulfide Dioxygenase Fused to a Rhodanese. N. Moti, O. Kabila, M. Skiba, J. Smith, R. Banerjee, University of Michigan

**B220 764.14**  Balance of Conformational States Affect the Intrinsic Hydrolysis of NRas When Compared to Other Ras Isoforms. D.F. Reid, C. Mattos, Northeastern University

**B221 764.15**  Factors That Influence Recombinant Lysine Deacetylase Activity. S.A. Imbraguglio, B.J. Hylton, T.B. Toro, T.J. Wint, Xavier University of Louisiana

**B222 764.16**  Optimization of the Paired Enzyme Assay Synthesizing UDP-Xylose from UDP-Glucose. M.D. Cook, A. Culbertson, O. Zabotina, Iowa State University

**B223 764.17**  Development of a Thermostable ATP Hydrolysis Coupled Enzyme Activity Assay. K.L. Cumpian, M.D. Cannly, M.P. Latham, Texas Tech University

**B224 764.18**  Unmasking the High Affinity of *Escherichia coli* Glycogen Synthase Toward Its Polyglycan Substrate. A.A. Iglesias, M. Aleanzi, M.D. Asecion Dziej, M. Machtey, A. Yeo, M. Ballicora, Instituto de Agrobiotecnologia del Litoral Argentina, Cal Poly and Loyola University at Chicago

**B230 765.6**  Modulation of Sirtuin NAD+‐Dependent Deacetylase Activity by Cysteine Oxidation. K.S. Kalous, L.S. Wyna-Smith, M.D. Olp, B.C. Smith, Medical College of Wisconsin

**B231 765.7**  Phosphinositides and Kinesin 13 Family Member KiF2A Cooperatively Regulate Arf GTPase Activating Protein AGAPI. N.S. Roy, R. Luo, P.A. Randazzo, National Center Institute, National Institutes of Health

**B232 765.8**  A Potential Modification of the Production of the Essential Amino Acid: L-Threonine. C. Petit, Y. Kim, S. Lee, C. Kang, D. Ronning, University of Toledo and California State University-Stanislaus

**B233 765.9**  Phospholipase A2: A Unique Paradigm of Allosteric Regulation by Membranes. V. Mouchlis, J. McCammon, D. Denis, UC San Diego

**B234 765.10**  The Predicted Human PANK4 Lacks Key Catalytic Residues for Pantothenate Kinase Function. J. Yao, C.O. Rock, S. Jackson, St Jude Children's Research Hospital

**B235 765.11**  Redox Control of PMT1 Substrate Specificity. T.B. Caceres, O. Price, Y. Morales, J. Hevel, Utah State University


B238 765.14 The Firmicutes Case on the Regulation of Bacterial ADP-Glucose Pyrophosphorylase. M.D. Asencion Díez, A.E. Cereijo, A. Demonte, M. Ballicora, A.A. Iglesias, Instituto de Agrobioiciología del Litoral, Argentina and Loyola University at Chicago

B239 765.15 The Regulatory Subunit Type Ic of Protein Kinae A: A Study of Carney Complex and Acrodysostosis Mutations J.C. Del Rio, C.R. Nielsen, S.S. Taylor, and A.A. Iglesias, University of Erlangen-Nuremberg, Germany

B240 765.16 Negative Allosteric Regulation of a Serine Hydrolase by Divalent Metal Cations. G.C. Hoops, Butler University

B241 765.17 Role of the Inter-Subunit Surface Interaction in the Regulation of the ADP-Glucose Pyrophosphorylase from Agrobacterium tumefaciens. H.P. Patel, E. Dobrzynski, D. Liu, M.A. Ballicora, Loyola University Chicago

B242 765.18 Divergent Mechanisms of Allosteric Regulation of Pyruvate Carboxylase by Acyetyl Coenzyme A. Y. Liu, M. St. Maurice, Marquette University

B243 765.19 Probing the Role of N- and C-Terminal Regions in Allosteric Regulation of Thermoanoxobium yellowstonii ADP-Glucose Pyrophosphorylase. E. Yik, S. Kaur, E. Pushkarev, E. Mercado, M. Collazo, D. Caccio, H. Axelrod, C.R. Meyer, California State University, Fullerton and UCLA


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Chemical Biology of Natural Products and Small Molecules

B245 766.1 Identification of Tumor Necrosis Factor-α Inhibitors from the Traditionally Used Chinese Plant Mappiamthus iodoides. M. Garrison, H. Park, M. Wright, A. Farone, Middle Tennessee State University

B246 766.2 Biosynthetic Studies of the Antibiotic Uncialamycin. H. Hindra, T. Huang, D. Yang, X. Yan, H. Ge, B. Shen, The Scripps Research Institute

B247 766.3 Mechanisms by Which Plant Extracts Delay Aging in Yeast by Targeting Certain Signaling Pathways and Modulating Lipid Metabolism. V. Titorenko, V. Luchten, Y. Medkour, A. Arlia-Ciannonio, P. Dakik, M. McCauley, Concordia University, Canada

B248 766.4 Distracting the Hungry: Mosquito Anosmia-Inducing and Odor Perception-Enhancing Compounds of Natural Origin Targeting ORco Function for Control of Transmission of Malaria and Other Mosquito-Borne Infectious Diseases. K. Iatrou, P. Tastoura, M. Konstantopoulou, National Centre for Scientific Research “Demokritos”, Greece

B249 766.5 The Effects of Sibilibin on Colorectal Cancer Cell Line. M.A. Horita, U. Ezekiel, Saint Louis University


B251 766.7 Annona senegalensis Shows Potent Anti-Diabetic Activity by Attenuating DNA Fragmentation in Oxidative Injury and Inhibiting Key-Enzymes Linked to Type 2 Diabetes. O.L. Erukanuere, S. Islam, University of KwaZulu-Natal, South Africa

B252 766.8 Deciphering the Function of NTF2-Like Proteins Associated with Polyketide Biosynthesis in Actinomycetes. N. Yukanovic, X. Zhu, N.R. Silvaggi, C.E. Melançon III, University of Wisconsin-Milwaukee and University of New Mexico

B253 766.9 Abscissic Acid/Dormin, a Plant Hormone That Inhibits Angiogenesis in Vitro and Neovascular Growth in Vivo. J.Y. Chaur, S. Lee, B. Chaur, High Technology HS and SUNY Downstate Medical Center

B254 766.10 Structure Revision and Biological Evaluation of Artabonatine A and Its Diastereoisomer. A. Ku, G. Cuny, University of Houston


B256 766.12 Microarray and Pathway Analysis of Prostate Cancer Tumors Treated with Andrographolide. I.S. Forestier-Roman, M. Sanchez, R. Rohena, H. Ortiz-Zuazaga, M. Martinez-Ferrer, University of Puerto Rico Comprehensive Cancer Center, Puerto Rico, University of Puerto Rico Medical Sciences Campus, Puerto Rico University of Puerto Rico at Rio Piedras, Puerto Rico, School of Pharmacy and University of Puerto Rico Medical Sciences Campus, Puerto Rico

B257 766.13 Effects of Aspirin on Expression of Proteins Implicated in Airway Remodeling in Human Lung Fibroblasts. K. Geary, D. Hasenmeyer, F. Daghigh, Philadelphia College of Osteopathic Medicine, Center for Chronic Disorders of Aging and PCOM


B259 766.15 New Roles for Dithiopyrrolones in Disrupting Bacterial Metal Homeostasis and Inhibiting Metalloenzymes. A.N. Chan, A.L. Shiver, W.J. Weer, S.Z. Razvi, M.T. Traxler, University of North Carolina at Chapel Hill, University of California, San Francisco, University of North Carolina at Chapel Hill, Eshelman School of Pharmacy, Duke University, University of California, Berkeley

B260 766.16 Electrochemical Detection of Isatin Using Flow Injection Analysis with Amperometric Detection. S.W. Sanchez, R. Jarasova, G.M. Swain, St. Mary’s University and Michigan State University

B261 766.17 A Chemical Biology Approach to the Study of Coenzyme Q Biosynthesis and Metabolism. A. Nag, L. Fernandez, J.M. Villalba, J.N. Shepherd, O. Kwon, C.F. Clarke, University of California, Los Angeles, Universidad de Córdoba, Spain and Gonzaga University


B263 766.19 Characterization of an Unprecedented Hybrid Peptide-Nonribosomal Peptide Synthetase-Like Biosynthetic Gene Cluster. C.E. Perez, H. Park, K.W. Barber, J. Rinehart, J.M. Crawford, Yale University and Yale School of Medicine

B264 766.20 Predicting Function of Class II Diterpene Cyclases in Bacterial Species Using a Sequence Similarity Network. C. Lemke, R. Nett, Iowa State University

B265 766.21 Characterizing the Use of the RNA Mango Aptamer for RNA Pull-Downs and Single Molecule Fluorescence. H.M. Poe, C. van der Feltz, X. Chen, P. Unrau, A. Hoskins, University of Wisconsin - Madison and Simon Fraser University, Canada

B266 766.22 Predicting and Interpreting the Hofmeister Effects of Different Salts with Nucleic Bases and Aromatic Compounds Using Solubility Assay. R. Hong, L. Cheng, Y. Yao, B. Knowles, Y. Zhang, M. Kerins, I. Shikel, M. Record, University of Wisconsin Madison

B267 766.23 Second Generation PS-ASO Internalization and Endosomal Escape. C. Miller, A. Egger, B. Kellar, B. Hass, P.P. Seth, E.N. Harris, University of Nebraska-Lincoln and Ionis Pharmaceuticals Inc.
Monday

Chemical Probes, Biosensors and Biomarkers

B268 767.1 Probing the Charge and Conformational Requirements of JmjC Demethylases. G.W. Langley, A. Brinke, M. Munzel, L.J. Walport, C.J. Schofield, R.J. Hopkinson, University of Oxford, United Kingdom and Aarhus University, Denmark

B269 767.2 Development of Algorithmic Techniques for Designing Electrochemical DNA Biosensors. A.J. Bonham, A.J. Bulow, Metropolitan State University of Denver


B271 767.4 Chemoenzymatic Synthesis of Bioorthogonal PepTidoglycan Derivatives: Tools to Remodel Bacterial Cell Wall. Z. Jones, University of Delaware

B272 767.5 An Inexpensive and Effective Aptamer-Based Evanescence Wave Biosensor. I. Mazin, A.J. Bonham, Metropolitan State University of Denver

B273 767.6 Lanthanide-Based FRET Biosensors for Time-Gated Imaging and Detection of Protein-Protein Interactions in Live Mammalian Cells. T. Chen, H. Pharm, L. Miller, UIC

B274 767.7 Measuring Oxytocin Hormone and Oxytocin-Reactive Autoantibodies to Determine Their Correlation with the Severity of Clinical Depression. S.E. Thompson, A.J. Russo, Hartwick College

B275 767.8 Multiplexing Metabolomic-Based Disease Diagnosis by Surface Enhanced Raman Spectroscopy (SERS) Platform. Y. Chen, L.D. Ziegler, Boston University

B276 767.9 Biosensor Diagnostic for Congestive Heart Failure via Detection of B-Type Natriuretic Peptide. N. Dubchak, A.J. Bonham, Metropolitan State University of Denver

B277 767.10 Serological Diagnosis of Mycoplasma via Lipoprotein Specific Electrochemical Biosensor. J. Jacobs, A.J. Bonham, Metropolitan State University of Denver


B280 767.13 ENOX2-Selective Aptamer Identification for an Electrochemical-Aptamer Biosensor in Cancer Diagnostics. L.C. Fetter, J. Jacobs, A.J. Bonham, Metropolitan State University of Denver

B281 767.14 Constructing Red-Shifted Fluorescent Protein Sensors of Cellular Redox Status. S. Norcross, K. Trull, J. Snider, S. Doan, K. Tat, L. Huang, M. Tantama, Purdue University

B282 767.15 Building a Synthetic Library of Fluorogenic Ester Substrates to Analyze Serine Hydrolyses. A. Koelmer, R. Johnson, G. Hoops, Butler University

B283 767.16 Development of Ester-Protected Ethambutol Derivatives for Characterization of Mycobacterial Hydrolyase Activity. E. Larsen, D. Stephens, R.J. Johnson, Butler University

B284 767.17 Development of an Arsenic Sensitive Bacterial Biosensor and San Diego Soil Testing. A. Magsumbol, M.S. Magee, J.J. Provost, University of San Diego


B286 767.19 Withdrawn.

B287 767.20 High Dynamic-Range LRET Biosensors of Rac1. H.T. Pham, T. Chen, L. Miller, University of Illinois at Chicago

B288 767.21 Toward Cell-Permeable, Multi-Fluorophore Protein Labels for Enhanced LRET Imaging. M. H. Soflase, C. Ivette Rivera Vera, L. Miller, University of Illinois at Chicago

768 Proteomics (I)

B289 768.1 Nicotine-Induced Proteome of Arthrobacter nicotinovorans pAO1+. M. Mihasan, C. Babii, C.C. Darie, Alexandru Ioan Cuza University of Iasi, Romania and Clarkan University

B290 768.2 There Are Still Proteins in Rat Urine After 7-Day Starvation. F. Zhang, Y. Yuan, Y. Ni, Y. Gao, Institute of Basic Medical Sciences Chinese Academy of Medical Sciences, School of Basic Medicine Peking Union Medical College, People’s Republic of China, Beijing Normal University, People’s Republic of China

B291 768.3 Investigation of Induced Obstructive Sleep Apnea (OSA) in Rat Atria Using Mass Spectrometry Based Proteomics. D. Channaveerappa, J. Lux, K.L. Wormwood, M. McLerie, B.K. Panama, C.C. Darie, Clarkson University and Masonic Medical Research Laboratory

B292 768.4 Temporal Quantitative Proteome Analysis Reveals Dynamic Change of Cellular and Secreted Protein Profiles of Clostridium cellulovorans Depending on Carbon Sources. A. Shunsuke, A. Wataru, K. Kouichi, U. Mitsuysahi, Kyoto University, Japan, Research Fellow of Japan Society for the Promotion of Science, Japan, Kyoto Integrated Science & Technology Bio Analysis Center, Japan, JST and PRESTO, Japan

B293 768.5 Development of a High Throughput Extraction Procedure for Nuclei and Mitochondria from Rat Tissues. B. Easparro, S. Garrett, J. Atwood, Omni International

B294 768.6 Proteomic Research on the Therapeutic Mechanism of Zhibai Dihuang Granule for Treating Hyperthyroidism Yin-Deficiency Rats. C. Liu, L. Mao, S. Yang, T. Jiang, C. Wang, Z. Chen, H. Tu, Z. Li, J. Li, Zhejiang University, People’s Republic of China

B295 768.7 A High Serum Vanin-1 Phenotype Is Not Unique to Diving Marine Mammals. B.K. Boxall, K. Prager, B.A. Neeley, J.O. Lloyd-Smith, F. Gulland, M.G. Janech, College of Charleston, University of California, Los Angeles, National Institute of Standards and Technology, The Marine Mammal and Medical University of South Carolina

B296 768.8 Quantifying Protein Dephosphorylation as a Function of Mechanical Sample Disruption Techniques Toward an Optimized Sample Prep Protocol for Phosphoproteomics. S. Garrett, J. Atwood, B. Easparro, Omni International

B297 768.9 Global Proteomics Assay of Ubiquitin-Knockout Strains of Yeast. A. Hanse, C. Minogue, E. Cooper, Hartwick College

B298 768.10 Effect of Zhibai Dihuang Granule on Anti-Inflammatory Proteins Associated with Yin Deficiency Heat Syndrome. L. Mao, C. Liu, T. Jiang, C. Wang, Z. Chen, J. Li, Zhejiang University, People’s Republic of China

B299 768.11 Pathogenesis of AMI Revealed by Integrative Global Transcriptomics and Proteomics Analysis. Y. Wang, W. Lin, C. Nugent, S. Gao, Z. Ma, R. Zhu, C. Li, L. Zhu, W. Wang, Beijing University of Chinese Medicine, People’s Republic of China, Key Lab of Computational Biology, CAS-MPG Partner Institute for Computational Biology, People’s Republic of China, Digestive Diseases and Nutrition Center, Department of Bioinformatics, School of Life Sciences and Technology, People’s Republic of China, Genane, Environment and Microbiome Community of Excellence, People’s Republic of China

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ASBMB POSTERS  MONDAY continued

B300  768.12  Screening and Identification of Novel Serum Potential Biomarkers for Pulmonary Tuberculosis by iTRAQ-2D LC-MS/MS.  T. Jiang, L. Shi, X. Li, L. Wei, S. Yang, C. Wang, C. Liu, Z. Chen, H. Tu, Z. Li, J. Li, South China University of Technology School of Medicine, People's Republic of China; Department of Laboratory, Zhejiang Hospital, People's Republic of China, Zhejiang Province People's Hospital, People's Republic of China, Zhejiang University, People's Republic of China.

B301  768.13  Over-Expression and Association of Serum PPIA, vwf, and FXIIIa with a Systemic Hypercoaguable State in Patients with Pulmonary Tuberculosis.  Z. Chen, T. Jiang, L. Wei, X. Li, L. Shi, M. Li, C. Liu, H. Tu, S. Yang, J. Chen, J. Li, Institute of Cell Biology, Zhejiang University, People's Republic of China, Zhejiang University Hospital, People's Republic of China, 468 Yuri Road, Shaoxing, People's Republic of China, Zhejiang Hospital, People's Republic of China.

B302  768.14  Proteomics Analysis of Tea Tree Oil-Selected Staphylococcus aureus Small Colony Variant.  N.J. Torres, S.D. Hartson, J. Rogers, K.A. Abdulhafid, J.E. Gustafson, Oklahoma State University.

B303  768.15  Assessment of the Effects of Pollutants in the Great Lakes on the Human Proteome.  E. Dupree, B. Crimmins, T. Holsen, J. Pagano, B. Thompson, K. Christensen, M. Raymond, C. Darie, Clarkson University, SUNY Oswego and Wisconsin Department of Health Services.

769  Metabolomics

B304  769.1  Alcoholic Effect on the Metabolome and CCL2.  C.W. Berndt, P. Schumann, A. Dunn, J. Bray, J. Lawrence, University of Wisconsin - Stevens Point.


B306  769.3  PathQuant: A Bioinformatic Tool to Quantitatively Annotate the Relationship Between Genes and Metabolites Through Metabolic Pathway Mapping.  S. Therrien-Laperrière, S. Cherkouki, G. Boucher, T. Consortium, F. Jouard, G. Lettre, J. Rioux, C. Des Rosiers, Montreal Heart Institute, Canada, University of Montreal, Canada, Institute of Molecular Systems Biology, ETH Zürich, Switzerland, INRA and Toulouse University, France.

B307  769.4  High Resolution Mass Spectrometry Coupled with Multivariate Data Analysis Revealing Plasma Lipidomic Alteration in Patients with Colorectal Cancer.  P. de Oliveira Carvalho, M.F. Messias, G.C. Mecatti, C.F. Angolini, Sao Francisco University, Brazil and University of Campinas, Brazil.

B308  769.5  Effects of PCBs Exposure on Modulation of Bile Acid Profile and Intestinal Microbiota in Mice.  S.L. Cheng, D.Z. Fu, X. Li, K. Khay, H-J. Lehmler, J.F. Cui, University of Washington and University of Iowa.

B309  769.6  Age-And Species-Specific Activation of CAR on Bile Acid Homeostasis in Mice.  S.L. Cheng, K. Buckley, D. Rizzolo, B. Buckley, G.L. Guo, J. Cui, University of Washington and University of Rutgers University.

770  Protein Kinases


B311  770.2  O-GlcNAcylation of the Human Kinome.  X. Liu, G. Han, A. Pandey, G. Hart, Johns Hopkins University.

B312  770.3  Calcium Signals Alter the Mobility and Localization of CaMKIIβ in Cardiomyocytes.  B.M. Wood, S. Galice, D.M. Bers, J. Bossuyt, UC Davis.

B313  770.4  Role of an Abscisic Acid-Activated Protein Kinase in Drought Response in Soybean Revealed by RNA-Seq.  S.K. Sah, G. Popescu, K.R. Reddy, V. Klink, J. Li, Mississippi State University.


B315  770.6  AMPK-Related Kinase MPK3/8/MEK Potentiates p21-Mediated Apoptosis, Cell Cycle Arrest, and Inhibition of Adipocyte Differentiation via Thr55 Phosphorylation.  H. Ha, H. Seong, R. Manoharan, Chungbuk National University, Republic of Korea and University of Madras, India.


B317  770.8  Structural Elucidation of the Binding of the Yad-5H2 Domain to the EphA2 Cytoplasmic Region.  K. Zhang, J. Ma, C.B. Post, C.V. Stauffacher, Purdue University.

B318  770.9  A Platform for Delivery of Isoform Selective Inhibitors with in Vivo Efficacy and Safety: Case Study That Revised Prevailing Perspectives on Active Site Targeting and Delivered a Novel Drug Candidate.  S.M. Roy, V. Tokars, D.M. Watterson, Northwestern University.


B320  770.11  Fyn Regulates Cyclic-AMP Dependent Protein Kinase a Binding Interactions.  S.A. Barritt, M.E. Weir, B.A. Ballif, P.B. Deming, University of Vermont.

B321  770.12  Novel Molecular Interaction Between Cyclic-AMP Dependent Protein Kinase A Holoenzymes and La-Related Protein 4.  K.T. O'Toole, P.B. Deming, University of Vermont.

B322  770.13  Biochemical Study of a Cancer Driver Fusion Protein, DnaJ-BI-PKA.  T. Lu, P. Zhang, M. Cianfranco, S. Simon, A. Leschziner, S. Taylor, University of California, San Diego, National Cancer Institute, Rockefeller University and UCD.


B324  770.15  PKA Subunit Balance Plays a Key Role in Lipolysis.  Y. Ji, J. Lee, J. Han, J. Kong, J. Kim, Department of Biological Sciences, Institute of Molecular Biology and Genetics, Seoul National University, Republic of Korea.


B327  770.18  Importance of “Single Turnover Reaction” in Protein Kinase A Signaling.  L.G. Ahuja, J. Wu, P. Zhang, S. Taylor, University of California San Diego and National Cancer Institute.
771 Phosphatases

B328 771.1 Insight Into the Mechanism and Structural Basis for Autoinhibition of PTEN by Phosphorylation of Its C-Terminal Tail. D.R. Dempsey, Z. Chen, S. Thomas, D. Hayward, D. Bolduc, P. Cole, Johns Hopkins University

B329 771.2 At the Crossroads Between TYR and SER/THR Signaling: A New Paradigm in the Regulation of PP2A by SRC Kinase. E. Sontag, J. Sontag, R.J. Gomez, A. Hoffmann, G. Taleski, M.D. Mazaloukas, S.K. Hanks, I. Frohner, E. Ogris, B.E. Wadzinska, University of Newcastle, Australia, Vanderbilt University School of Medicine and Medical University of Vienna, Austria

B330 771.3 The Phosphatase PRL-3 as a Novel Drug Target in T-Cell Acute Lymphoblastic Leukemia. M. Wei, H. Jing, J. Liu, C. Weng, J. Blackburn, University of Kentucky

B331 771.4 Cyclosporin A-Induced Calcineurin Isoform Specific Matrix Metalloproteinases (MMP2 and MMP9) Expression in Renal Fibroblasts. C.E. Francis, Y. Bai, Philadelphia College of Osteopathic Medicine


772 Ion Channels

B333 772.1 STIM1 Interacts with the Voltage Sensor (L-Channel) of L6 Skeletal Muscle Cell Cultures. S. Pitake, R.S. Ochs, St. John's University

B334 772.2 Transient Receptor Potential Vanilloid 4 (TRPV4) Regulates Fibroblast Differentiation in vitro and in vivo. J. Farina, L. Darj, A. Agbaje, Y. Yu, St. John's University

B335 772.3 NADPH Oxidase 4 Expression is Increased Through TRPV4 Channel In D. farinae-Induced Airway Remodeling in Asthma in vivo via Modulation of Matrix Synthesis and Matrix Degradation Mechanisms. F.C. Gombeda, V. Kondeti, N. Al-Azzam, C. Thodeti, S. Paruchuri, University of Akron and Northeast Ohio Medical University

B336 772.4 Up-Regulation of Atrial and Neuronal Kir3 Activity by Cholesterol. A. Rosehouse-Dantzer, A.N. Bukiya, University of Illinois at Chicago and The University of Tennessee Health Science Center

B337 772.5 Fluorescence Investigations of the Rate-Limiting Step in the HCN Ion Channel Deactivation Pathway. K.E. Magee, T.W. Claydon, E.C. Young, Simon Fraser University, Canada

B338 772.6 Identification of TRPP2 Binding Partners in Mice Tissues. C. Ng, Y. Yu, St. John’s University

B339 772.7 Purification and Crystallization of the C-Terminal Interaction Domains of TRPP Ion Channel Proteins. H.R. Martin, Z. Agbaje, Y. Yu, St. John’s University

B340 772.8 Identification of Extracellular Residues Critical to the Epithelial Sodium Channel. T.F. Dismuke, R. Booth, Texas State University and University of the Incarnate Word

B341 772.9 Identification of Accessory Proteins Impacting the Function of the Epithelial Sodium Channel (ENaC). T. Adewunmi, R. Booth, Texas State University and University of the Incarnate Word

B342 772.10 Disrupted BKα Channel α1 Subunit Gene Contributes to Vascular Dysfunction in Pulmonary Hypertension. E.A. Barnes, C. Chen, L. Lee, S.L. Barnes, D.N. Cornfield, Stanford University

B343 772.11 5-Fluorouracil Disrupts Nuclear Transport During Apoptosis in a Calcium Dependent Manner. J.A. Koper, K. Higby, L. Foltz, K. Resendes, Westminster College

B344 772.12 Piezo1 Mediated Mechanotransduction of Wall Shear Stress Activates Ca2+ Gating Secondary to Src Phosphorylation of Piezo1 and Induces Angiogenesis. K. Wong, M. Mittal, A. Karginov, Y. Komarova, D. Mehta, A. Malik, University of Illinois College of Medicine

B345 772.13 Regulation of the Arabidopsis thaliana Ca2+-Dependent Protein Kinase, CPK28, by Autophosphorylation and Calmodulin-Binding. M. Hristova, B. Deng, Y. Lam, J. Li, A. van der Vliet, University of Vermont

B346 772.14 The Intrinsically Disordered Membrane Enzymes Selenoprotein S and Selenoprotein K. S. Rozovsky, J. Liu, Z. Zhang, University of Delaware

B347 772.15 The Nucleotide Exchange Factor Sill Modulates Redox Signaling Through the Molecular Chaperone BiP. K. Siegenthaler, K. Pareja, J. Wang, C. Sevier, Cornell University

B348 772.16 A Novel Mediator of Heart Failure Development and Progression. S. Thomas, D. Hayward, D. Bolduc, P. Cole, Simon Fraser University, Canada

B349 773.4 Hydrogen Sulfide Homeostasis and Signaling in Normal and Neoplastic Intestinal Cells. M. Libiad, N. Sakamoto, E. Fearon, R. Banerjee, University of Michigan

B350 773.5 Lipid-Derived Electrophiles Regulate Isoform-Specific Redox-Dependent Kinase Signaling. S. Surya, S. Parvez, M. Long, Y. Zhao, J. Haegeli, P. Huang, Y. Aye, Cornell University and Weill Cornell Medicine

B351 773.6 4-Hydroxy-2-Nonenal (HNE), a Product of Lipid Peroxidation, Induces Tissue Factor Decryption by Modulating Thrombogenic System and Mitochondrial ROS Generation Independently. S.A. Ansari, U.R. Pendurthi, L.M. ‘Rao, University of Texas Health Science Center at Tyler

B352 773.7 Hydrogen Sulfide Oxidation by Myoglobin. T.M. Bostelmar, University of Michigan

B353 773.8 Characterization of Glutathione Flux Between Subcellular Compartments. C.E. Ousten, M. Darch, C. McGee, University of South Carolina

B354 773.9 Molecular Basis for Redox Regulation of the Src Kinase. D.E. Heppner, C.M. Dustin, C. Liao, M. Hristova, B. Deng, Y. Lam, J. Li, A. van der Vliet, University of Vermont

777 Apoptosis and Cell Death

B355 777.1 Enhanced Aggressiveness of Bystander Cells in an Anti-Tumor Photodynamic Therapy Model: Role of Nitric Oxide Produced by Targeted Cells. A. Girotti, J. Bazak, J. Fahey, W. Korytkowski, Medical College of Wisconsin and Jagiellonian University, Poland

B356 777.2 H/D Exchange Mass Spectrometry Reveals Calmodulin-Controlled Regulatory Interactions in Neuronal Nitric Oxide Synthase. J.R. Carley, M.F. Barrett, T.J. Gilbreath, E.S. Underbakke, Iowa State University

B357 777.3 Mapping Calmodulin-Induced Oxidase Domain Interactions of Neuronal Nitric Oxide Synthase Using H/D Exchange Mass Spectrometry. M.F. Barrett, J.R. Carley, E.S. Underbakke, Iowa State University

B358 777.4 Stay on Target: Deconvoluting Mixed Redox Messages Through Precision Redox Targeting. Y. Aye, Cornell U & Weill Cornell Med

B359 777.5 Cation-Independent Mannose 6-Phosphate Receptor Interacts with Several Components of the Plasminogen Activation System. R. Bohnack, J. Miller, S. Twing, L. Olson, N. Dahms, Medical College of Wisconsin
Posters Monday Continued

B360 774.6 Probing the Activation Mechanism of BAK in Mitochondrial Apoptosis. M. Tesney, G. Singh, C. Guihao, T. Moldoveanu, Winthrop University and St. Jude Children’s Research Hospital

B361 774.7 Inhibition of Apoptosis in Glutamine-Starved Mouse Hybridoma Cells by Ammonium Ions and DON, a Glutamine Analog. E.R. Gauthier, C. Zhou, A. Abusneina, Laurentian University, Canada


B363 774.9 Pro-Death Bax Has an Intrinsinc Capability to Induce Aggregate-Dependent Caspase 8-Mediated Cell Death. A. Manas, S. Wang, J. Li, A. Nelson, A. Davis, S. Lamerand, H. Zhang, J. Xiang, Illinois Institute of Technology and University of Chicago


B365 774.11 Gene Expression of SEB-Induced C-Jun N-Terminal Kinase Apoptosis Pathway in Human PBMCs. M. Hendricks, D. Borgos, J. Butzen, A. Watson, C. Mendis, J. Jett, University of Alabama at Birmingham

B366 774.12 Post-Transcriptional Modulation of MCL1 by PTBP1 Regulates Celluar Apoptosis Induced by Antitubulin Chemotherapeutics. J. Cui, W.J. Placzek, University of Alabama at Birmingham


B368 774.14 The Effect of Compound L19 on Human Colorectal Cells (DLD-1). S. Mohammadhoseinepour, B. Clack, Stephen F. Austin State University

B369 774.15 Intracellular Zinc Trafficking and Metallothioneine Gene Activation in HUVEC Treated with Crotalox atox Venom. E. Albrecht, V. Garbar, S. Tomlins, E. Williams, Kennesaw State University and University of Michigan Medical School

B370 774.16 Activation of Caspase-8/BID Pathway in Dexamethasone-Induced Apoptosis in a Human Lens Epithelial Cell Line. M.S. Ali, William Beaumont Army Medical Center


B372 774.18 Antioxidant and Anti-Proliferative Activity of Fractions from Anona senegalensis Pers (Annonaceae) Stem Bark on HeLa Cells. R.A. Adisa, G.T. Getti, S.C. Richardson, University of Lagos, Nigeria and University of Greenwich, United Kingdom

B373 774.19 Understanding the Role of BCL-2 Proteins in Hyperglycaemia-Induced Apoptosis in Cardiomyocytes. S. Miller, V. Del Gaiho Moore, Elion University

B374 774.20 The NPM1 Inhibitor NSC348884 Induces Apoptosis in Neuroblastoma Cells. K. Kristjansdottir, N. Akgul, K. Vlcek, Midwestern University

B375 774.21 Effect of Methylyxocaul and Curcumin on PC12 and RINm5F Cells. V. Puccini de Castro, S. Keys, J. Su, S. Munre, Northeastern Illinois University

B376 774.22 Bcl-2 Dependency in Cell Culture and Mouse Models of Sepsis-Associated Acute Kidney Injury. K.A. Lynch, V. Del Gaiho Moore, Elion University

B377 774.23 NF-xB Promotes Alternative Splicing of Bnip3 During the Cellular Adaptation to Hypoxia. J. Field, M. Martens, W. Mughal, S. da Silva Rosa, J. Gordon, W. Diehl-Jones, University of Manitoba, Canada and Athabasca University, Canada


B379 774.25 Analysis of the Functional Relationship Between the Kaposi Sarcoma-Associated Herpesvirus (KSHV) VBCl-2 Protein and the Pro-Apoptotic Host Protein, BIK. K. Hixon, J. Roekelein-Canfield, Simmons College

B380 774.26 A Flow Cytometry Analysis of Apoptosis Reversibility in Mammalian Lymphocytes Following Cytokine Deprivation. A. Parres, R. Lauzon, Union College

B381 774.27 UV Irradiation/Cold Shock-Induced Bubbling Death Is Ca2+-Dependent. C.-C. Tsai, Y.-W. Chen, N.-S. Chang, National Cheng Kung University College of Medicine, Taiwan

775 Cancer Signaling and Therapeutics (I)

B382 775.1 Mortalin Modulates MEK/ERK Activity by Regulating the Physical Interaction Between MEK1/2 and Protein Phosphatase 1 Alpha. P. Wu, Medical College of Wisconsin

B383 775.2 Targeting Cancer Progression Genes Upregulated in CREBL1-Deficient Breast Cancer Cells. S. Smith, F. Goubian, P. Mellor, D. Anderson, University of Saskatchewan, Canada

B384 775.3 Manipulating the Bone Marrow Microenvironment to Prevent Survival of AML Cells. R.M. Sterner, K.N. Kremer, A. Dukadamov, J.J. Westendorf, A.J. van Wijzen, K.E. Hedin, Moya Clinic

B385 775.4 Leveraging Synthetic Lethality to Target Convergent Therapeutic Resistance. K.C. Wood, Duke University

B386 775.5 ATG5 Knockout Leads to Malignant Cell Transformation and Resistance to Src Family Kinase Inhibitor PP2. M. Lee, S. Hwang, Incheon National University College of Medicine, Republic of Korea

B387 775.6 Modelling the Effects of Laser Photothermal Therapy on Proteins HSP70 and P53. A. Milcarek, K. Daus, M. Alpaugh, T. Dobbs, Rowan University

B388 775.7 Pim-1 Signaling in Drug-Resistant Colon Cancer Cells Promotes Cell Survival and Chemoresistance Through Up-Regulation of Lactate Production. G. Park, D. Kim, Kasan University College of Medicine, Republic of Korea, Inje University College of Medicine, Republic of Korea

B389 775.8 Differential Inhibitory Effects of Nocodazole on Human Hematopoietic and Hepatocytic Cells and Their Stem/Progenitors in Culture. J. Baquier, H. Darrell, S. Brumaire, L. Schoonover, T. Hu, Barry University

B390 775.9 (A3)Beating Cancer: Impact of APOBEC3B in 5-Fluorouracil Treatment. S.R. Fine, College of Wooster

B391 775.10 Differential Phosphotydylserine Sensing by TAM Receptors Regulates AKT Dependent Chemoresistance and PD-L1 Expression in Epithelial Cells. C. Kasikara, S. Kumar, R. Birge, Rutgers University

B392 775.11 Overcoming Resistance to Anti-EGFR Therapy in Breast Cancer with Rac Inhibitors. L.D. Borrero-Garcia, A.L. Troche-Torres, M. Maldonado, S. Dharmawardane, University of Puerto Rico, Medical Sciences Campus, Puerto Rico, University of Puerto Rico and Rio Piedras Campus, Puerto Rico

B393 775.12 Targeting Both Aberrant Metabolism and Cell Proliferation in Cancer Therapy. B. Gibbs, C.P. Masamha, Butler University
B394 775.13 CCN5/WISP-2 Activates Estrogen Receptor-α in Normal and Cancerous Breast Epithelial Cells and Sensitizes Them to Hormonal Therapy. S. Sarkar, A. Ghosh, S. Banerjee, G. Maiti, A. Das, V. Gupta, I. Haque, O. Tawfik, M. Larson, S. Banerjee, University of Kansas Medical Center, Kansas City VA Medical Center, Kansas City VA Medical Center and University of Calcutta, India

B395 775.14 Identification of Novel Variants of the CB2, Cannabinoid Receptor in Cancer Cells. A. Yarbrough, S. Pyrek, L. Wood, A. Urbaniaik, J. Bush, P. Prather, A. Radominska-Pandya, University of Arkansas at Little Rock and University of Arkansas for Medical Science

B396 775.15 Attenuation of γ-Secretase Mediated Activation of Notch Signaling Induces Autophagic Cell Death in Triple Negative Breast Cancer Cells. A. Das, A. Ganguli, K. Narayanam, P. Mukherjee, B. Basu, U. Chatterjee, S. Banerjee, P. Karmakar, D. Kumar, G. Chakrabarti, Jadavpur University, India, Calcutta University, University of Calcutta, Calcutta University, India, Amity University, India, VA Medical Center, University of Kansas Medical Center and Birla Institute of Science & Technology, India

B397 775.16 Activation of Cry6l Signaling in Solid Tumor Cells Diminishes Response to a Histone Deacetylase Inhibitor: Challenges for HDACis. A. Ghosh, P. Ghosh, G. Maiti, S.K. Banerjee, S. Banerjee, University of Kansas Medical Center and VA Medical Center

B398 775.17 Aspirin: A Regulator of Tumor Angiogenesis in Breast Cancer. G. Maiti, J. Chakrabarty, S. Banerjee, S.K. Banerjee, Kansas University Medical Center, VA Medical Center and Blue Valley West High School

B399 775.18 Rosheip (Rosa canina) Extracts Prevent AKT and MAPK-Mediated Cell Proliferation in Triple Negative Breast Cancer Cells. P. Cagle, P. Martin, North Carolina A & T State University

B400 775.19 SRC Regulates Proliferation in ER+ Breast Cancer Cells by Stabilizing MYC mRNA. C. Abdullah, H. Korkaya, S.A. Courtneidge, Oregon Health & Science University, UC San Diego and Augusta University

B401 775.20 Gemcitabine-Induced Exosomal Hypermethylation Increases the Chemoresistance and Migration of Pancreatic Cancer Cells. R. Sweeney, K.E. Richards, R. Hill, University of Notre Dame and Harper Cancer Research Institute

B402 775.21 Using a CRISPR/Cas9 Knockout to Evaluate the Role of Furin in the Intoxication Pathway of Pseudomonas Exotoxin A. J. Sanford, Y. Zhu, J. Weldon, Towson University

B403 775.22 DDB2 Activates Rnf43 and Regulates Wnt/β-Catenin Signaling in Colorectal Cancer Cells. S. Huang, D. Fantini, B. Merrill, S. Bagchi, P. Raychaudhuri, University of Illinois at Chicago, Northwestern University and Jesse Brown VA Medical Center

B404 775.23 Investigation of Affinity at Binding Site Between Human Epidermal Growth Factor Receptor 2 (HER2) and Herceptin. M. Kondrashova, B. Miller, Truman State University

776 Parasite-Host Interactions

B405 776.1 Genetic Variants of Tumor Necrosis Factor-α (rs180629) Gene Enhances Susceptibility to Malaria Infection in West Africa. T. Snyder, J. Noble, R. Funwei, C. Falade, O. Ojurongbe, B.N. Thomas, Rochester Institute of Technology and Lodoke Akintola University of Technology, Nigeria

B406 776.2 Extensive Intercystic Diversity of Cytokine Interleukin-10 Promoter Gene (rs1800872) Single Nucleotide Polymorphisms and Association with Malaria Infection. N. Aziz, S. Agedakun, T.J. Snyder, I. Farid, O. Ojurongbe, B. Thomas, Rochester Institute of Technology, Rochester, NY, Lodoke Akintola University of Technology, Osogbo, Nigeria

B407 776.3 Evaluation of the Immune Response Induced in Mice by a Recombinant Form of SPO-1, a Schistosoma mansoni Modulatory Protein. W.D. Bernardes, C.C. Alves, R.A. Pereira, C.T. Fonseca, Rene Rachou Research Center, Brazil


B409 776.5 Genetic Mapping of Strain Specific Differences in Autophagy Effector Recruitment to the Toxoplasma gondii Parasitophorous Vacuole. J.B. Radke, L. Sibley, Washington University School of Medicine

B410 776.6 Molecular Characterization and Pathogenicity of Meliodogyme incognito on Tomato Cultivars (Solanum lycopersicon L.). M. Abdullai, B.C. Cole, B. Fawole, Akendun University, Turkey and University of Ibadan, Nigeria

B411 776.7 Overcoming Challenges in the Diagnosis of Schistosoma mansoni Infections Using POC Tests, Recombinant Protein and Monoclonal Antibody Technology. R.F. Queiroz, R. Cruz, M. Pedrosa, M. Oliveira, W. Jeremias, J. Assis, L. Coutinho, D. Taborda, V. Moraes, L. McEwen, D. Harn, P. Coelho, Fiocruz, Brazil and University of Georgia

B412 776.8 Discovery Recovery Methods and Detection of Food Borne Parasites. A. Aralu, University of Georgia

B413 776.9 Toxoplasma gondii Infection Reprograms Monocyte Adherence and Motility. L.L. Drewry, L. Sibley, Washington University

777 Antibiotic Resistance


B416 777.2 Discrete Structural Dynamics of Pseudo-Palindromic Motifs Control DNA Binding of Bacterial Toxin-Antitoxin Complexes. D.E. Brodersen, K.L. Bendsen, K. Xu, M. Luckmann, K. Winther, S.A. Shah, C.N. Pedersen, Aarhus University, Denmark and University of Copenhagen, Denmark


B428 777.14 Gyrase Inhibition by Toxin-Antitoxin Modules. C.R. Bourne, J.C. White, S. Dabadi, M. Muthuramalingam, University of Oklahoma


B430 777.16 Withdrawn.

B431 777.17 Streptococcus mitis and Streptococcus oralis Mutate an “Essential” Gene upon Exposure to Daptomycin. H. Adams, L. Joyce, Z. Guan, R. Akins, K. Palmer, University of Texas at Dallas, Duke University Medical Center and Methodist Chariton Medical Center

B432 777.18 Effects of Over-Expression of RecA on Transformation in Bacillus subtilis. S. Pennumutchu, B. Korry, P. Belenky, University of Maryland, Baltimore County and Brown University

B433 777.19 Biochemical Characterization of Type II Toxin-Antitoxin Module from Pseudomonas aeruginosa. M. Muthuramalingam, J.C. White, C.R. Bourne, University of Oklahoma

B434 777.20 S. Noguchi, 4977-bp “Common Deletion” on Metabolism and Muscle Atrophy and Weakness in GNE Myopathy. A. Wimmer, Saint Mary’s University of Minnesota


B436 777.22 Multidrug Resistance and High Prevalence of Class I Integrons in Escherichia coli Isolated from Irrigation Water and Vegetables in Parts of Nsukka and Enugu, Nigeria. C.B. Chigor, I.I. Ibangha, V.C. Onuora, O.E. Omotosa, T. Chernikova, V.N. Chigor, P. Golyshin, Chukwuemeka Odumegwu-Oguu University, Nigeria, University of Nigeria, Nigeria, Covenant University, Nigeria and Bangor University, United Kingdom

B437 777.23 The Structure of EmrE and Its Role in Antibiotic Resistance. J. Kenana, B. Langat, C. Kaliuki, E. Imathiong, A. Kanna, Otsise North High School

B438 777.24 Functional Analysis of Taxoplasm gondii cGMP-Dependent Protein Kinase Isoforms Using an Axin-Inducible Degron System. K.M. Brown, S. Long, L. Sibley, Washington University School of Medicine

B439 777.1 Determining the Rhodoquinone Biosynthetic Pathway in Rhodospirillum rubrum Using Gene Knock-Outs. A. Martin, J. Shepherd, Gonzaga University


B441 777.3 Leigh Syndrome French Canadian Type Patient Fibroblasts Exhibit Energy Metabolism Adaptations Through a Warburg-Like Effect. Y. Mukaneta, A. Cohen, M. Rivard, J. Tardif, C. Laprise, C. Des Rosiers, L. Coderre, Montreal Heart Institute, Canada, Université de Montréal, Canada, The Hebrew University of Jerusalem, Israel and Université de Québec à Chicoutimi, Canada

B442 777.4 Increased N-Acetyltaurine in the Skeletal Muscle After Endurance Exercise. T. Miyszki, Y. Nakamura, K. Ebina, S. Ra, K. Ishikura, H. Ohmori, T. Ikegami, Y. Matsuakura, A. Honda, Tokyo Medical University Ibaraki Medical Center, Japan, University of Tsukuba, Japan, Fukuoka University, Japan and Sojo University, Japan

B443 777.5 Hydrodynamic Delivery of Isoctirate Dehydrogenase in Mice (Mus musculus) Exposed to Utero to Atrazine. A. Wimmer, Saint Mary’s University of Minnesota


B445 777.9 Stimulation of Astrocyte Fatty Acid Oxidation Increases Spare Respiratory Capacity Under Nutrient-Deprived Conditions. M. Sifuentes, J. Lechleiter, University of Texas Health Science Center at San Antonio

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Energy Metabolism, Oxidative Phosphorylation

B439 777.1 Determining the Rhodoquinone Biosynthetic Pathway in Rhodospirillum rubrum Using Gene Knock-Outs. A. Martin, J. Shepherd, Gonzaga University


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Oxidative Stress and Reactive Oxygen


B449 779.2 S-Nitrosylation Is Responsible for Muscle Atrophy and Weakness in GNE Myopathy. M. Miyakawa, A. Cho, M.C. Malcic, I. Nishina, S. Nobuchi, National Institute of Neuroscience, Japan, Ewha Womans University School of Medicine, Republic of Korea, National Institute of Health and National Institutes of Health
**Diabetes, Obesity and Metabolic Syndrome (I)**

**B450 779.3 Inflammatory Stress Induces a Biphasic Nrf2 Activation in Neuronal Cells.** S.A. Krepel, L. O’Hara, S. Mangum, M.B. Hogan, T.B. Kuhn, University of Alaska Fairbanks and Fairbanks West Valley High School

**B451 779.4 Exploring the Role of Trehalose-6-Phosphate Synthase in Oxidation and Desiccation Stress Tolerance of Fusarium verticillioides.** N.R. Oberlie, S.D. McMillan, P.N. Pierson, N.S. Bonich, D.W. Brown, K.L. McQuade, Brodax University and USDA-ARS-NCARD

**B452 779.5 Fruit Extract of Thaumatroccus danielli Reduces Oxidative Stress in Rats.** F.N. Iheagwam, S.N. Chinodu, O.C. Emiloju, A.C. Okenna, Department of Biological Sciences, College of Science and Technology, Covenant University, Nigeria, Department of Biological Sciences, College of Science and Technology and Covenant University, Nigeria

**B453 779.6 Cross-Talks Between Intracellular Zinc Increases and Reactive Oxygen Species in Hypoxia.** K. Stepchenko, Y.V.Li, Ohio University

**B454 779.7 Effect of Maternal Separation on Oxidative and Nitrosative Stress in the Brain of Rat Offspring.** A. Campos-Rangel, L. Tornier-Aguilar, A. Saavedra-Molina, S. Manzo-Avalos, Universidad Michoacana de San Nicolás de Hidalgo, Mexico, Centro de Investigación Biomédica de Michoacán and IMSS, Mexico

**B455 780.1 Lactotransferrin Prevents Hepatic Steatosis Through Inhibition of Hepatic Dietary Lipid Uptake in Hormone Disturbance Non-Alcoholic Fatty Liver Disease Model.** S. Lee, B. Son, G. Park, W. Kim, H. Youn, B. Youn, Pusan National University, Republic of Korea, and Sejong University, Republic of Korea

**B456 780.2 Adiponectin Receptor 1 Resists the Decline of Serum Osteocalcin and GPRC6A Expression in Ovariectomized Mice.** Y. Lin, C. Chen, S. Wu, S. Ding, National Taiwan University, Taiwan and Institute of Biotechnology, Taiwan

**B457 780.3 Use of a Three Dimensional Porcine Retinal Explant Model to Detect HIF1α for Understanding Diabetic Retinopathy.** B. Iwuagwu, S.F. Cruickshank, I. Rowe, R.M. Knott, Robert Gordon University, United Kingdom

**B458 780.4 Niclosamide Blocks Glucagon Phosphorylation of Serine 552 on β-Catenin Leading to Decrease Target Genes Expression and Improve Glucose Metabolism via PKA Signalling Pathway.** M.H. Chowdhury, M. Morris, N. Turner, L. Wu, P. Shepherd, G. Smith, UNSW Australia and University of Auckland, New Zealand

**B459 780.5 Potential Role of Dietary Fat- and Obesity-Sensitive Adipose PCKbcta Signaling in Pathophysiology of Adipose Dysfunction.** N.K. Mehta, W. Huang, Northeastern Ohio College of Medicine and The Ohio State University College of Medicine

**B460 780.6 Diabetic Nephropathy Accelerated by Imbalance of Renal Renin-Angiotensin System Components in db/db Mice with High Fat Diet.** G. Wang, C. Cha, C. Lin, H. Wu, C. Lin, National Chiao Tung University, Taiwan and National Chiao Yi University, Taiwan

**B461 780.7 Prohibitin Has Sex Dimorphic Role in Adipose and Immune Functions.** Y. Xu, S. Ande, S. Mishra, University of Manitoba, Canada

**B462 780.8 Regulation of Hepatic Inflammation by Folic Acid in Non-Alcoholic Fatty Liver Disease (NAFLD).** V. Sid, Y. Shang, C. Siow, K. O, National Taiwan University, Taiwan and National Chiao Yi University, Taiwan

**B463 780.9 Lack of Efficient Metabolism Adaption Caused Failure of Regenerative Cell-Based Therapy in a Rat Model of Metabolic Syndrome.** A. Jamaiyar, W. Wan, D. Janota, M. Enrick, V. Ohanyan, L. Yin, W. Chilian, Northeast Ohio Medical University and Kent State University

**B464 780.10 Impact of VEGF Gene Polymorphisms on Progression of Diabetic Retinopathy in an Indian Population.** D. Jajal, K. Kalia, Sardar Patel University, India and National Institute of Pharmaceutical Education & Research (NIPER - Ahmedabad), India

**B465 780.11 Altered Islet Function May Promote a Lean Phenotype in Tafazzin Deficient Mice.** L.K. Cole, C. Doucette, M. Vandel, M. Fonseca, B. Xiang, V.W. Dolinsky, G.M. Hach, University of Manitoba, Canada

**B466 780.12 Lipid Stress Alters Cell Distribution, Traffic, and Desensitization Properties of Menaconin-4 Receptor, a GPCR Involved in Appetite Control.** K. Cooney, B. Molden, S. Russell, G. Baldini, University of Arkansas for Medical Sciences

**B467 780.13 Mitochondria-Targeted Catalase Primes Adipocyte Differentiation Through Regulation of Pref-1.** K. Tavares, B. Christian, Appalachian State University

**B468 780.14 Ome Is Where the Wound Is: Biomarkers of Healing in Chronic Diabetic Foot Ulcers.** M. Glucksman, K. Philosoph, X. Shao, C. Yang, J. Ortiz, S. Wu, Chicago Medical School and Scholl College of Podiatric Medicine

**B469 780.15 Investigation of Free Fatty Acid on Concerted Trafficking of K+ and Kv2.1 Channels in the Adipoinuscular Axis in Vivo and in Vitro.** J. Ruan, P. Chen, National Cheng Kung University, Taiwan

483 781.14 Saccharomyces cerevisiae Coq10, a Putative START Domain Protein Binds Coenzyme Q and Late-Stage Q-Biosynthetic Intermediates. H. Tsui, C. Clarke, UCLA

484 781.15 A Conserved Putative Kinase Is Required for Coenzyme Q Biosynthesis: Functional Insights from Yeast Genetics. N.V. Pham, C. Clarke, University of California, Los Angeles


486 781.17 Identification of Inhibitors of ACSVL3, a Therapeutic Target in Glioma. E. Clay, X. Shi, Y. Liu, C.C. DiRusso, P.N. Black, P.A. Watkins, Johns Hopkins University School of Medicine, Kennedy Krieger Institute, University of Nebraska Lincoln

487 781.18 Characterization of a Glycerophosphocholine Acyltransferase (Gpc1), a Novel Enzyme in Phosphatidylcholine Biosynthesis in Saccharomyces cerevisiae. S. Anoakar, I. Lager, B. Glab, A. Banas, S. Stormme, J. Patton-Vogt, Duquesne University, Sweden University of Agricultural Sciences, Sweden and Intercollegiate Faculty of Biotechnology of University of Gdansk and Medical University of Gdansk, Poland

488 781.19 Four Acyltransferases Uniquely Contribute to Phospholipid Heterogeneity in Saccharomyces cerevisiae. P. Oelkers, K. Pokhrel, University of Michigan-Dearborn

489 781.20 The Malonyl-CoA-ACP Transacylase R117A Variant Catalyzes Acyl-Transfer with a Broad Range of Acyl-CoA Substrates. A.M. Marcella, A.W. Barb, Iowa State University


491 781.22 LplT-Aas System: The Primary Mechanism for Lysosphospholipid Remodeling in E. coli. L. Zheng, Y. Lin, S. Tong, Z. Guan, M. Bogdanov, University of Texas Houston Medical School and Duke University

492 781.23 Effect of Myeloid Specific ACAT1 Knockout on Atherosclerosis. J.A. Benson, E. Melton, L. Huang, P. Sohn, H. Li, C. Chang, T. Chang, Dartmouth College and Geisel School of Medicine

782 Regulation of Lipid Metabolism

493 782.1 Acyl-CoA:Thioesterase 1 Regulates Hepatic Lipid Metabolism and PPAR-α Signaling. M.P. Franklin, A. Sathyaranayana, D. Mashek, University of Minnesota

494 782.2 Phosphorylation of the Nemi-1-Spo7/Pah1 Phosphatase Cascade by Pik1 Protein Kinase C. P. Dey, W. Su, G.M. Carman, Rutgers University

495 782.3 Unravelling a Role of LRPPRC in Peroxisomal Lipid Metabolism Through Lipidomic Investigations in Human and Mouse. M. Ruiz, A. Cuillerier, F. Dupuis, P. Morue, B. Bouchard, I. Robillard-Frayne, A. Forest, C. Danauet, J. Thompson-Legault, L. Codereur, Y. Burelle, J. Rioux, C. Des Rosiers, Montreal Heart Institute, Canada and Faculty of Health Sciences, Canada

496 782.4 Regulation of Phosphatidic Acid Phosphatase by High Glucose in the Oleaginous Yeast Yarrowia lipolytica. D. Hardman, S. Fakas, Alabama A&M University


498 782.6 Methionine Restriction Decreases Fat Mass in C57BL/6 Mice via Increasing Endogenous Hydrogen Sulphide Production. Y. Wang, J. Zhang, H. Guo, B. Yan, Y. Shi, G. Le, Food Nutrition and Functional Factors Research Center, People’s Republic of China

499 782.7 Angiopoietin-1-Like 4 Directs Uptake of Dietary Fat Away from Adipose During Fasting. E.M. Cushing, B. Davies, University of Iowa

500 782.8 Functional Interplay Between LXR and AMPKα Inhibits Atherosclerosis in apoE-Deficient Mice — A New Anti-Atherogenic Strategy. C. Ma, W. Zhang, Y. Duan, Y. Chen, J. Han, Nankai University, People’s Republic of China


502 782.10 Energy Substrate Levels and Metabolic Changes in Skeletal Muscle Underlie Increased Activity and Improved Exercise Performance in Liver Fatty Acid-Binding Protein Null Mice. H. Xu, A. Gajda, Y. Zhou, A. Fatima, J. Storch, Rutgers University

503 782.11 Lanthionine Synthetase C-Like Protein 2 (LanCL2) Is Necessary for 3T3-L1 Differentiation to Adipocytes. D. Dutta, J. Chen, W. van der Donk, University of Illinois, Urbana Champaign

504 782.12 N-Terminal Phosphorylation of Thioesterase Superfamily Member 1 (Them1) Regulates Its Subcellular Localization in Brown Adipocytes. Y. Li, L. Ang, S.J. Hagen, D.E. Cohen, Beth Israel Deaconess Medical Center and Weill Cornell Medical College

505 782.13 T(l)1 and T(l)II Induce Alterations in MDCK Cell Lipid Metabolism. E. Morel Gomez, S. Verstraeten, M. Fernandez, Universidad de Buenos Aires, Facultad de Farmacia y Bioquímica, Argentina, CONICET, Argentina; Universidad de Buenos Aires, Facultad de Farmacia y Bioquímica and BCM, Argentina

506 782.14 A Severe Inherited Arrhythmia Syndrome Highlights the Role of Fatty Acid Metabolism in the Regulation of Cardiac Electrical Activity. R. Gelinis, F. Goyette, A. Forest, B. Bouchard, I. Robillard-Frayne, L. Pruneau, M. Ruiz, L. Villeneuve, J. Thompson-Legault, M. Talajic, C. Des Rosiers, J.D. Rioux, Montreal Heart Institute, Canada and Université de Montréal, Canada

507 782.15 Nutrient Sensing and Mitochondrial Coenzyme Q Biosynthesis: Are They Connected by a Phosphatase?. A. M. Awad, S. Venkatakrishnan, A. Nag, M.C. Bradley, A.R. Galvanche, T.L. Johnson, C.F. Clarke, UCLA

508 782.16 Regulation of Schizosaccharomyces pombe Lipid Homeostasis in Response to Low Oxygen by Coordinated Activation of the Transcription Factors Sir2 and Mgα2. R. Burt, E.V. Stewart, W. Shao, S. Zhao, H.K. Harnimb-Bach, C.S. Eping, P.J. Espenhade, Johns Hopkins University School of Medicine, VILLUM Center for Bioscience Studies and University of Southern Denmark, Denmark


510 782.18 Novel Function of Tetraspanin-Interacting Protein IGSF3 in the Regulation of Glycosphingolipid Metabolism. K. Schweitzer, M.J. Justice, I. Bronova, S.M. Leach, E.V. Berdyeshay, I. Petracek, National Jewish Health and Indiana University

511 782.19 Rottlerin Diminished the Lipid Accumulation in 3T3-L1 Cell Line and Enhanced the Uncoupling of Oxidative Phosphorylation in D16 Cell Line via LRP6 Mediated Pathway. Y. Ryu, J. Jeong, G. Go, Kookmin University, Republic of Korea
783 Vesicle Trafficking and Cargo


B516 783.3 The Effect of Cellular Autophagy on Replication and Dissemination of Theiler's Murine Encephalomyelitis Virus. L. Benner, University of Iowa

B517 783.4 Multifaceted Role of Glycan Interactions on Clathrin-Independent Endocytosis of MHC1 and CD59. M. P. Mathew, J. G. Donaldson, National Heart Lung and Blood Institute


B519 783.6 Investigating the Effects of Vps45 Mutations Associated with Severe Congenital Neutropenia on SNARE Interactions. A. D’Ordine, M. P. Mathew, J. G. Donaldson, Indiana University

B520 783.7 Structural and Functional Studies of the ANTH Domain as Ubiquitin-Binding Module Involved in Endocytosis. N. Pashkova, R. C. Piper, University of Washington

B521 783.8 The Selective Autophagy Pathway of Nanodiamond-SSEA-1 Antibody in GBM Cells. C. Ting-Hua, National Chiao Tung University, Taiwan

B522 783.9 Regulation of Angiostatin Receptor Trafficking by an Upstream Short Open Reading Frame in the mRNA 5’ Leader Sequence. P. Kadam, S. Mueller, H. Ji, K. Sandberg, Georgetown University

784 Glycans and Glycobiology

B523 783.10 Use of the Auxin-Induced Degradation System to Dissect Factors Important for Exocyst Assembly and Localization. R. D. Heard, D. Lepore, M. Munson, University of Massachusetts Medical School

B524 783.11 Genetic Dissection of Early Endosomal Recycling Highlights a TORC1-Independent Role for Rag GTPases. C. MacDonald, R. C. Piper, University of Iowa

B525 783.12 Myopalladin’s Role in Cardiac Muscle Function and Disease. V. K. Kadarla, B. M. Bigge, M. R. Beck, Wichita State University

B526 783.13 The Effect of Intermolecular Interactions in the Elongation Rates of Actin Filament by Formins. F. Aydin, N. Courtemanche, T. D. Pollard, G. A. Voeltz, University of Chicago, University of Minnesota and Yale University


B529 784.2 Methodology Toward the Purification and Analysis of Glycopolymers. G. Nagy, T. Peng, N. L. Pohl, Indiana University

B530 784.3 Toward a Glycosidase Toolbox for Glycan Structure Analysis: General Label-Free Mass Spectrometry-Based Assay to Identify Glycosidase Substrate Competence. T. Peng, G. Nagy, N. L. Pohl, Indiana University

B531 784.4 Microbiota-Sensing O-GlcNAc Signaling in Intestinal and Metabolic Homeostasis. H. Ruan, M. Zhao, University of Minnesota

B532 784.5 The Expanding Glycouniverse: Diverse Glycan Modifications in Lower Eukaryotes. I. B. Wilton, S. Yan, A. Hykollari, B. Eckmair, J. Vanbeselaere, K. Paschinger, Universität für Bodenkultur Wien, Austria

B533 784.6 Glycoproteins in the Midgut Microvillar Membrane of Spodoptera frugiperda (Leptoplopa: Noctuidae). F. Juzita, K. B. Chandler, J. R. Haserick, C. Ferreira, W. R. Terra, C. E. Costello, University of Sao Paulo, Brazil and Boston University

B534 784.7 Imaging Specific Glycan Epitopes on Cells Using Glycosyltransferases via Click Chemistry. Z. L. Wu, A. Person, M. Anderson, B. Burroughs, R. Sackstein, T. Geders, Bio-technie, Brigham & Women’s Hospital and Harvard Medical School

B535 784.8 The Human Lectin Galectin-3 Recognizes Chondroitin Sulfate Proteoglycans (CSPGs) and Sulfated Glycosaminoglycans. T. Dam, M. Talaga, N. Fan, A. Fuert, R. Brown, P. Bandyopadhyay, Michigan Technological University

B536 784.9 Using Recombined RNA Apmers to Specifically Change O-GlcNacylation on a Protein. Y. Zhu, Johns Hopkins University

B537 784.10 Toward Facile Automated Glycan Synthesis: Current Progress and Remaining Challenges. N. L. Pohl, Indiana University

B538 784.11 Examining the Role of the AMP-Activated Protein Kinase in Stress-Dependent O-GlcNAc Signaling. A. Maduka, K. Fahie, N. Zachara, University of Maryland, Baltimore County and Johns Hopkins University School of Medicine

B539 784.12 Differing O-Glycan-Forming Glycosyltransferase Expression Profiles in Cancer Cells Act as Signatures That Accurately Identify Cancer Types/Subtypes, Epithelial-Mesenchymal Transforming Cells as Well as Cancer Stem Cells. A. F. Abuelela, J. S. Merzaban, KAUST, Saudi Arabia

785 Glycan Function and Control Mechanisms

B540 785.1 Analysis of C-Mannosylated Proteins, Hsc70, and Inflammation. D. A. Securraro, J. Rakus, Marshall University

B541 785.2 Identifying C-Mannosylated Peptides Involved in Hsc70 Mediated Inflammation. N. R. Kegley, Marshall University

B542 785.3 Metabolic Modulation of Cell Surface Sialoform of Macrophages. Y. Zhao, Cleveland State University

B543 785.4 The Tumor Associated Lectin Galectin-3 Can Bind and Sequester Cancer Biomarkers. N. Fan, M. Talaga, R. Brown, A. Fuert, P. Bandyopadhyay, T. Dam, Michigan Technological University

B544 785.5 Enhanced Glycosylation Detection and Characterization of a Human IgG1 Reference Material by Using 2D-LC MS/MS Fractionation and High Resolution Mass Spectral Library. Q. Dong, X. Yan, Y. Liang, S. E. Stein, NST

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## TUESDAY
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DNA Repair and Recombination

B1 906.1 Impact of Histone Mutations on Mismatch Repair and Cancer. J. Fang, Tongji University, People’s Republic of China

B2 906.2 Functional Analysis of the Role of Phosphorylated PCNA in Cancer Development and Its Potential in Cancer Therapy. B. Peng, Q. Jiang, J. Ortega, L. Gu, J. Dai, G. Li, Tongji University School of Medicine, People’s Republic of China, Tongji University College of Life Sciences, People’s Republic of China, and University of Southern California Keck School of Medicine

B3 906.3 Activation of Intra-S Phase Checkpoint Facilitates Tolerance of Replication Stress Caused by Mismatch Repair Processing of DNA Damage. D. Gupta, B. Lin, C.D. Heinen, UConn Health

B4 906.4 Using Transcriptome Analysis to Solve the Puzzle of DNA Repair in Bdelloid Rotifers. C.C. Huber, G. Glazko, Y. Rahmatallah, S. MacLeod, Hendrix College and University of Arkansas for Medical Sciences

B5 906.5 Rabbit Polyclonal Antibodies to Detect C7orf49 Proteins Toward Understanding Double Strand Break Repair. B. England, Augustana College

B6 906.6 DNA Repeat Expansion and Mismatch Repair: A Recurrent Problem. K.T. Fuselier, Cues as Detected by a Novel Fluorescence Sumoylation and Ubiquitination to Yeast Replica- tory Factor a Function Through the Examination of Mps3 and Cdc5 in Saccharomyces cerevisiae. T. Roeck, R. Conaway, Stowers Institute and Kansas University Medical Center

B7 906.7 Down-Regulation of Ubiquitin-Specific Protease 24 Regulates DNA Repair by Homologous Recombination in Lung Cancer Cells. S. Wang, Y. Wang, J. Hung, Institute of Bioinformatics and Biosignal Transduction, College of Bioscience and Biotechnology, National Cheng-Kung University, Taiwan, Institute of Basic Medical Sciences and National Cheng-Kung University, Taiwan

B8 906.8 An Investigation of Protein Function During DNA Repair in Bdelloid Rotifers. J.C. McReynolds, M. Boerma, S.D. Byrum, L.M. Orr, A.J. Tackett, Medical Sciences and National Cheng Kung University, Taiwan

B9 906.9 Filament Formation on Double-Stranded DNA Mediates E38K RecA’s Enhanced Activity in the Absence of DNA Damage. M. Rager, M.M. Cox, University of Wisconsin-Madison

B10 906.10 RECQ1 Interacts with rDNA and Promotes Pre-rRNA Transcription. S. Parvathaneni, X. Lu, S. Sharma, Howard University

B11 906.11 DNA Polymerase ε Is an Important Bypass DNA Polymerase in the Repair of DNA Interstrand Cross-Links. L. Zhao, Central Michigan University

B12 906.12 Characterization of the Interaction Between Mps3 and Cdc5 in Saccharomyces cerevisiae. L. Antoniacci, C. Breymeier, Marywood University

B13 906.13 Identifying the Contribution of Sumoylation and Ubiquitination to Yeast Replication Factor a Function Through the Examination of “Lyse-Less” RFA Mutants. B.L. Senger, S.J. Haring, North Dakota State University


B15 906.15 Molecular Mechanisms of Mutagenesis Induced by DNA Repair. J. Shen, J. Chapman, A.V. Furano, NIH

B16 906.16 Development of a Specialized Yeast Strain to Monitor Recruitment Patterns of S1 Mediated Rad1-Rad10 Recruitment to DNA Damage Sites Through Single-Strand Annealing. F.E. Fregoso, P.L. Frischhaber, California State University Northridge

B17 906.17 Differential Requirements for Nonhomologous End-Joining (NHEJ) Pathway Genes in DNA Repair and Telomere Stability. N.D. Rodriguez, K. Lewis, Texas State University

B18 906.18 Unstable Telomere Cap Structures in Saccharomyces cerevisiae yku70 Mutants Cause Altered Cell Cycle Phase Distributions. T. Posey, L. Lewis, Texas State


B20 906.20 Exploring the Role of ATP Hydrolase in the RecA Protein via Stalled DNA Intermediates. L. Sowin, M.M. Cox, University of Wisconsin-Madison

B21 906.21 Purification and Characterization of Deinococcus radiodurans Polynucleotide Phosphorylase a Phosphate Stimulated Mn2+-Dependent Nucleases. M.N. Spence, L. Uranga, S. Lusetti, New Mexico State University

B22 906.22 Effects of DNA Damage on Natural Transformation in Bacillus subtilis. B.J. Karry, P.A. Belenky, Brown University


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B27 907.3 Re-Emergence of Chloramphenicol Resistance and Associated Genetic Background in Vibrio cholerae O1. P. Kumar, P. Yadav, A. Nema, A.K. Goel, P.K. Yadava, Jawaharlal Nehru University, India, National Centre for Disease Control, India and Defence Research and Development Establishment, India

B28 907.4 Sensitive and Specific Detection of Ligands Using Engineered Riboswitches. J.P. Laney, D.P. Morse, United States Naval Academy

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B31 908.3 Resolving Specificity over a Large Footprint Distinguishes Androgen and Glucocorticoid Receptor DNA Binding. L. Zhang, G.D. Martini, H.T. Rube, H.J. Bussemaker, M.A. Puffal, University of Iowa, and Columbia University

B32 908.4 Transgene Expression Is Increased In Vitro When Cells Are Cultured on Defined Biophysical Cues as Detected by a Novel Fluorescence Quantification Method. S.C. Veen, A.J. Youssef, C. Liu, J.Z. Gasiorowski, Midwestern University and The University of Chicago
B33 908.5 RXRα Phosphorylation at Threonine 167 Coordinates Energy Metabolism in Mice. T. Sueyoshi, T. Sakuma, S. Shindo, T. Karayama, R. Moore, M. Negishi, National Institute of Environmental Health Sciences, NIH, Research Triangle Park, North Carolina

B34 908.6 Functional Characterization of Caprin2 in Mouse Eye Development and Its Associated Developmental Defects. Peter A. Nasmyth, N. Borders, University of Delaware

B35 908.7 Nutrient Regulation of TATA-Box Binding Protein by O-GlcNAcylation. S. Hardivillé, G. Han, J. Ma, P. Hu, P.S. Banerjee, G.W. Hart, Johns Hopkins University School of Medicine

B36 908.8 A Novel Transcription Factor Regulates the Oxidative Stress Response in Caulobacter crescentus. N.G. Maragos, N. Mohieddin, B. Smolarek, A. Bryan, C. Peterson, Suffolk University

B37 908.9 Angiotensin II-Mediated Repression of Guanylyl Cyclase/Natriuretic Peptide Receptor-A Gene Expression Involving CREB, HSFI-α, and HDAC1,2 in Mesangial Cells. K.K. Arise, P. Kumar, K. Pandya, K.N. Pandey, Tulane University Health Sciences Center and School of Medicine

B38 908.10 Selective Regulation of Hypoxia Inducible Factors by Endogenous Ligands. C. Moreno Romero, H. Wang, R. Bruck, St. Mary’s University and University of Texas Southwestern Medical Center


B40 908.12 Regulation of Renal Proximal Tubule Function by CREB-Regulated Transcriptional Coactivators and Salt-Inducible Kinase. M. Taub, D. Kim, F. Curtis, Buffalo University

B41 908.13 Engineering a Tissue-Specific Cell-Based Therapeutic Delivery System. A. Pandey, J.L. Keenan, K.L. Doiron, T. Siggers, Boston University and University of Massachusetts Boston


B45 908.17 Urinary Proteome Changes Were Detected Earlier Than Serum Biochemical Parameters and Histopathology Changes in a Rat Thioacetamide-Induced Hepatic Fibrosis Model. F. Zhang, Y. Ni, Y. Yuan, Y. Gao, Institute of Basic Medical Sciences Chinese Academy of Medical Sciences, School of Basic Medicine Peking Union Medical College, People’s Republic of China, Beijing Normal University, People’s Republic of China


B50 908.22 Genomic Cell Lineage Analysis Uncovers Novel Endothelial Gene Expression Programs for Metabolic and Immune Regulation. J. Klomp, A. Malik, University of Illinois Chicago

B51 908.23 mir-140 and mir-6321/miR-6321 Contribute to the Pathogenesis in Acute Myocardial Infarction Revealed by Integrative Study of mRNA and microRNA Transcriptomes. Y. Wang, W. Lin, C. Nugent, R. Zhu, C. Li, L. Zhu, W. Wang, Beijing University of Chinese Medicine, People’s Republic of China, Key Lab of Computational Biology, CAS-MPG Partner Institute for Computational Biology, People’s Republic of China, Digestive Diseases and Nutrition Center, Department of Bioinformatics, School of Life Sciences and Technology, People’s Republic of China, Genome and Environment and Microbiome Community of Excellence

B52 908.24 Absolute Quantification of RXRG Isomers. T. Skotarczak, E. Karnath, L. Monin, Y. Shimawakah, G. Buxeff, D’Youville College

B53 908.25 Differential Gene Expression and Variant Analysis of Clinical Strains of Cryptococcus neoformans. R. Seipel-Thiemann, E. McClelland, Middle Tennessee State University

B54 909.1 Further Development of a CRISPR/Cas9 Platform for 60% of Duchenne Muscular Dystrophy Patients. K. Fernandez, University of California, San Diego

B55 909.2 CRISPR/Cas9 Genome Editing to Repair Receptor-Mediated Endocytosis in Homozygous Familial Hypercholesterolemia Induced Pluripotent Stem Cells. L. Omer, E.A. Hudson, J.B. Hoyo, N.L. Boyd, University of Louisville


B57 909.4 Cell Penetrating Peptide-Mediated Nuclear Delivery of Cas9 to Enhance the Utility of CRISPR/Cas9 Genome Editing. D.S. Axford, D.P. Morris, J.L. McMurry, Kennesaw State University

B58 909.5 Multidimensional Chemical Control of CRISPR-Cas9. C.L. Moore, B. Majei, A. Choudhary, M. Shoulders, MIT, Broad Institute and Harvard Medical School

B59 909.6 Developing a Tagged CRISPR-Cas9 Enhancer Pull-Down Assay. S. Yang, R. Rose, North Carolina State University

B60 909.7 Conserved DNA Motifs in the Type II-A CRISPR Leader Region. R. Rajan, H. Van Orden, P. Klein, B. Kesavan, F. Najar, University of Oklahoma

B61 909.8 Cas9: The Gateway to Genome Engineering. A. Schroeder, N. Mendoza, R. Mahesh, S. Lim, A. Howard, Ohio North High School

910 RNA Processing and Editing

B62 910.1 Deciphering the Dynamics of Alternative Pre-mRNA Processing of Glutaminase in Ovarian Cancer. P.R. LaFontaine, B. Gibbs, C.P. Masamha, Butler University

B63 910.2 Using Cryo-Electron Microscopy to Discover Box C/D snoRNA Structure. S.J. Baserga, W. Yip, H. Shimatsu, D.W. Taylor, Yale University, RIKEN Center for Life Science Technology, Japan, University of California, Berkeley

B64 910.3 Functional Significance of Intermediate Cleavages in the 5’ETS of Schizosaccharomyces pombe pre-rRNA. W. Van Logenberg, S. Nellimarla, J. Park, R.N. Nazer, University of Guelph, Canada

B65 910.4 BDF2 Transcript Sensitivity to RNase III-Mediated Decay Is Heavily Governed by Its Transcription Localization and Vulnerability to Cleavage. C. Wang, K. Roy, G. Chanfreau, UCLA
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B277 928.6 Cloning and Protein Overexpression of Chromydomonas reinhardtii Novel Gene Cia7.
H. Gonzalez-Cantu, E. Vazquez, R. Ynalvez, Texas A&M International University

B278 928.7 Annotating the Cia7 Gene: Comparing Lead Bioaccumulation, Cell Growth and Morphology in Two Strains of Chromydomonas reinhardtii.
J.A. Gutierrez, R. Ynalvez, Texas A&M International University

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Signaling Integration and Cross-Regulation

B279 929.1 Design Principles of Pleiotropic G-Protein Signaling Through Guanine Nucleotide Exchange Modulators (GEMs).
P. Rangamani, M. Getz, P. Ghosh, UCSD

B280 929.2 Glucocorticoid-Induced Inhibition of AKT Leads to CREB Phosphorylation and Increased Myostatin Expression via a PDE/cAMP/PKA Pathway in Skeletal Muscle.
Y. Xie, P. Zhang, D. Espinoza, B. Perry, J. Rahmert, B. Zheng, R. Price, Emory University, Xiangya Hospital and Xiangya School of Medicine, Central South University, People’s Republic of China

B281 929.3 Withdrawn.
B282 929.4 Shoc2 Mediates Hematopoietic Signals of the ERK1/2 Pathway.
H. Jang, E. Jang, A. Morris, M. Forbes-Osborne, E. Galperin, University of Kentucky

B283 929.5 Identification of a Novel Pathomechanism Underlying a Congenital Disorder of Glycosylation: Crossstalk Between Hexosamine Biosynthetic Pathway, PI3K/AKT Signaling, and Protein Glycosylation.
S.Y. Wong, S. Perez, X. Huang, K. Stiers, L. Beamer, F. Foulquier, G. Berry, T. Kozic, E. Morava, Tulane University School of Medicine, Boston Children’s Hospital, University of Missouri and University of Lille 1, France

930

Spatiotemporal Control of Signaling

B284 930.1 The (AAA+) ATPases PSMCS and VCP/p97 Control ERK1/2 Signals Transmitted Through the Shoc2 Scaffolding Complex.
E. Galperin, E. Jang, D. Anderson, H. Jang, University of Kentucky and Cleave Bioscience

B285 930.2 Mating Yeast Cells Concentrate the Pheromone Receptor and its G Protein as Polarized Crescents at the Default Polarity Site That Then Track to the Eventual Chemotropic Site.
X. Wang, D.E. Stone, University of Illinois at Chicago

B286 930.3 ERK1/2 Signaling Through Scaffold Protein Shoc2 Complexing with H, K, and M-Ras: A Structure-Function Analysis.
R. Norcross, E. Galperin, University of Kentucky

B287 930.4 DUOX1 Silencing in Lung Cancer Is Associated with Enhanced Nuclear EGFR Localization.
A. Little, K. Danyl, D. Heppner, M. Hristova, A. van der Vliet, University of Vermont

B288 930.5 The Role of Dicylglycerol and Cysteine-Rich Domains in Spatiotemporal Regulation of Protein Kinase D1 in Cardiac Myocytes.
B.M. Wood, M. Ferrero, L.J. Gildar, M.F. Goldman, J. Bossuyt, UC Davis

B289 930.6 Characterizing the Role of Yeast Cyclin Pcl1 in the Establishment of Pheromone Receptor Polarity.
C.Y. Pai, M. Sukumar, D. Stone, University of Illinois at Chicago

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Cell Motility and Migration

B290 931.1 Ubiquitin-like Protein Ubl4a Promotes Actin-Mediated Cell Migration.
H. Zhang, Y. Zhao, C.R. Alfonsos, A. Manas, R. Bonomo, J. Xiang, Illinois Institute of Technology

B291 931.2 Galectin-1 Modulates Focal Adhesion Turnover and Migration of Vascular Smooth Muscle Cells.
L. Chau, M. Chiang, D. Tsai, M. Tsai, Institute of Biomedical Sciences and Academia Sinica, Taiwan

B292 931.3 Serylglu Regulates Cytoskeletal-Related Proteins Associated with Cell Motility in Breast Cancer in Vitro.
B. Bay, P. Chua, G.W. Yip, J. Gunaratne, National University of Singapore, Singapore and Institute of Molecular and Cell Biology, Singapore

B293 931.4 Characterization of the Cask Protein in Drosophila Ovaries.
S. VanHorn, C. Wirth, T. Hoffman, J. Sanner, C. Warren, S. Liber, M. Popil, D. Miller, S. Maruagha, J.L. Sanford, Ohio Northern University

B294 931.5 Generation of a CASK-GFP Transgenic Fly Line.
J. Sanner, C. Lovejoy, K. Robinson, E. Olah, J.L. Sanford, Ohio Northern University

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Checkpoint Mechanisms

B295 932.1 The Response of Histone H3.3 to Chromosomal Misalignment and Miss Segregation: A Novel Biochemical Pathway Correlated to Cell Cycle Arrest.
S. Fadness, C.A. Day, A. Langfeld, E.H. Hinchcliffe*, Hamline University, The Hormel Institute and University of Minnesota

B296 932.2 The ULK3 Kinase Regulates the ESCRT Pathway in the Abscission Checkpoint.
D.M. Wenzel, J. McCullough, A. Caballe, J. Marin-Serrano, W.I. Sundquist, University of Utah and King’s College London, United Kingdom

B297 932.3 Functional Characterization of a Novel Role for Rfa2 N-Terminal Hyper-Phosphorylation During Checkpoint Adaptation.
T.M. Wilson, T.A. Baumgartner, B.L. Senger, N.M. Miles, S.J. Haring, North Dakota State University

B298 932.4 Phosphorylation of Replication Factor A Promotes Checkpoint Adaptation in Adaptation-Deficient Phosphatase Deletion Strains.
T.A. Baumgartner, S.J. Haring, North Dakota State University

B299 932.5 Phosphorylated Astrin Regulated Kinocore Function Mediated by TRAIP in Mitosis.
H. Chung, J. Park, J. Lee, H. Kim, Sungkyunkwan University, Republic of Korea, and Sookmyung Women’s University, Republic of Korea
Biochemistry of Signaling, Cancer, and Aging

**B300 932.6** Regulation of Mitotic Microtubule Dynamic Instability in Monopolar Spindles by Bundling and Kinetochore Attachment. Z.R. Gergely, P.J. Flynn, S. Montes, J. McIntosh, M. Betterton, University of Colorado at Boulder

**B301 933.1** Calcineurin Homologous Protein Expression Regulates Na+/H+ Exchanger I Dependent Tumor Survival. W.T. Costie, M.A. Wallert, J.J. Provost, University of San Diego and Bemidji State University

**B302 933.2** PDE5 Induce Luminal Differentiation in Metastatic Prostate Cancer Cells. F. Wang, S. Koul, P. Timiri Shannamugam, Q. Dong, H.K. Koul, Louisiana State University Health Sciences Center-Shreveport, Overton Brooks VA Medical Center and Feist Weiller Cancer Center

**B303 933.3** Novel Protein Interactions Provide Insight Into the Regulation of the Polymerase Associated Factor Complex in Acute Myeloid Leukemia. J. Ropa, J. Serio, L. Chen, W. Chen, M. Myslivski, D. Mellacheruvu, V. Basrur, A. Nesvisshkii, A. Muntean, University of Michigan


**B305 933.5** Dissecting the TORC1 Gene Interaction Network by Perturbing Different Subunits. C.J. Torres Gutierrez, S.M. Santos, J.L. Hartman, University of Puerto Rico at Ponce, Puerto Rico and University of Alabama at Birmingham


**B307 933.7** The Role of CDK3 in Neuroblastoma Differentiation. V. Partridge, L. Du, Texas State University

Cancer Signaling and Therapeutics (II)

**B308 934.1** Electrophilic Nitro-Oleic Acid Inhibits Triple Negative Breast Cancer Cell Migration via Suppression of NF-κB Activity. C. Woodcock, S. Woodcock, S. Salvadori, N. Davidson, Y. Huang, B. Freeman, University of Pittsburgh and University of Pittsburgh Cancer Institute

**B309 934.2** Sensitizing Pancreatic Cancer Cells to Chemotherapeutics by Modulating Intracellular Iron Homeostasis. K.D. Bilieu, C. Li, University of Louisville

**B310 934.3** Individualized Proteogenomics in Analysis of Resistance to BRAF Inhibition in Malignant Melanoma. M. Schmidt, N. Naipas, A. Maas, B. Macek, University of Tuebingen, Germany

**B311 934.4** Kv3.1 and Kv3.4 as Tumor Hypoxia Related Voltage-Gated Potassium Channels. M. Song, S. Park, J. Park, J. Byun, H. Jin, S. Seo, P. Ryu, S. Lee, Seoul National University, Republic of Korea

**B312 934.5** TG-Interacting Factor Can Elicit Hedgehog Pathway to Increase Resistance to Gemcitabine in Urothelial Carcinoma. H. Huang, Y. Huang, Department of Medical Laboratory Science and Biotechnology, College of Medicine and National Cheng Kung University, Taiwan

**B313 934.6** Sequence-Dependent Sorafenib Therapy in Combination with Natural Phenolic Compounds for Hepatocellular Carcinoma and Possible Mechanism of Action. M. Abaza, A.M. Bahman, S. Khoushilash, R. Al-Astyayh, Kuwait University, Kuwait

**B314 934.7** The Potential Role of NMDA Receptor Regulating TGF-β1/Smad Pathway in Radiation-Induced Resistance in Giblotissma Multiforme. C. Liu, S. Wu, C. Szé, The Institution of Basic Medical Science, National Cheng Kung University, Taiwan, Department of Physiology, National Cheng Kung University, Taiwan, Department of Cell Biology and Anatomy and National Cheng Kung University, Taiwan

**B315 934.8** The Chemosensory Bitter Taste Receptors (T2Rs) Are Involved in Proliferation and Migration of Breast Cancer. N. Singh, F. Shaik, R.P. Bhullar, P. Chellakumar, University of Manitoba, Canada

**B316 934.9** Holographic View of the Senescent Cells: Imagine All the Senescent Cells Are Not Flattened. Y. D. Simay, A. Özdemir, B. Ibisoglu, M. Ark, Gazi University, Turkey

**B317 934.10** Anticancer Activity of Novel Benzimidazole Derivatives Against MCF-7 Cancer Cells. A. Özdemir, S. Uzunoglu, B. Çalışkan, E. Banoglu, M. Ark, Gazi University, Turkey

**B318 934.11** Puringeric Signaling in Bone as a Potential Mechanism in Prostate Cancer Progression and Cancer-Induced Bone Pain. M. Wilson, R. Duncan, M. Boggs, University of Delaware

**B319 934.12** Exploiting Immunogenic Modulation in Chordoma: Sublethal Radiation Increases EGFR Expression and Sensitizes Tumor Cells to Cetuximab. J. Griner, M. Padget, J. Hodge, Florida Southern College, National Cancer Institute and National Institutes of Health

**B320 934.13** Connections Between NF-κB Misregulation and Carcinogenesis. T. Link, D. Chyong, A. Naderi, C. Lee, T. Arpornsuksant, A. Lu, M. Dilip, M. Zhang, Walton High School

**B321 934.14** 3,4;7-O-Trimethylquercetin as a Novel Agent to Inhibit in Vitro Ovarian Cancer Cell Migration and Invasion. K. Yamuchi, S.H. Afroz, D.M. Dean, T. Mitsuaga, D.C. Zawieja, M.N. Uddin, Gifu University, Japan, Texas A&M Health Science Center College of Medicine and Baylor Scott & White Health/Texas A&M Health Science Center College of Medicine

**B322 934.15** Hypoxia and Serum-Deprivation Impacts Calcineurin B Homologous Protein Isoform 2 Expression and Activity in Non-Small Cell Lung Cancer. C.H. Wallert, J.J. Provost, M.A. Wallert, Bemidji State University and University of San Diego

**B323 934.16** The Role of the Na+-H+ Exchanger Isoform 1 (NHE1) and Calcineurin B Homologous Protein Isoform 2 (CHP2) on Cell Proliferation and Migration in Squamous Cell Carcinoma of the Lung. A.J. Kooker, J.J. Provost, M.A. Wallert, Bemidji State University and University of San Diego

**B324 934.17** Characterizing the Role of the Na+-H+ Exchanger Isoform 1 (NHE1) in Cell Proliferation and Migration in Ovarian Cancer Cells. T.M. Manzella, J.J. Provost, M.A. Wallert, Bemidji State University and University of San Diego

**B325 934.18** Targeting Integrin-Linked Kinase with Small-Interfering RNA Suppresses Invasion and Metastasis in Cisplatin-Resistant Ovarian Cancer. J.M. Reyes-González, P. Bázex, F. Valiyeva, P.E. Vivas-Meja, University of Puerto Rico, Medical Sciences Campus, Comprehensive Cancer Center


**B327 934.20** Cinobufotalin Inhibits Ovarian Cancer Cell Metastasis via Apoptotic Signaling and Targeting the mTOR Pathway. S.H. Afroz, C. Peddaboina, D.M. Dean, A. McDowell, T.C. McCormick, K. Newell-Rogers, D.C. Zawieja, T.J. Kuehl, M.N. Uddin, Texas A&M Health Science Center College of Medicine and Baylor Scott & White Health/Texas A&M Health Science Center College of Medicine

**B328 934.21** Evaluation of the High Mobility Group A1 Proteins (HMGA1) as a Key Mediate in the Anticancer Activity of EF24. M.N. Diaz, L. Travis, S. Barber, T.F. Sumter, Winthrop University

**B329 934.22** A Novel Endoglin Variant in Pancreatic Ductal Adenocarcinoma. S. Kumar, N. Shah, N. Zaman, N.Y. Lee, The Ohio State University Columbus, Ohio

Mechanisms of Aging

B337 935.2 Analysis of Telomere Length in Aging and Age-Related Illness. S.M. Connor, G.P. Einstein, O.L. Tulp, L.SAT Montserrat, Montserrat
B338 935.3 Follicle Stimulating Hormone and Reproductive Aging. A. Pardue, I. Dvoretz, C. Wright, A. Laskova, E. Barbara, D. Langat, University of Illinois, Chicago Medical School and PRESTO, Japan, JST, PRESTO, Japan
B339 935.4 The Role of Sphingosine 1-Phosphate in the Pathogenesis of Alzheimer's Disease. M. Beal, J. Bamburg, T. Kuhn, A. Shaw, L. Minamide, K. Watson, G. Cartagena, J. Bamburg, M. A. Carroll, E. J. Catapane, University of South Carolina, USA

Neurobiology and Neuronal Signaling

B341 936.2 Immunohistochemistry Localization of Biogenic Amine Receptors in Ganglia and Tissues of the Bivalve Mollusc, Mytilus edulis. D. Cummings, M. Jacobs, M.A. Carroll, E.J. Catapane, Catapane, Medgex Evers College
B342 936.3 Coordinated Beating of Gill Lateral Cell Cilia of Mytilus edulis and Grassstree virginica Involves Neuronal Innervation and Functioning Gap Junctions. R. Buchanan, C. Robertson, D. Frank, E.J. Catapane, M.A. Carroll, Medgex Evers College
B343 936.4 High-Throughput Functional Annotation of the Caenorhabditis elegans Neural Network. W. Aoki, Y. Yokoyama, M. Ueda, Kyoto University, Japan, JST, PRESTO, Japan, JST and PRESTO, Japan
B344 936.5 Neural Stem Cells Promote Nerve Regeneration Through IL-12-Induced Schwann Cell Differentiation. I. Chiu, D. Lee, J. Chen, National Health Research Institutes, Taiwan
B346 936.7 The Role of Rho/ROCK Pathway on the Sacral Neural Crest Cell Migration in the Mouse Gut. X. Zhang, W. Chan, School of Biomedical Sciences, Faculty of Medicine and The Chinese University of Hong Kong, Hong Kong
B348 936.9 Molecular Cloning of a Novel 69 kDa Brain-Specific Isoform of Regulator of G Protein Signaling 6 (RGS6). K.E. Ahlers, A. Stewart, J. Yang, G.K. Kopland, R.A. Fisher, University of Iowa and Florida Atlantic University
B349 936.10 Optogenetic Stimulation of BLA Cholinergic Terminals Induces a Hypophagic Phenotype. A.P. Addison, J. Ortiz-Guzman, B.R. Arendel, University of St. Thomas, Baylor College of Medicine and Jan & Don Duncan Neurological Research Institute
B350 936.11 PR α Poly-Dipeptides Encoded by the Repeat Expansion in C9orf72 Block Nuclear Import and Export. K. Shi, U/T Southwestern
B351 936.12 The Role of Neurotropism in HIV-1 gp120 Induced Oxidative Stress and Neurondegeneration. L. Smith, K. Walsh, L. Whittington, A. Shaw, L. Minamida, K. Watson, G. Cartagena, J. Bamburg, T. Kuhn, University of Alaska Fairbanks and Colorado State University
B353 936.14 Measuring Nisin Expression in RA-BDNF Differentiated SH-SYSY Human Neuroblastoma Cells by Flow Cytometry. J. Graham, T. Laakko Train, Eliot University
B354 936.15 Elucidating the Reproductiveome: System-Wide Regulation of Reproductive Neuropeptides. M. Gluckman, K. Philibert, N. Woitovich, J. Urban, G. Dejoseph, Chicago Medical School and Northwestern University
B355 936.16 Novel Role of bHLH Proteins in Synaptogenesis: Class I bHLH Proteins TCF4 and Daughterless Restrict Synaptic Branching and Bouton Formation via Neurexin Repression in Postmitotic Neurons. E.L. Robinson, E.A. Waddell, M. D’Rozario, D.R. Marenka, Drexel University, Washington University School of Medicine and Drexel University College of Medicine
B356 936.17 An Artistic Approach for Purification of Adeno-Associated Virus and Adenovirus. D. He, M. Xie, C&M Biologs

Immunity

B357 937.1 Prion-Like Protein Polymerisation Underlies Signal Transduction in Innate Immunity: The Emergence of a Universal Mechanism?. A. O’Carroll, T. Ve, M. Moustaqi, N. Giles, A. Bhukar, D. Hunter, B. Kobe, E. Sieriecky, Y. Gambin, UNSW (University of New South Wales), Australia and UQ (University of Queensland), Australia
B358 937.2 Novel Mechanism That Regulates Innate Immunity. A. Frolov, C. Csepeggi, L. Yang, M. Jiang, E. Cook, L.J. Crofford, Saint Louis University, University of Cincinnati, University of Kentucky and Vanderbilt University
B359 937.3 Investigating Structural Drivers of Antigen Specificity. N.K. Singh, S. Smith, D. Harris, D. Kranz, B.M. Baker, University of Notre Dame and University of Illinois- Urbana Champagne
B360 937.4 Detecting Lipoprotein in Gram-Negative Sepsis Patients. K. Farquharson, B. Novick, E. Snyder, M. Pichichero, J. Hellman, L. Michel, Rochester Institute of Technology, Rochester General Hospital, University of California, San Francisco
**Antibacterial Targets and Drug Discovery**

B378 939.1 **The Development of Novel Small Molecule Inhibitors of Listeria monocytogenes and Staphylococcus aureus Pyruvate Carboxylase.**
B.N. Wyatt, S. Matloub, M. St. Maurice, Monquette University

B379 939.2 **Unravelling the Myths and Mysteries of the Antimicrobial Agent, Silver.**
J. Lemire, K. Chatfield-Reed, L. Kalan, N. Gugala, C. Westersund, H. Almblad, G. Chua, R.J. Turner, The University of Calgary, Canada and Perelman School of Medicine

B380 939.3 **Aral Phosphatase from Bacillus subtilis, a Member of the HAD Superfamily.**
C. Martin, J. Armel, M. Madaio, J. Hill, S. O’Handley, Rochester Institute of Technology

B381 939.4 **Exploring Inhibitors of the Periplasmic Chaperone SurA Using Fluorescence Anisotropy.**
E.J. Zheng, E.W. Bell, L.M. Ryno, Oberlin College

B382 939.5 **Targeting Sigma Factor Controlled Signaling Pathways to Modulate Biofilm Growth and Composition.**
L.M. Ryno, E.R. Brezel, S.L. Loewus, E.J. Zheng, Oberlin College

B383 939.6 **Diadenosine Polyphosphates of the NUDIX Hydrolase Superfamily in M. tuberculosis.**
A.M. DiCola, A. Knowles, S. O’Handley, Rochester Institute of Technology

B384 939.7 **Suppression of Biofilm Formation in Staphylococcus aureus by Targeting Staphylococcal Accessory Regulator X Expression Using siHybrids.**
M. Morrow, Westminster College

B385 939.8 **Discovery of Antibiotic Peptides from Novelty-Prioritized Natural Product Genome Mining.**
C.J. Schwalen, D. Mitchell, University of Illinois at Urbana-Champaign

B386 939.9 **Small-Molecule Inhibitors Against Type I Pilus Selectively Target Uropathogenic E. coli in the Bladder and Gut.**

B387 939.10 **Synthesis of Potential AAC(6’)-lb Inhibitors to Combat Bacterial Resistance to Aminoglycoside Antibiotics.**
M. Simes, K.J. Labby, K. Johnson, Beloit College

B388 939.11 **Phagosomal Copper Triggers a Peptidomimetic’s Oxidative Activity and Enables Eradication of Intracellular Mycobacterium tuberculosis.**
M.J. Libardo, K. Anand, G. Krishnamoorthy, S.H. Kaufmann, A. Singh, A. Angeles-Boza, University of Connecticut, Indian Institute of Science, India and Max Planck Institute for Infection Biology, Germany

**Targeted Therapies and New Targets for Drug Discovery**

B368 938.1 **Lentivirus-Mediated RNA Interference Knockdown of Inositol Requiring 1 Enhances Sorafenib Lethality in Hepatoma Hep3B Cells Involving Autophagy Inhibition.**

B369 938.2 **Muscle Growth by Activin Type II Receptor Blocking Ameliorates Weakness in GNE Myopathy Mice.**
S. Noguchi, T. Yonekawa, M.V. Malidzan, M. Miyakawa, E. Lach-Trillifield, K. Nonaka, I. Nishino, National Institute of Neuroscience, NCNP, Japan, National Human Genome Research Institute, National Institutes of Health and Navarits Institutes for Biomedical Research, Switzerland

B370 938.3 **The Tyrosine Phosphatase PRL3 Drives T-Cell Acute Lymphoblastic Leukemia Progression.**
R.E. Sieg, S. Lammers, S. Hausman, J. Blackburn, Blackburn, University of Kentucky

B371 938.4 **A Time Course Analysis of the Effects of Arachidin 1 and Arachidin 3 on a Rotavirus-Infected Human Intestinal Cell Line.**
C.M. Witcher, H.N. Lockwood, R. Napier-Jameson, M.N. Mattila, E.B. Strange, J. Taylor, B. Clack, F. Medina-Bolivar, J.M. Ball, Stephen F Austin State University, Arkansas State University and Texas A&M University Commerce

B372 938.5 **Inulin Acetate Nanoparticles as Vaccine Adjuvants.**
S. Narisetty, Kakamozu College

B373 938.6 **Targeting the Transcriptional Kinases B7-33, a Single-Chain Derivative of the Relaxin Hormone Protects Cytotrophoblasts from Marinobufagenin-Induced Apoptosis.**
E.J. Zheng, E.W. Bell, L.M. Ryno, Oberlin College

B374 938.7 **Characterization of Asialoglycoprotein Receptor (ASGPR) Directed Hepatocellular Delivery Using a Pfizer Developed Targeting Ligand PF-06853291.**
M. Roy, J. Finley, T. Coskran, A. Shen, S. Xia, B. Thuma, V. Mascitti, Pfizer, Groton, CT

B375 938.8 **Use of Novel Drug Carrier System to Selectively Deliver Rolipram to the Liver for the Treatment of Alcoholic Liver Disease.**

B376 938.9 **Phagosomal Copper Triggers a Time Course Analysis of the Effects of Cholinerget Antifungal Response (CAP).**
S. Cotto, J.O. Colon, O. Queved, J.A. Lasalde, University of Puerto Rico, Puerto Rico, UPR Medical Sciences Campus, Puerto Rico and UPR Rio Piedras, Puerto Rico

B377 938.10 **YKL40: A Key Modulator of the CF Inflammatory Response.**
G.F. Bouvet, O. Bulka, A. Coriati, C. Massé, Y. Berthiaume, IRCM, Canada

B378 938.11 **Recombinant Adenoviral Vaccine Carrying the S1 Subunit of the Middle East Respiratory Syndrome Coronavirus (MERS-CoV) Spike Gene Can Elicit Cellular Immune Response in Mice.**
M. Ababneh, Jordan University of Science and Technology, Jordan

**ASBMB POSTERS TUESDAY continued**
940 Microbiomes

B389 940.12 Targeting Resistant Bacterial Pathogens with Next Generation Antifolates. D. Wright, University of Connecticut

B390 940.13 The Antimicrobial Properties of Extracts Isolated from Lichen Parmelia Vogans. V. Bondarenko, M. Korczynski, W. Techathaveewat, Touro University Nevada

B391 940.14 Msba as a Drug Discovery Target for Compounds with Antibacterial Activity. C.A. LaVigne, J.W. McCormick, P.D. Vogel, J.G. Wise, Southern Methodist University


B393 940.16 Kinetic Evaluation of the Reaction of Glutamate Racemase with Computational Derived Inhibitors Provides Validation of a Successful Pharmacophore Model for a New Line of Antibiotic Therapy. M. Young, E. Wells, O. Dinsmore, J. Marchiano, T. Mahfouz, A. Stockert, Ohio Northern University

B394 940.17 Evaluating the Activity of Bacterial Enzyme DXP Synthase a Potential Target for Newer Antibiotics. A.M. Kessler, S. Anand, K.P. Callahan, St. John’s Fisher College

B395 940.18 Structural, Biochemical, and Cellular Studies of TarA, the Novel Wall Teichoic Acid Glycosyltransferase, for the Discovery of Gram-Positive Bacterial Inhibitors. M. Koci, J. Tuffley, G. Schreiber, St. John’s Fisher College

B396 940.19 Analysis of Lysin a from Two Novel Mycobacteriophages. N. Surendranathan, Montclair State University


941 Metabolism and Aging

B400 941.3 The Role of the Negative Control in Microbiome Analyses. K. Edmonds, L. Williams, Providence College


B402 941.5 Gulliver Prototype Development and Deployment. C. Williams, B. Berdy, S. Epstein, Northeastern University

B403 941.6 Microbial Masterpieces: Bacterial Community Profiling in the Hastings College Art Buildings. S. Ashy, E. Tidwell, A. Laederach, A. Solem, Hastings College and UNC Chapel Hill

B404 941.7 The Metatranscriptome of the Rhusus Macaque: Investigating Potential Causes of Idiopathic Chronic Diarrhea. S.T. Westreich, A. Ardeshir, M.E. Kable, I. Korf, D.G. Lemay, University of California, Davis and USDAARS Western Human Nutrition Research Center


B406 941.9 Effects of a Junk-Food Diet on the Rat Gut Microbiome. A. Gutilla, C. Campbell, M. Pikcar, P. Vollbrecht, Hope College

B407 941.10 Design and Analysis of a Microbiome Mock Community: Understanding and Mitigating Methodological Biases. S. Musby, M. Kifflégigh, D. Edwards, P.J. Brooks, M. Rivera, Virginia Commonwealth University

B408 941.11 Probiotics Alter Avian Serum Profile to Stimulate Energy Consumption and Change of Gene Expression in Immune Cells. A. Ballou, R. Ali, M. Koci, NC State University

B409 941.1 Resveratrol Shortens the Chronological Life Span of Saccharomyces cerevisiae Under Dietary Glucose Restriction. L. Madrigal-Perez, I. Olivares-Marin, M. Canizal-Garcia, J. Gonzalez-Hernandez, G. Nava, M. Ramos-Gomez, Universidad Autonoma de Queretaro, Mexico, Instituto Tecnológico Superior de Ciudad Hidalgo, Mexico and Instituto Tecnológico de Morelia, Mexico

B410 941.2 Association Between the Serum Metabolome and All-Cause Mortality: A Prospective Analysis in the Alpha-Tocopherol, Beta-Carotene Cancer Prevention (ATBC) Study Cohort. J. Huang, S. Weinstein, S. Moore, J. Sampson, D. Albanes, NIH/NCI

B411 941.3 Teniposide Reduces Vascular Calcification by Inhibiting BMP2 Expression. L. Liu, X. Zhang, Y. Chen, Y. Duan, J. Han, Nankai University, People’s Republic of China

B412 941.4 Time Course Metabolic Profiling of Senescing Flight Muscles in the Hawk Moth, Manduca sexta. B. Wone, J.M. Kinchen, E.R. Kaup, B.W. Wone, University of South Dakota and Metabolon


B414 941.6 Sirtuin 3- and Diet-Mediated Regulation of Mitochondrial Function During Aging. R.S. Dhillon, P.R. van Ginkel, V. Fu, T.A. Prolla, J.M. Denu, University of Wisconsin

B415 941.7 The Transmembrane Sequences of Amyloid Precursor Protein Family Members Regulate Their Ectodomain Shedding. G. Multhaup, L. Schauenburg, M. Mayer, C. Walter, M. Eracci, C. Weise, F. Liebsch, McGill, Canada and FU Berlin, Germany


B417 942.2 E-Cadherin Regulates Mitochondrial Metabolism and Induces Cell Growth Through NF-xB in E-Cadherin Deficient AGS Cells. S. Park, J. Shin, S. Kee, Korea University, Republic of Korea

B418 942.3 Human Hepatocellular Carcinoma Cells Adapt to ASCT2 and LAT1 Amino Acid Transporter Silencing by shRNA and CRISPR-Cas9. P. Bothwell, B. Bode, Northern Illinois University

B419 942.4 MED28 Mediates Glucose Metabolism in Human Colorectal Cancer Cells. N. Huieh, C. Huang, Y. Weng, Y. Lin, M. Lee, China-Medical University, Taiwan and Chang-Jung Christian University, Taiwan

B420 942.5 Involvement of SNX27-Retromer in ASCT2 Trafficking and Glutamine Uptake. Z. Yang, J. Follett, M. Kerr, T. Claireville, B. Collins, R. Teasdale, Institute for Molecular Bioscience, Australia
942.17 Cancer-Specific Cell Death in Response to Palmitoylcarnitine Is Associated with Increased Mitochondrial Hydrogen Peroxide. P.C. Turnbull, C.G. Perry, York University, Canada

943 Metabolism and Nutrition

943.1 Thimet Oligopeptidase (EP24.15), a Neuropeptide Processing Enzyme Regulatingxin Signaling. M. Glucksman, K. Philibert, T. Mizuno, P. Lew, Chicago Medical School and University of Manitoba, Canada

943.2 Vitamin E Deficiency Causes Mortality in Zebrafish Embryos via Metabolic Dysregulation due to Redox-Mediated Mechanisms. M.Q. McDougall, J. Choi, H. Kim, G. Bobe, E. Ho, J.F. Stevens, E. Cadenas, R. Tanguay, M.G. Traber, Linus Pauling Institute, Oregon State University, Catholic University of Korea, Republic of Korea, University of Southern California and Smitnkhur Aquatic Research Laboratory

943.3 Effects of Acute Aerobic Exercise on Whole Genome Nucleosome Maps and Gene Expression in Skeletal Muscle of Lean vs Overweight/Obese Men. P.M. Devarshi, A.D. Jones, W.W. Campbell, E.M. Taylor, T.M. Henagan, Purdue University

943.4 Isolation, Identification, and Characterization of Local Wild Yeasts for Use in Fermentation. L.N. DeLong, B. Noone, L. Erickson, Salisbury University

944 Diabetes, Obesity and Metabolic Syndrome (II)

944.1 Role of INKT Cells in Obese Adipose Tissue. J. Park, J. Huh, Y. Ji, J. Kim, School of Biological Sciences, Institute of Molecular Biology & Genetics, Seoul National University, Republic of Korea

944.2 Anti-Hyperglycemic Effect of Argylin-Fructosyl-Galactose (AFL) in SD Rat Model Induced Lactase Expression Using Milk Administration. J. Lee, H. Choi, Y. Kim, H. Apostolidis, Y. Kim, Y. Kwan, Hamnam University, Republic of Korea, University of Massachusetts, Framingham State University, Chungnam National University, Republic of Korea

944.3 Effects of 3D Culture and Aqueous Cinnamon Extract on 3T3-L1 Adipogenesis. E. Wells, O. Dinsmore, A. Aulthouse, D. Kinder, J. Marchiano, A. Stockert, Ohio Northern University

944.4 Development of Novel Allele Specific PCR Based Assays to Investigate the Contribution of Cortisol to Metabolic Syndrome. B.R. Godlewski, J.R. Salm, B.D. Cohen, Union College

944.5 FoxO1 Localization Changes in Cinnamomum cassia Treated 3T3-LI Pre-Adipocytes. K. Bova, A. Aulthouse, A. Stockert, Ohio Northern University


944.7 Determining the Association and Interaction of Obesity Gene Risk Variants with Metabolic Disease Phenotypes. J.J. Castillo, V.R. Shah, L. Luo, W.S. Garver, University of New Mexico


944.9 Chronic Diabetic Wounds: Longitudinal Profiling of the Evolving Microbiome and Metabolic Landscape in Diabetic Patients. M.B. Ammons, A.L. Fuchs, B.P. Tripepi, V. Copie, A.J. Weaver, A. Braaksma, E. Johnson, C. Yeoman, Montana State University and Bozeman Deaconess Health Hospital


944.11 Therapeutic Targeting of Skeletal Muscle Nix in Early-Onset Insulin Resistance. S.C. da Silva Rosa, L. Nguyen, Y. Hai, D. Chapman, C. Ramptisch, J.W. Gordon, University of Manitoba, Canada and Children’s Hospital Research Institute of Manitoba, Canada

944.12 Novel Crosstalk Between Insulin and TGF-Beta Signaling in Vascular Endothelial Cells. N. Shah, C. Pan, S. Kumar, N. Zaman, F. Elmarsi, N.Y. Lee, The Ohio State University Columbus, Ohio

944.13 Environmental Lead (Pb)-Exposure, When Combined with Diet-Induced Obesity, Induces Metabolic and Behavioral Abnormalities in Mice. E.A. Lisyaiy, D. Yamin, M. Liseski, P. Stemmer, T. Leff, S. Perrine, Wayne State University

944.14 Effect of Surfactin Administration on Glucose and Lipid Metabolism in Mice Fed a High Fat Diet. M.A.N. Porto, P.R. Marinho, M.E. Oliveira, P.A. Grangeiro, M.E.S.M. Santos, Federal University of São João do Rio, Brazil
945 Lipidomics

946 Lipid Signaling

946 Lipid Signaling

946.1 Homeostatic Regulation of Serine Palmitoyltransferase (SPT) Is Mediated by a Direct Interaction of Ceramide with the SPT/ORMDL Complex. D. Davis, B. Wattenberg, Virginia Commonwealth University

946.2 Differential Growth State-Dependent Activation of p38MAPK by Treatment of Endothelial Cells with Docosahexaenoic Acid (DHA). Y. Du, C.G. Taylor; H.M. Aukema, P. Zahradka, University of Manitoba, Canada and St Boniface Albrechtsen Research Centre, Canada


946.4 Generating a Transgenic Mouse Line Containing the Plasma Membrane Phosphatidylinositol 4,5-Bisphosphate Depletion System. G. Guylás, B. Szalai, M. Geiszt, B. Szalai, M. Geiszt, T. Balla, L. Hunyady, P. Vármai, Semmelweis University, Department of Physiology, Hungary, NICHD and NIH

946.5 Withdrawn.

946.6 Differential Effects of Lipids on Cellular Activities of SH2 Domain-Containing Proteins. I. Singaram, W. Cho, University of Illinois at Chicago

946.7 Orthogonal Lipid Sensors Determine Differential Signaling Roles of PtdIns(3,4)P, and PtdIns(3,4,5)P. Z. Wang, S. Liu, W. Cho, University of Illinois at Chicago

946.8 PIP4Kα as a Potential Target for Huntington’s Disease. S. Panapakkam Giridharan, I. Al-Ramahi, J. Hasegawa, N. Safren, S. Patnaik, A. Ghebreigziabher, C. Thodeti, R. Noriega-Cisneros, D. Peña-Montes, R. Salgado-García, J. Montoya-Pérez, A. Saavedra-Molina, Universidad Michoacana de San Nicolás de Hidalgo, Mexico

946.9 Targeting Cysteinyl Leukotriene 2 Receptor as a Therapeutic Target for Tumor Growth and Metastasis: A New Function for an Old Receptor. L.R. Teegala, E. Dusha, V. Kondeti, N.Z. Al-Azzam, R. Adapala, S. Ghebreigziabher, C. Thodeti, S. Parucheti, University of Akron, the University of Akron and Northeast Ohio Medical School

946.10 Single-Molecule Analysis of PKB/ AKT-Lipid Interactions. N. Singh, E. Arauz, V. Aggarwal, T. Ha, J. Chen, University of Illinois at Urbana Champaign

946.11 Readers, Writers and Erasers of Nuclear PIP3. R.D. Blind, Vanderbilt University School of Medicine

947 Lipids and Inflammation

947.1 Skin-Specific Stearoyl-CoA Desaturase 1 Deficiency Protects Against Adiposity by Enhancing IL-6 Expression. S.N. Dumas, C. Guo, J.M. Ntambi, University of Wisconsin-Madison

947.2 High Salt Intake Induces Adipogenesis by the Modulation of MAPK/ERK1/2 Pathway in Both 3T3-L1 Adipocytes and Co-Culture with Macrophages. H. Park, J. Kim, S. Bak, M. Lee, Sungshin Women’s University, Republic of Korea

947.3 Effects of High-Fat Diet and Age on the Blood Lipidome and Circulating Endocannabinoids of Female C57BL/6 Mice. S. Pali, S. Krishna, J.H. Lee, C. de la Serre, D. Harn, J. Wagner, N. Filipov, B. Cummings, University of Georgia

947.4 Alcohol and HIV Protease Inhibitor-Induced Inflammamosome Activation and Hepatic Lipotoxicity. M. Hinton, W. Pandak, P. Hylemon, H. Zhou, Virginia Commonwealth University and McGuire Veterans Affairs Medical Center

947.5 Lipidomic Analysis of Liver Injury Caused by a 06-PUFA-Enriched Diet and Ethanol Exposure. D. Warner, M. Miller, X. Yin, X. Wei, A. Prodhan, X. Zhang, A. Feldstein, C. McClain, I. Kirpich, University of Louisville, University of California, San Diego and Robley Rex VAMC

947.6 Inflammatory Generation and Signaling Actions of Conjugated Nitro-Linoleic Acid. F.J. Schofer, D. Vitturi, L. Minarrieta, S.R. Salvatore, N. Kho, S. Jobaggy, L. Li, S. Woodcock, R. Berman, A. Ferreira, B. Freeman, L. Villacorta, University of Pittsburgh, Institute for Infection Immunology, Tübingen, Germany, University of Michigan and University of La Republica, Uruguay

947.7 Macrophage Cholesterol Efflux and Atherosclerosis in Psoriasis: A Role for microRNA-33. D. Karunakaran, G. Dwevidi, K. Rayner, Stanford University

948 Lipid Storage and Trafficking

948.1 NPC1-Mediated Cholesterol Export from Lysosomes. S.R. Pfeffer, Stanford University

948.2 Sterol O-Acyltransferase I Enhances Cholesterol Esterification via Cyclic AMP-Dependent Pathway in the Yolk Sac Membrane Endothelial Epithelial Cells. H. Lin, S. Wang, Y. Chen, H.J. Mersmann, S. Ding, National Taiwan University, Taiwan

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<td>HDLs and LDLs in the Brain: Characterizing the Lipid Secretome of Astrocytes</td>
<td>A. Nguyen, Trinity University</td>
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<td>948.4</td>
<td>Sac1 Degrades Its Lipid Substrate PI4P in the ER to Maintain a Steep Electrochemical Gradient on Donor Membranes</td>
<td>G. Hammond, R. Wills, J. Zewe, University of Pittsburgh</td>
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<td>948.5</td>
<td>Cholesterol Hydroperoxide Trafficking: Impairment of Macrophage Cholesterol Efflux with Implications for Atherosclerosis Under Oxidative Stress</td>
<td>W. Korytowski, K. Wawak, P. Pabisz, A.C. Chadwick, D. Sahoo, A.W. Girotti, Jagiellonian University, Poland and Medical College of Wisconsin</td>
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#### 949  Membrane Structure, Function and Assembly

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<td>Functional Reconstitution of the Beta Cell Parasome</td>
<td>A.R. Naik, K.T. Lewis, B.P. Jena, Wayne State University</td>
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<td>949.3</td>
<td>A Membrane Trafficking Screen to Identify Components Involved in Cation-Independent Endocytosis</td>
<td>D. Dutta, J. Wayt, J.G. Donaldson, National Institutes of Health</td>
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<td>Palmitoylation Impact on the Sodium Hydrogen Exchanger Isoform I Function</td>
<td>E. Pritsch, A. Holland, A.J. Kovskey, D.E. Rastedt, R.A. Vaughan, J.D. Foster, M.A. Wallert, J.J. Provost, University of San Diego, Bemidji State University, University of Michigan Medical Center, University of North Dakota, School of Medicine and Health Sciences</td>
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<td>949.5</td>
<td>Mutation of Follicle Stimulating Hormone Receptor Putative Caveolin Binding Motif Results in Altered Signaling</td>
<td>J.H. Fleischer, B.D. Cohen, Union College</td>
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<td>Functional Characterization of a Novel Caveolin-1 Adenine 474 Deletion (c.474delA Mutation) in TGFF1 Signaling and Caveole Formation</td>
<td>Y. Yuan, G. Marsboom, Z. Chen, D.R. Minshall, J. Rehman, A.B. Malik, University of Chicago</td>
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<td>949.7</td>
<td>Lipid Raft Disruption Alters Human Follicle Stimulating Hormone Receptor Signaling in a Human Granulosa Cell Line</td>
<td>J.G. Pradhuman, G.R. Geisel, B.D. Cohen, Union College</td>
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#### 950  Membrane Transport and Channels

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<td>Machinery Mediating Kiss-and-Run Mechanism of Cell Secretion</td>
<td>B.P. Jena, Wayne State University</td>
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<td>950.2</td>
<td>Type 2 Diabetes-Associated Variants Disrupt Function of SLC16A11, a Proton-Coupled Monocarboxylate Transporter, Through Two Distinct Mechanisms</td>
<td>E. Hoch, V. Russu, S.L. Schreiber, J.C. Florez, S.B. Jacobs, E.S. Lander, Broad Institute of MIT and Harvard and Massachusetts General Hospital</td>
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<td>HM2 From S. cerevisiae and Y. lipolytica: Comparison of Their Role in Oxidative Stress</td>
<td>J. Hartnett, P.N. Pierson, J. Nicaud, P.J. Trotter, Augustana College, INRA and AgroParisTech, France</td>
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<td>Structural and Functional Characterization of Outer Membrane Usher Activation in Uropathogenic E. coli</td>
<td>N. Omantage, Z. Deng, P. Yuan, S.J. Hultgren, Washington University School of Medicine</td>
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<td>In Vitro Activity of a Purified Natural Anion Channelrhodopsin</td>
<td>H. Li, O. Sineshchekov, G. Wu, J. Spudich, University of Texas Medical School at Houston</td>
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<td>Probing the Structural Basis of P-Glycoprotein Transport of μ-Opioid Receptor Agonists: Methadone and Loperamide.</td>
<td>M.E. Gibbs, K. Ledwitz, A. Roberts, University of Georgia</td>
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<td>Investigation of a Mitochondrial Twin Arginine Transport Pathway in Arabidopsis thaliana</td>
<td>T.S. Weerakoorn, Q. Ma, C. Dabney-Smith, Miami University</td>
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#### 951  Glycosyltransferases and Hydrolases

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<td>Dolicholphosphate Mannosyltransferase: A Glycosyltransferase with Unity in Molecular Diversities</td>
<td>K. Bakri, Z. Zhang, D.K. Banerjee, Universidad Central del Caribe, University of Puerto and University of Puerto Rico</td>
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<td>Regiospecificity of Galactan Polymerization by Divergent GTF2 Orthologs</td>
<td>P.W. Sadecki, A.M. Justen, J.S. Ho, L.L. Kiessling, University of Wisconsin-Madison</td>
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### 952  Protein-Glycan Interactions

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<td>‘Real Time Imaging of Tri-Molecular Protein Interactions in Live Cells by Förster Resonance Energy Transfer (FRET) Microscopy</td>
<td>H. Kuo, N. Chang, National Cheng Kung University College of Medicine, Taiwan</td>
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<td>952.2</td>
<td>Electrostatic Contributions of Aromatic Residues in Protein-Carbohydrate Interactions</td>
<td>S.A. Early, R.C. Diehl, L.L. Kiessling, University of Wisconsin-Madison</td>
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<td>952.3</td>
<td>Structural Effects of Skp1 Glycosylation</td>
<td>D.F. Thiiker, G. Chalmers, X. Xu, M.O. Sheikh, J.N. Glushka, J. Prestegard, R. Woods, C.M. West, University of Georgia</td>
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<td>952.5</td>
<td>Sulfation Pattern of Chondroitin Sulfates Regulates SHP2, the Non-Receptor Tyrosine Phosphatase</td>
<td>J.K. Tobacman, S. Bhattacharyya, L. Feferman, University of Illinois at Chicago and Jesse Brown VA Medical Center</td>
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953 Glycans in Development and Disease

BS11 953.1 FUT8 Promotes Breast Cancer Cell Invasiveness Through Remodeling of TGF-β Receptor Core Fucosylation. C. Tu, M. Wu, Y. Lin, R. Yang, Institute of Biomedical Sciences and Academia Sinica, Taiwan

BS12 953.2 Glycolipid Storage and Phenotypes in a New Rat Model of Fabry Disease. J.J. Miller, K.Aoki, C.A. Murphy, C.L. Stucky, J.S. Kassen, M. Tiemeyer, N.M. Dahms, Medical College of Wisconsin and University of Georgia

BS13 953.3 Identification of a Post-Translational Modification with Ribitol-Phosphate and Its Defect in Muscular Dystrophy: Roles of ISPD, Fukutin, and FKRP in α-Dystroglycan Glycosylation. M. Kanagawa, K. Kobayashi, M. Tajiri, H. Manya, A. Kuga, Y. Yamaguchi, Y. Wada, T. Endo, T. Toda, Kobe University, Japan, Osaka Medical Center and Research Institute for Maternal and Child Health, Japan, Tokyo Metropolitan Geriatric Hospital and Institute of Gerontology, Japan and RIKEN Global Research Cluster, Japan


954 Glycan Biotechnology and Drug Development

BS15 954.1 Deconvolution of Glycan Occupancy Heterogeneity for Rational HIV Immunogen Design. W. Yu, P. Zhao, M. Draghi, C. Arevalo, C. Karsten, L. Wells, D. Lauffenburger, G. Alter, Massachusetts Institute of Technology, Ragon Institute and Complex Carbohydrate Research Center

BS16 954.2 Mannose Moieties Exhibit Self-Adhesive Interactions. K.H. Perera, P.L. Chandran, Howard University


BS18 954.4 Arabidopsis Plants Expressing a Fungal Pectin Methylesterase Enzyme Have Reduced Degree of polysaccharide Methylation and Exhibit a Dwarfed Phenotype and Resistance to Stresses. L. Chambers, O. Zabotina, N. Reem, S. Abdullah, Iowa State University

BS19 954.5 Bifidobacterium dentium Regulates Intestinal Mucus Production and Glycosylation. M.A. Engervik, B.K. Luk, C. Visuthranukul, J. Versalovic, Baylor College of Medicine, Texas Children’s Hospital and King Chulalongkorn Memorial Hospital, Thailand
### WEDNESDAY

#### ASBMB Late-Breaking Poster Sessions

**SKYLINE BALLROOM**

**POSTER SET UP BY:** 9:00 am  
**POSTER DISPLAY:** 9:00 am – 4:00 pm  
**POSTER REMOVAL:** 4:00 – 6:00 pm

**Poster manning: times:**

ODD BOARD NUMBERS: 12:00 – 1:15 pm  
EVEN BOARD NUMBERS: 1:15 – 2:30 pm

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<td>Genome Dynamics: DNA Replication, Repair and Recombination</td>
<td>LB133-LB139</td>
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**WEDNESDAY APRIL 26**

**LATE BREAKING**

**Genome Dynamics: DNA Replication, Repair and Recombination**

**LB50** De Novo Thymidylate Biosynthesis and Outstrand Interact in DNA Synthesis. J. Chon, J.C. Gondokusumo, M.S. Field, P.J. Stover. Cornell University

**LB51** Lysine Acetylation of Nuclear Pif1 Regulates Its Helicase Function. O.E. Ononye, C.W. Saused, M.W. Bochman, L. Balakrishnan, Indiana University-Purdue University Indianapolis and Indiana University


**LB53** Base Unpairing at the Flap Junction Controls the Rate of FEN1-Catalyzed Cleavage of DNA During Replication and Repair. B. Song, M.M. Hingorani, Wesleyan University

**LB54** Has the Duration and Temperature of Lysis Buffer Been Minimized for the Comet Assay? A.A. Alaholy, Y. JI, M.S. Cooke, M. Karbaschi. Florida International University

**LB55** Outer Membrane Vesicles from Clinical Strains of Escherichia coli can Cause Megalocytosis and DNA Damage in HaLa Cells. Y. Morales-Lozada, R. Gómez-Mooreno, A. Baerga-Ortiz. University of Puerto Rico, Rio Piedras Campus, University of Puerto Rico and University Medical Science Campus

**LB56** Regulation of the Functional Properties of Xeroderma Pigmentosum Complementation Group A (XPA) Protein Through Lysine Acetylation. C. Njeri, J. Kaur, J. Turchi, L. Balakrishnan, Indiana University-Purdue University Indianapolis and Indiana University School of Medicine

**LB57** A SUMO-Ubiquitin Mediated Proteasome Pathway in Repair of DNA Damage Induced by Topoisomerase II Inhibitors. Y. Sun. University of Illinois at Chicago

**LB58** NHEJ and BER Concurrently Repair Oxidative DNA Damage via Initiation of APE1 in Rat Cortical Neurons. J.-L. Yang, Y.-P. Chen, S.-F. Sun, S.-D. Chen. Kaohsiung Chang Gung Memorial Hospital, Taiwan

**LB59** A Humanized Single Chain Fragment Variable Constructed to Use in Breast Cancer Immunotherapy. E.O. Mahgoub. Qatar University, Qatar

**LB60** Cross-Tissue Telomere Length Measurement to Determine Auxiliary Marker of Brain Telomere Length in Neurosurgery Patients. S. Lussier, P. Braun, J. Potash, G. Shinozaki, H. Stevens. University of Iowa

**LATE BREAKING**

**Chromatin Structure and Gene Expression**


**LB65** The Roles of Flanking DNA and Transcriptional Activators in Regulating SAGA-Mediated Nucleosome Acetylation. S.J. Olson, C. Minzl, M.A. Shogren-Knaak, Iowa State University and Pennsylvania State University


**LB67** Mitronic tsmiR miR6855 Biosynthesis Regulation by Oxidative Stress in the Basal-Like Breast Cancer Cells. M. Ellison, S. Misra, G. Chaudhuri. Mehany Medical College

**LB68** Allostery in Nuclear Hormone Receptor Transactivation. E.J. Fernandez. University of Tennessee

**LB69** Intron 5 of RUNX1 Gene Harbors a Putative Promoter Region. S. Gutierrez, M. Hinojosa, N. Schnake, M. Martinez. Universidad de Concepcion, Chile

**LB70** Characterization of Gene Expression of the E. coli abg Region, Which Encodes Proteins Involved in Folic Acid Catabolism. N. Patel, L. Pittstick, J. Green. Midwestern University

**LATE BREAKING**

**RNA: Processing, Transport, and Regulatory Mechanisms**

**LB71** Investigating the Role of the DYW Deaminase in RNA Processing. J.A. Aldana-Mendoza, M.I. Hayes. California State University, Los Angeles


**LB74** Reversibly Constraining the Human UI snRNA and the Spliceosome to a Pre-mRNA via an Engineered Site-Specific Disulfide Bond. P. McCarthy, E. Garside, A. MacMillan, D. Pomernak Krummel. Brandeis University, University of Alberta, Canada and Emory University

**LATE BREAKING**

**Protein Chemistry, Synthesis and Turnover**


**LB76** Purification and Subsequent Binding Assay of B-Cell Activating Factor’s Receptor (BAFF-R) to an Oligonucleotide Aptamer (BAFF-R). C.F. Imman, Sonoma State University

**LB77** Discovery of a Cell-Penetrating Peptide via Heparin-Binding from Pereskia bleo. S. Loo, A. Kam, J.P. Tam, Nanyang Technological University, Singapore

**LB78** Studies on the Interaction of Human Phospholipid Scramblase 1 with C-Terminal Domain of Topoisomerase IIα. U. Sivagnanam, S.N. Gummadi. Indian Institute of Technology Madras, India

**LB79** Withdrawn.
**ASBMB POSTERS**  WEDNESDAY continued

**LB80**  Altering Oligomerization of EphA2 via Mutations in the Intracellular Domain.  R.W. Liniger, X. Shi, D.M. Bowman, V.M. Hapik, J. Zheng, M. Buck, B. Wang, A. Smith, The University of Akron, Case Western Reserve University/Rammelkamp Center of Metabolism and Case Western Reserve University

**LB81**  Dihydroxyacetone Phosphate (DHAP) Induced Type-I Collagen Glycation and the Formation of Cross-Linked Advanced Glycation End-Products (AGEs) in Vitro.  W. Liu, G.W. Dombi, J.A. Dain, University of Rhode Island

**LB82**  Human Peptidylarginine Deiminase Types 2 and 4 Target Glycine-Containing Motifs for Citrullination: An in Silico Study.  J.S. Olson, D. Meyer, J. Grant, The University of Wisconsin at Stout

**LB83**  ngPalmPISC: A Sensitive Method for Proteome-Wide Characterization of S-Acetylation.  B. Zhou, Y. Yan, M.R. Freeman, W. Yang, Cedars-Sinai Medical Center

**LB84**  Assessing Cysteine Residue Thiol Status in t-Darpp, a Protein Involved in Chemoresistance.  J.A. Aldana-Mendoza, P. Farías, J.A. Momand, California State University, Los Angeles

**LB85**  Activation and Binding Mechanisms of the Tandem Collagen-Binding Domain of CoG Collagenase.  R. Bauer, K. Janowska, K. Tanaka, O. Matsushita, J. Sakon, University of Arkansas, Nippon Research Inc., Japan and Okayama University, Japan

**LB86**  Nuclear Transport of Fungal Transcription Factors Mediated by Importin-α and Specificities of This Interaction.  N.E. Bernardez, D. Litvac, M.C. Bertolini, N. Panté, M.R. de Matos Fontes, São Paulo State University, Brazil and University of British Columbia, Canada

**LB87**  The Folding Mechanism of an Artificial Knotted Protein Characterized by Optical Tweezers.  A. Bustamante, M. Rivera, J. Molina, M. Baez, Facultad de Ciencias Químicas y Farmacéuticas and Universidad de Chile, Chile


**LB89**  Initial Crystallization of a Phage DNA Kinase.  A. Gnann, P. Wegele, D. Dowling, University of Massachusetts Boston and New England Biolabs

**LB90**  Characterization of a Putative Monoxygenase Involved in Climate Regulation from Hyphomicrobium sulfonivorans.  J.M. Gordon, M.B. Culpepper, M.A. Culpepper, Appalachian State University

**LB91**  Diversity and Evolutionary Analysis of Iron-Containing (Type-III) Alcohol Dehydrogenases in the Three Domains of Life.  A. Julián-Sánchez, C. Gáona-López, H. Riveros-Rosas, Fac. Medicina, Universidad Nacional Autónoma de México, Mexico and Colegio Benedictino, Mexico

**LB92**  NMR Mapping of the Allosteric Network in the Oncogenic Protein Kinase A Chimera Dnaj1-PRKACA.  A.N. Karamafrooz, G.N. Li, S.M. Simon, S.S. Taylor, G.N. Veiga, University of Minnesota, Rockefeller University, and University of California at San Diego

**LB93**  Mechanical Untying of the Smallest Knotted Protein from Different Pulling Axes Using Optical Tweezers.  M. Rivera, A. Bustamante, Y. Hao, R.A. Maillard, M. Baez, Universidad de Chile, Chile and Georgetown University

**LB94**  Bio-Incorporation of Amino Acid Analogs into Target Proteins.  E.E. Rush, Tennessee Technological University

**LB95**  Multi-Domain Dynamic Studies of Calcium Bound Polycystic Kidney Disease-Like and Collagen Binding Domains.  C.E. Rush, J. Sakon, University of Arkansas

**LB96**  Investigating the Catalytic Molecular Details of Malonyl-Thioester Decarboxylating Enzymes.  L.M. Stunkard, J.M. Lohman, Purdue University

**LB97**  The Structure and Function of VE-Cadherin in Endothelial Cells.  A.L. Wary, S. Sreedharan, York Community High School


**LB99**  Insight into Parkinson’s Disease from Yeasts: Evidence for Sumoylation as a Protective Factor Against Alpha-Synuclein Toxicity.  P. Jones, R. Thomas, Y. Ganey, A. Roman, M. Marshall, G. Lipkin, E. Ong, S. DeBurrman, Lake Forest College

**LB100**  Understanding the Nature of Toxicity of Parkinson’s Disease Associated Alpha-Synuclein Familial Mutants H50Q, G51D, and A53E with Yeast Models.  E.N. Ong, M. Temba, C. Mwale, M. Marshall, C. Alvarado, M. Buabeng, N. Kukula, S. DeBurrman, Lake Forest College

**LB101**  FTD1-Related Mutants S320F and S352L Have Subtle Differential Effects on 4R Tau Isform Aggregation in Vitro.  M. Yenjiera, C.T. Gamblin, University of Kansas

**LB102**  Identification of an Arabidopsis WD-Repeat Protein That Activates the Deubiquitinase UBP3 and Interacts with Two E3 Ubiquitin Ligases.  A.T. Baskerville, J. Donahue, G. Gillaspy, L. Erickson, Salisbury University and Virginia Polytechnic Institute and State University

**LB103**  Rotavirus NSP1 as a Phosphorylated Substrate Adaptor of Hijacked Cullin-RING Ligases.  K.A. Davis, M. Morelli, J.T. Patton, University of Maryland and National Institutes of Health

**LB104**  Modification of CUL3 by Related to Ubiquitin (RUB) Is Partially Regulated by the Phytochrome B Pathway in Arabidopsis thaliana.  A. Orellana, M. Christians, Grand Valley State University

**LB105**  Redundancy Between Proteasome Chaperones Nas2 and Hsm3 During Proteasome Assembly.  A. Suppahha, R.S. Chingakham, A. De La Mota Peymao, J. Roelets, Kansas State University

**LB106**  Proprotein Convertase Selectivity in the Activation of the Human Papilloma Virus.  G. Izaguirre, University of Illinois at Chicago

**LB107**  Characterizing Small Molecule Inhibitors of the LINE1 Endonuclease.  M. Smith, S. Bertrand, Q. Bolden, B. Russell, C. DeFreese, Xavier University of Louisiana

**LB108**  Molecular Mechanism of the Functions and Allosteric Regulations of the αβ- and αγ-Heterodimers of Human NAD-Dependent Isocitrate Dehydrogenase.  J. Ding, T. Ma, Y. Liu, Y. Peng, W. Huang, Shanghai Institute of Biochemistry and Cell Biology, People's Republic of China, and School of Life Sciences, Shanghai University, People's Republic of China

**LB109**  Streptomyces wadyamensis MppP: A Novel PLP-Dependent L-Arginine Hydroxylase in L-Enduracidine Biosynthesis.  L. Han, N. Silvaggi, University of Wisconsin-Milwaukee

**LB110**  Elevating the Molecular Details of Catalysis for Type III Polyketide Synthases Using Near Natural Substrate/Intermediate Analogs.  L.R. Richards, L. Stunkard, A. Benjamin, B.P. Manning, J. Lohman, Purdue University

**LB111**  The Effect of Substrate Presentation and Activation on Neuraminidase NEU2 Specificity.  R.J. Woods, O.C. Grant, S. Makeneni, B.L. Foley, University of Georgia

**LB112**  Preliminary Investigation by NMR of the Electron Transfer Complex Between the Vitamin D Metabolizing Cytochrome P450 24A1 and Adrenodoxin.  D. Estrada, Y. Tu, University at Buffalo

**LATE BREAKING**

**Biomolecular Catalysis**

**LB108**  Molecular Mechanism of the Functions and Allosteric Regulations of the αβ- and αγ-Heterodimers of Human NAD-Dependent Isocitrate Dehydrogenase.  J. Ding, T. Ma, Y. Liu, Y. Peng, W. Huang, Shanghai Institute of Biochemistry and Cell Biology, People’s Republic of China, and School of Life Sciences, Shanghai University, People’s Republic of China

**LB109**  Streptomyces wadyamensis MppP: A Novel PLP-Dependent L-Arginine Hydroxylase in L-Enduracidine Biosynthesis.  L. Han, N. Silvaggi, University of Wisconsin-Milwaukee

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**LB112**  Preliminary Investigation by NMR of the Electron Transfer Complex Between the Vitamin D Metabolizing Cytochrome P450 24A1 and Adrenodoxin.  D. Estrada, Y. Tu, University at Buffalo
LATE BREAKING
Chemical Biology, Drug Discovery and Bioanalytical Methods

LB113  Cellular Uptake of a Cystine-Knot Peptide and Modulation of Its Intracellular Trafficking.  X. Gao, K. Stanger, H. Kaluaraachchi, T. Maurer, P. Ciepia, C. Chalouni, Y. Franke, R. N. Hannoush, Genentech

LB114  Investigation of the Mechanism of Cytotoxic Natural Product PateamineA Analog.  S.S. Kommaraju, W. K. Low, D. Romo, St. John’s University and Texas A&M University

LB115  Lybatide: Naturally Occurring Disulfide-Stapled Helical Peptides from Lycium barbarum.  W. L. Tan, K. H. Wong, J. P. Tam, Nanyang Technological University, Singapore


LB118  Improving Therapy for Refractory Mast Cell Lymphoma Using Small Molecule Inhibitors Vorinostat and Palbociclib to Target Histone Deacetylase and Cyclin Dependent Kinase 4/6.  N. Haas, N. Chaturvedi, M. Kling, S. Joshi, University of Nebraska Medical Center at Omaha

LB119  Inhibitory Effects of Single Component Isolated in Natural Product Complex (No-αp) on the AT1 Receptor Expression and Oxidative Stress in Angiostatin II- Stimulated Cells.  E. Y. Hong, G. U. Hong, Y. H. Shin, Y. I. Kwon, J. Y. Ro, Hyunsungvital Co. Ltd, Life & Science Research Center, Republic of Korea, and Daedeok Valley Campus, Republic of Korea

LB120  Inhibition of Osteoarthritis-Related Molecules by Single Component Identified from Natural Product Complex (Rypungwhan) in IL-1β-Stimulated SW1353 Cells.  G. U. Hong, E. Y. Hong, Y. H. Shin, Y. I. Kwon, J. Y. Ro, Hyunsungvital Co. Ltd, Life & Science Research Center, Republic of Korea, and Daedeok Valley Campus, Republic of Korea

LB121  Profiling and Authentication of Herbal Products.  J. Huang, K. H. Wong, J. P. Tam, Nanyang Technological University, Singapore


LB123  Serum Protein S100B, a Biomarker for Head Injury or Skeletal Muscle Damage!.  A. Harris, S. Keuter, A. Kerska, M. Rogaczki, University of Wisconsin-Platteville


LB125  Employing Surface-Displayed Proteins on Bacillus megabacterium Spores to Detect Environmental Pollutants.  D. T. Wynn, R. Mistal, L. Knecht, S. Deo, S. Daunert, University of Miami

LB126  Using Small Angle X-Ray Scattering to Determine the Role of Poly-Cystic Kidney Disease-LikeDomains in Clostridium histolyticum.  P. C. Caviness, T. Koide, O. Matsuhashi, J. Sakon, University of Arkansas, Waseda University, Japan and Okayama University Graduate School of Medicine, Japan


LB128  Determination of Total Oxytocin in Human Serum by Traditional LCMS.  A. Franke, A. Menden, X. Li, University of Hawaii

LB129  Absolute Quantitation of mRNA and DNA Copy Number in Different Nutritional States: A Methodological Approach in Primer Design, mRNA Copy Number and Discrimination Between Highly Homologous Gene Families.  P. Rose, L. A. Shirato, K. Sharma, J. P. Hardwick, Northeast Ohio Medical University (NEOMED), University of Marila Medical School (UNIMAR), Brazil and Case Western University School of Medicine

LB130  Strategies for Point-of-Care Detection of Nucleic Acid Targets.  D. Broyles, S. K. Deo, University of Miami

LB131  Identification of a High-Risk Cardiovascular Disease Population: Combining Computational Modeling and Bioluminescence Imaging.  T. Head, P. Dau, V. Andreev, S. Deo, P. Daftarian, P. Goldschmidt-Clermont, S. Daunert, University of Miami Miller School of Medicine, Arbor Research Collaborative for Health and NGM Biopharmaceuticals Inc.

LB132  Role of Albumin on the Cellular Uptake and Selective Autophagy of Nanodiamonds.  E. N. R. Lawrence, H. C. Su, K. K. Liu, J. I. Chao, National Chiao Tung University, Taiwan

LATE BREAKING
Systems Biology Technologies and Applications

LB133  Integrated Sigma Dynamics Quantum Energy Therapy Presented by Mathematical Function and Matrices in Immunology.  G. P. Einstein, O. L. Tulp, M. Idle, C. M. Konyk, University of Science, Arts and Technology, Montsenat, and Einstein Medical Institute

LB134  Linking Nutrition and Molecular Biology Using Data Mining and Graph Theory.  R.inchanggo, J. J. Jay, C. Brouwer, University of North Carolina at Charlotte

LB135  Association Between Women with Endometriosis and Human Leukocyte Antigen-C Genotyping.  Y.-C. Chou, C.-R. Tseng, Taipei Medical University, Taiwan and Taipei Medical University Hospital, Taiwan

LB136  Altered Brain Hemoglobin Gene Expression in the Frontal Cortex of Patients with Alzheimer’s and Acquired Creutzfeldt-Jakob’s Disease.  S. Vanni, M. Zattoni, F. Moda, F. Tagliavini, S. Haik, J.-P. Deslys, G. Zanuss, J. W. Ironside, I. Ferrer, G. Kovacs, G. Legname, Scuola Internazionale Superiore di Studi Avanzati, Italy, IRCCS Foundation Carlo Besta Neurological Institute, Italy, Sarbonne Universités, France, Commissionat à l’énergie atomique et aux énergies alternative, France, University of Verona, Italy, National CJD Research & Surveillance Unit, United Kingdom, Bellvitge University Hospital, Institut d’Investigació Biomèdica de Bellvitge, Spain and Medical University of Vienna, Austria

LB137  The Pseudophosphatase MK-STYXs Effects on Dynein.  A. Whitaker, L. Hall-Moxing, S. Hinton, College of Willam & Mary

LB138  The Sweat Mediator Lipidome Is Affected by Stimulation Technique but Not Sampling Location.  K. Agrawal, J. D. Waller, M. V. La, E. L. Bonnel, J. W. Newman, University of California-Davis, National Institutes of Health West Coast Metabolomics Center and Mateon Therapeutics Inc.

LB139  Using Metabolite Profiling to Understand the Consequences of Iron-Source Choices by Staphylococcus aureus.  J. DuBois, A. Celis, Montana State University
LATE BREAKING

Signal Transduction and Cellular Regulation

**LB140** Activation of the D2 Dopamine Receptor Hampers the Protective Effect of the A2a Adenosine Receptor on TDP-43 Mislocalization. Y. Chern, C-T. Lai, Y-J. Liu, H-L. Lai, IBMS and Academia Sinica, Taiwan

**LB141** Investigating Methylated Arginine Residues in PGC-1α. J.M. Cuala, I.M. Osuji, C. Zurita-Lopez, California State University Los Angeles

**LB142** Effect of Outer Hair Cell-Specific STAT3 Deletion in the Noise-Induced Cellular Stress Response. S. Dziennis, T.L. Wilson, S.L. Foster, A.L. Nuttall, OHSU

**LB143** Role of Serotonin Signaling in the Remodeling of Thoridazine-Induced Craniofacial Deformities in Xenopus laevis Pre-Metamorphic Tadpoles. J.S. Familia, K. Pinet, K.A. McLaughlin, Tufts University

**LB144** AKT2 Is the Predominant Akt Isoform Expressed in Human Skeletal Muscle. A. Geddis, A. Mitrophanov, R.W. Matheny Jr., S. Hobbs, Tufts University

**LB145** Arl4A Interacts with Robo1 to Promote Cell Migration via Up-Regulating Cdc42 Activation. F-J.S. Lee, T-S. Chiang, C-H. Chen, M-C. Tsai, L-T. Jang, National Taiwan University, Taiwan

**LB146** NFkB Activation and Cytokine Output in LPS-Treated RAW264.7 Macrophages. M. Reynoso, A. Geddis, A. Microphanov, R.W. Matheny Jr., S. Hobbs, U.S. Army Research Institute of Environmental Medicine, DoiBiotechnology High Performance Computing Software Applications Institute, Telemedicine and Advanced Technology Research Command, and U.S. Army Medical Research and Material Command

**LB147** CD95-Ligand from Myeloid Cells Contributes to Abdominal Aortic Aneurysm Formation. W. Xiong, T. Meisinger, M. Fitzgerald, R. Bartha, B. T. Baxter, University of Nebraska Medical Center

**LB148** Dissecting the Dual Activity of Cellular Retinoic Acid Binding Protein 2 (CRABP2). A. Vreeland, D. Driscoll, N. Noy, Cleveland Clinic Foundation Lerner Research Institute

**LB149** AKT Signaling Is Essential for Functional and Structural Integrity of the Heart. S. Goedeck, A. Heine, F. Moeller, R. Deenen, K. Koehler, A. Goedecke, UKO Heinrich-Heine-University, Germany

**LB150** Probing the Structural and Biochemical Basis for the Development of Cushing’s Syndrome Caused by a Somatic Mutant of Protein Kinase A. C. Walker, A. Karamafroz, Y. Wang, S. Taylor, G. Vogila, University of Minnesota-Twin Cities and University of California at San Diego

**LB151** EphA2 Organization and Dynamics in Cancer Cells. D.M. Bowman, X. Shi, V. Hapik, J. Zheng, J. Muller-Greven, R. Lingerak, M. Buck, B-C. Wang, A. Smith, University of Akron, MetraHealth Medical Center and Case Western Reserve University

**LB152** The Baculoviral Chloride/Proton Antiporter: A Molecular Machine. D. Shannon, J. Glass, B. Hall, K. Peters, J. Hardesty, Moeller

**LB153** Carbon Monoxide as a Mediator of Ca2+ Signaling for Insulin Secretion in Pancreatic Islets. F.U. Rahman, U-H. Kim, Chonbuk National University Medical School, Republic of Korea

**LB154** Edcsyneless, a Novel Regulator of Calcium Influx. A. Sarkar, University of Nebraska Medical Center

**LB155** Modulations of Calcium in Adipose Tissue by TRPC1: A Key Player in Obesity. A. Schaar, D. Krout, J.N. Roemmich, K.J. Claycombe-Larson, B.B. Singh, University of North Dakota, USDA-ARS and Grand Forks Human Nutrition Research Center

**LB156** Inositol Hexakisphosphate Increases the Transition Constant and the Affinity of Horse Aqumethemoglobin for 5,5’-Dithiobis(2-Nitrobenzoate). O.E. Omotosho, S.N. Chinedu, Covenant University, Nigeria

**LB157** Heterogeneity Patterns of Apoptosis Mediators in Cervical Carcinoma Cells. I. García-Aguirar, O. Del Moral-Hernández, M. Martinez-Castillo, R. Bonilla-Moreno, N. Villegas-Sepúlveda, Center for Research and Advanced Studies of the National Polytechnic Institute, Mexico

**LB158** Regulation of MAP Kinase Signaling by c-Myc Mediates the Apoptotic Response to Vinca Alkaloids. R.A. Grisstock, C.T.K. Wales, A.T. Jacobs, University of Hawaii at Hilo

**LB159** C-Terminal ISKDa Fragment from β-Actin Causes Apoptotic Cell Death. N. Itō, S. Tone, M. Tanaka, Tokyo Denki University, Japan

**LB160** Downregulation of X-Linked Inhibitor of Apoptosis Protein by “7-Benzylidenenaltrexone Maleate” Sensitizes Pancreatic Cancer Cells to TRAIL-Induced Apoptosis. S-Y. Kim, S. Park, S. Yoo, J.K. Rho, E.S. Jun, S. Chang, K.K. Kim, S.C. Kim, I. Kim, ASAN Medical Center, Republic of Korea, University of Ulster College of Medicine, Republic of Korea, and University of Ulster College of Medicine, Republic of Korea

**LB161** Treatment Effects of Vorinostat and Letrozole Combination on Breast Cancer Cell Survival and Peripheral Blood Mononuclear Cell Differentiation. U. Natarajan, S. Samuel, R. Vijjyaramghavan, A. Rathinavelu, VRI Institute of Biomedical Science, India, VRR Institute of Biomedical Science, India and Nova Southeastern University


**LB163** Analysis of the Expression of E6*E7, a Short Splicing Variant of HPV-16-E6 in the HPV Negative Cervical Carcinoma Cells C33-A. C.E. Vanaman, R. Bonilla-Moreno, N. Villegas-Sepúlveda, Center for Research and Advanced Studies of the National Polytechnic Institute, Mexico

**LB164** Role of Primary Cilia in Cell Migration. J. Ganesh, F. Miskevich, University of Michigan, Flint

**LB165** Analysis of Cell Spreading as a Function of Integrin Inhibition. P. Soneral, H. Zipoiy, K. Lunacek, Bethel University

**LB166** Suppressor of IKK Epsilon (SIKE) Acts as a Bridge Between Innate Immune Signalling Pathway and Cytoskeletal Rearrangements. K.A. Wittenberg, F.A. Slykas, H.A. Sonnenschein, J.K. Bell, University of San Diego


**LB168** Mangosteen Extract as Agent for Inhibiting Breast and Lung Cancer Growth. A.H. Bahannah, T. Johnson, E. Myles, Tennessee State University

**LB169** BET Inhibition Suppresses Gastric Cancer Cell Proliferation by Inducing Cell Senescence. X. Dong, University of Illinois at Urbana-Champaign

**LB170** Prolyl Isomerase Pin1 Regulates the Stability, Transcriptional Activity and Oncogenic Potential of Brd4. X. Hu, University of Illinois at Urbana-Champaign

**LB171** Characterization of Human SH2 Domain-Containing Protein 4A(SH2D4A) in HeLa Cells. L. Tamborlini, K.D. Pereira, L. Meneguello, A.R.G. de Proença, A.D. Luchessi, University of Campinas, Brazil and São Paulo State University, Brazil

**LB172** Characterizing the Transcriptional Regulation of Importin α1 Expression in Non-Small Cell Lung Cancer. C.-J. Yu, Y.-Y. Cheng, H.-P. Feng, P.Y. Li, C.-L. Wang, Chang Gung Memorial Hospital, Linkou, Taiwan and Chang Gung University, Taiwan

**LB173** LPI NI Promotes Epithelial Cell Transdifferentiation and Mammary Tumourigenesis via Enhancing Insulin Receptor Substrate 1 Stability. H.S. Choi, Ceous University, Republic of Korea

**LB174** Breast Tumor Cell-Derived FGF-5 Induces MEKK1-Dependent Chemokine Expression in Mammary Fibroblasts: Implications for Tumor Microenvironment. B.D. Cuevas, Loyola University Chicago

LB176 Targeting Potassium Channels in Cancer: zcx=l Strategy for Therapeutic Intervention. S. Gendle, Loyola University Chicago

LB177 Inhibition of Human Prostate Cancer Growth by Mesenchymal Stem Cells Delivering MiR-16. E. Jones, P. Mazirka, M.A. McNurlan, P. Brink, G. Caso, Rutgers, Robert Wood Johnson Medical School and Story Brook University Medical Center

LB178 Mir-16 and Mir-34a Suppress Growth of a Variety of Human Cancer Cells. E. Jones, P. Mazirka, M.A. McNurlan, P. Brink, G. Caso, Rutgers, Robert Wood Johnson Medical School and Story Brook University Medical Center

LB179 Witherafin A Suppresses and Inhibits Hepatocellular Carcinoma-Cell Proliferation and Tumor Burden via Activation of ERK1/2-ELK-1-RSK-DR5 Axis. P. Kuppusamy, A. Nagalingam, C. Drachenberg, D. Sharma, N.K. Saxena, University of Maryland School of Medicine and Johns Hopkins University School of Medicine

LB180 Haspin Is a Survival Factor for H3T3 Phosphorylation and Survivin Recruitment in Malignancy of Colorectal Cancer. T-C. Lee, Y-H. Chang, T-W. Yu, T-K. Shen, M-C. Tsai, C-C. Huang, T-W. Yang, C-C. Lin, G-Y. Chiou, Y-J. Jong, J-I. Chao, National Chiao Tung University, Taiwan and Chung Shan Medical University Hospital, Taiwan

LB181 A Novel Synthetic Compound Overcomes Drug Resistance on EGFR (T790M) and Cancer Stemness in Human Non-Small Cell Lung Cancer. P.Y. Pan, C-J. Chang, K-K. Liu, Y-C. Chan, Y-T. Chen, J-I. Chao, National Chiao Tung University, Taiwan

LB182 Gliona Cell Proliferation Promoted by AK4 Regulated mTORC1 Pathway Activation. J. Silva, N. Lanning, California State University Los Angeles

LB183 Characterization of a Patient Fibroblast Cell Line with Infantile Neuronal Cereoid Lipofuscinosis Disorder. B. Balouch, Q. Chu-LaGriff, Union College

LB184 Subpopulations of Neurtensin Neurons in the Lateral Hypothalamic Area Respond to Distinct Cues and Contribute to Energy Balance by Discrete Mechanisms and Projections. J.A. Brown, A. Wright, R. Bugeascu, H.L. Woodworth, G. Kurt, G.M. Leinninger, Michigan State University - Dept of Physiology

LB185 Influence of Farnesene on Male Aggression in Rodents: A Behavioral and Mapping Study. A. Ganga, I. Davison, Y. Gao, Valley High School and Boston University

LB186 The Cytoprotective Effect of Chlorogenic Acid Against Oxidative Stress-Induced Cell Damage via the ERK and PI3K/Akt-Mediated NdH2/OH-I Signaling Pathways. M. Jang, G-H. Kim, Dukjsxin Women’s University, Republic of Korea

LB187 Assessment of an Immortalized Rat Dopaminergic Neuronal Cell Line as a Potential Model for Studying Dopamine Transporter Function. G.H. Larson, D.J. Stanislawski, J.D. Foster, University of North Dakota School of Medicine & Health Sciences

LB188 The Neuroinflammatory Role of Fyn-PKC-δ Signaling Pathway in the Mouse Kainate Model of Epileptogenesis. S. Sharma, S. Puttachary, M. Putra, S. Sarkar, A.G. Kanthasamy, Th. Thippeswamy, Iowa State University

LB189 Subpopulations of Dopamine Transporters Show Enrichment in Phosphorylation or Palmitoylation. M.H. Storandt, M.J. Hasd, D.J. Stanislawski, R.A. Vaughan, J.D. Foster, University of North Dakota School of Medicine & Health Sciences

LB190 Antioxidant Activity and Protective Effect on PC12 Against Pathway H2O2 of Epileptiform koreanum. S. You, M. Jang, G-H. Kim, Dukjsxin Women’s University, Republic of Korea

LB191 Maintenance of Antibody Avidity in Alaska Native Adolescents Receiving Quadrivalent Human Papillomavirus (HPV) Vaccine. A.M. Brady, G. Panicker, J.K. Kim, Albert Einstein College of Medicine

LB192 The Role of Glucose-6-Phosphate Dehydrogenase of Inflammasome Activation. D.T. Chiu, W. Yen, Y-H. Wu, Department of Medical Biotechnology and Laboratory Sciences, Chang Gung University, Taiwan, Department of Pediatric Hematology/Oncology and Linkou Chang Gung Memorial Hospital, Taiwan

LB193 NLRP3 Inflammasome Is Critical for Lipopolysaccharide-Induced Depressive-Like Behaviors. E. Lee, S-A. Jeon, I. Hwang, J. Yu, Department of Microbiology and Immunology, Brain Korea 21 PLUS Project for Medical Science, Yonseiu University College of Medicine, Republic of Korea

LB194 Modulation of Inflammasome Signaling by Advanced Glycation End Products (AGEs). S. Son, I. Hwang, J-W. Yu, Yonseiu University College of Medicine, Republic of Korea, Brain Korea 21 PLUS Project for Medical Science, and Republic of Korea

LB195 Pseudomonas aeruginosa Attenuates Inflammasome Activation via Quorum Sensing-Dependent Mechanism. J. Yang, K-M. Lee, S. Park, S-S. Yoon, J-W. Yu, Department of Microbiology and Immunology, Institute for Immunology and Immunological Diseases, Brain Korea 21 PLUS Project for Medical Science, Yonseiu University College of Medicine, Republic of Korea

LB196 Generating a Novel Cell Line with a Codon Optimized LINE1 Element at a Single Locus. B. Russell, M. Morales, C. DeFreece, Xavier University of Louisiana and Tulane University

LATE BREAKING Microbial Systems and Parasitology

LB197 Identification of Amidase Negative Strains of bacillus thuringiensis. S.Z. Fillian, T. Johnson, A. Ejiofor, Tennessee State University

LB198 Elucidating Peptide Phenomone Signaling in Pathogen Conversations to Understand Advantages of Social Cooperation. M.J. Federle, University of Illinois at Chicago

LB199 Direct and Specific Interaction of MIF and Bacterial Endotoxin May Play an Important Role in the Pathogenesis of Sepsis. T. Cho, Saint Louis University School of Medicine

LB200 Epstein-Barr Viral microRNAs Coordinateely Repress Human Transcripts in Inflammatory and Apoptotic Pathways. D. Kolakada, C. Katrak, K. Riley, Rollins College

LB201 Identification and Characterization of Population Heterogeneity of Vibrio cholerae in Vivo. Y.N. Nguyen, L.M. Shull, A. Camilli, Tufts University School of Medicine

LB202 Genotypically Distinct Helicobacter pylori Causes Gastric and Peptic Ulcer Diseases in Kashmir Indian Patients. S. Rehman, A.C. Bharti, B.C. Das, J. Talukder, West Virginia University, University of Delhi North Campus, India and University of Wisconsin-Stout

LB203 Characterizing the Mechanism of Trogocytosis in Entamoeba histolytica. S.E. Feeney, K.S. Rashon, University of California, Davis

LB204 Toxoplasma gondii Reprogram Metabolism of the Host During Infection. I. Gendrina, K. Kim, Albert Einstein College of Medicine

LB205 Spectroscopic Investigation of Novel New Delhi Metallo-β-Lactamase-I Inhibitors. A. Bergstrom, Z. Cheng, C. Miller, A. Chen, P. Thomas, R. Bonomo, W. Fast, S.M. Cohen, R.C. Page, D.L. Tierney, M.W. Crowder, Miami University, University of California, University of Texas, Louis Stokes Cleveland Department of Veterans Affairs Medical Center and Case Western Reserve University

LB206 Spinal Cord Injury and the Gut Microbiome: Mechanisms and Therapies for Bowel Dysfunction. E. Jeffrey, G. O’Connor, S. Dea, D. Dietrich, S. Daumert, University of Miami School of Medicine
ASBMB POSTERS  WEDNESDAY continued

LB207 Detection and Quantification of Probiotic Strains in Clinical Fecal Samples of Healthy Adults by Real-Time PCR.  V. Nagulesapillai, J. Belvis, T. Tompkins, S. Girard, Lallemand Health Solutions, Canada

LB208 EIF5A1 Isoform A Can Modulate the Metabolism in HeLa Cells.  K.D. Pereira, L. Tamborin, L. Meneguelli, L.H. Bomfim, A.R. de Proença, C.F. Melo, R.R. Catharino, L. Silveira, A.D. Luchessi, University of Campinas, Brazil and Sao Paulo State University, Brazil

LB209 Generation of Leishman Pathway Cell Models.  J. Alvarado, California State University, Los Angeles


LB212 Elucidation of juglone synthesis in black walnut.  R.M. McCoy, Y. Ye, J.R. Widhalm, Purdue University

LB213 The Good, the Bad and the Ugly of Nitric Oxide, Peroxynitrite and PeptideNitrosothiol Signaling During Oxygen-Glucose Deprivation in Rat and Arctic Ground Squirrel.  S. Bhowmick, K. Drew, University of Alaska Fairbanks

LB214 SP-A2 Contributes to miRNA-Mediated Sex Differences in Response to Ozone-Induced Oxidative Stress: Pro-Inflammatory, Anti-Apoptotic, and Anti-Oxidant Pathways Are Involved.  N. Thorennoo, G.T. Noutsios, X. Zhang, D.S. Phelps, T.M. Umstead, F. Durrani, J. Floros, Penn State University College of Medicine

LB215 Tales from the crypt: Malic Enzyme I (ME1) Links Metabolism to Intestinal Cancer.  L. Fernandez, A. Al-Dwairi, M. Marij, D. Brown, R.C. M. Simmen, F.A. Simmen, University of Arkansas for Medical Sciences

LB216 Comparison of Postprandial Hypoglycemic Effect of Ecklonia cava Extract in Healthy Subjects Using Three Different Challenge Models.  Y. Kim, H. Lee, Y.S. Ahn, O. Kwon, Ewha Womans University, Republic of Korea

LB217 Oral Supplementation of Soybean and Hop Restored Bone Mass and Bone Turnover in Ovariectomized Rats.  H. Lee, D. Noah, Y. Lim, O. Kwon, Ewha Womans University, Republic of Korea

LB218 Persimmon Tannin Regulates Gene Expression Important for Lipogenesis and Cholesterol Efflux in HepG2 Cells.  E.K. Oh, Y. Ahn, O. Kwon, Ewha Womans University, Republic of Korea

LB219 Ethanol Extract of Philomis tuberosa I Promotes Glucose Uptake in 3T3-L1 Preadipocytes via Insulin Signaling Pathway.  D. Baatar, O. Sukhbaatar, B. Ouyungerel, S. Hwang, Hankyong National University, Republic of Korea, and Mongolian University of Life Sciences, Mongolia

LB220 P311, an Intrinsically Unstructured Protein, in Adipogenesis.  K.R. Badri, K.M. Mupprupu, R.E. Samuel, Hampton University, Morehouse School of Medicine and Sree Vidyakethan Engineering College, India

LB221 Melatonin Improves Insulin Resistance and Hepatic Steatosis Through Attenuation of ER Stress.  J. Heo, Korea University, Republic of Korea

LB222 Cytokine Production by Insulin Resistant Adipocytes.  K.R. Levenberg, T. Laakko-Train, Elon University

LB223 The Optical Spectroscopic Properties of Glycation Induced Changes in Hemoglobins.  V. Sriramoju, R. Dudley, J.A. Secor, S. Ashrafi, R. Alfano, The City College of New York, City University of New York and NvGen Partners

LB224 A Novel Assay for Cardiolipin Quantification in Isolated Mitochondria and Cell Lysates.  V. Bahl, S. Saddar, BioVision

LB225 Identification of Sterolic and Phenolic Catalpa Extractive Components.  G.S. Epstein, University of Wisconsin-Madison and U.S. Department of Agriculture, Forest Products Laboratory

LB226 Yeast Pah1 Phosphatidate Phosphatase Regulates the Expression of Phosphatidylserine Synthase for Membrane Phospholipid Synthesis.  G. Han, G.M. Carman, Rutgers University

LB227 HIF-1a-Mediated Induction of Insig-2 Regulates Cholesterol Metabolism by Accelerating Degradation of HMGR.  S. Hwang, Y. Jo, N. Wolff, J. Brugalaras, R. DeBose-Boyd, University of Texas Southwestern Medical Center

LB228 Dietary Long-Chain Monounsaturated Fatty Acid (LCMUFA) as Functional Ingredient in Fish Oils: A Novel Approach for Cardioprotection.  Z. Yang, S. Gordon, M. Pryor, H. Miyahara, J. Takeo, A.T. Remaley, National Institutes of Health (NIH), Central Research Laboratory and Nippon Suisan Kaisha, Japan

LB229 Targeted LC/MS-Based Quantitative Determination of 8 Endogenous Free Fatty Acids in Human Pleural Effusion Using Surrogate Analytes.  L.Y. Yip, N. Basri, K.L. Lim, G.S. Tan, D.S.W. Tan, T.K.H. Lim, Y.S. Ho, Bioprocessing Technology Institute, Singapore, Singapore General Hospital, Singapore and National Cancer Centre, Singapore

LB230 Identification of Metabolites of Maresin I in Human Neutrophils.  M.A. Gijon, A-C. Almstrand, C.A. Johnson, R.C. Murphy, S. Zarini, University of Denverador and Sahlgrenska University Hospital, Sweden

LB231 Skin of the Catfish (Arius bilineatus, Val.) Contains Lipid Compounds That Regulate NET Formation and NET-Mediated Inflammation.  C. Pace-Asciak, J.M. Al-Hassan, M. Afza, B. Paul, S. Oommen, M. Khan, Y.F. Liu, N. Palaniyar, Research Institute, The Hospital for Sick Children, Canada, Kuwait University, Kuwait and CMS College, India

LATE BREAKING

Lipids and Membranes

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LATE BREAKING

Cell and Organelle Dynamics

LB232 The Role of the Subunits of the Conserved Oligomeric Golgi Complex in Filamentous Growth of the Fungus Aspergillus nidulans.  S. Gremillion, Armstrong State University

LB233 A Novel Yeast-Based Screening System Identifies Signal Motifs That Regulate Membrane Protein Trafficking.  J. Bernstein, Y. Okamoto, S. Shikano, University of Illinois at Chicago

LB234 Type I Interferons Block Extracellular Vesicle-Mediated Cargo Transfer.  M.P. Hantak, E. Qing, T. Gallagher, Loyola University Stritch School of Medicine

LB235 Cellular Proteases Prime Extracellular Vesicles for Intercellular Communication.  E. Qing, M. Hantak, T. Gallagher, Loyola University Stritch School of Medicine

LB236 Regulatory Mechanisms of Sec1/Munc18 Proteins in Intracellular Vesicle Fusion.  H. Yu, Y. Liu, J. Shen, University of Colorado at Boulder


LB238 Comparison of the Structure Between the Wild Type Lamin A/C Protein and the Cardiac Disease Causing Variant D192G.  S. Wall, A. Akman, A. Chow, M. Deng, F. Dumitrascu, M. Jiang, M. McCartney, T. Nguyen, T. Rulkov, N. Sullivan, L. Wang, M. Xiao, H. Nicolas, Ashbury College School, Canada and University of Ottawa, Canada

LB239 Drug Delivery in the Eye.  J. Hosten, S. Penunmutu, E. Lavik, University of Maryland, Baltimore County
LATE BREAKING

Glycans and Glycobiology

LB243 Antidiabetic Activity and Gene Expression Profiling of db Mice Treated with Catharsius mollusus (a Type of Dung Beetle) Glycosaminoglycan. M. Ahn, H. Kim, B. Kim, J. Hwang, National Academy of Agricultural Science, Republic of Korea

LB244 Anti-Cancer Effect and Gene Expression Profiling of Melanoma Induced Mice Treated with Dung Beetle Glycosaminoglycan. M. Y. Ahn, H. Kim, B. Kim, J. S. Hwang, National Academy of Agricultural Science, Republic of Korea

LB245 Cellulose Degradation in Anaerobic Condition by Filament Fungi. B. Mercado-Garcia, University of Puerto Rico, Puerto Rico

LB246 Biological Roles of Oligosaccharides on Recombinant Eel LH and Functions of EelLH Receptors. M. Byambaragchaa, M-H Kang, D. Kim, K-S Min, Hankyong National University, Republic of Korea, Hoseo University, Republic of Korea, National Institute of Fisheries Science (NIFS), Republic of Korea, and Institute of Genetic Engineering, Republic of Korea

LATE BREAKING

ASBMB Education and Professional Development

LB247 Improving the Recruitment, Retention, and Success of Students in STEM Disciplines. D.M. Baker, K.M. Slunt, University of Mary Washington

LB248 Shadow-A-Postdoc Initiative: Evaluation of the Undergraduate Students’ Research Workshop Series at the University of Alabama at Birmingham. O. Adeyotan, G. Jones, L. Schwiebert, University of Alabama at Birmingham

LB249 Simulating a Graduate Student Experience in an Undergraduate Course. A. E. Bednarski, Washington University in St. Louis

LB250 A 3D Intervention Addressing Enzyme-Substrate Interactions Misconceptions. C. Terrell, C. Bongers, University of Minnesota, Rochester

LB251 Development of an Interdisciplinary Undergraduate Research Training Program to Improve Retention and Future Success of Women in STEM. L.A. Nogaj, L. Roberts, S. Depreele, Mount Saint Mary’s University Los Angeles

LB252 Integrate Move-In Day: Mechanisms of HIV DNA Integration. T.A. Windgassen, S. Fahlberg, B. Hanson, K. Klauser, S. Semia, J.L. Keck, University of Wisconsin Madison and Monona Grove High School

LB253 Fix the Wrecks, RecA+. K. Dubiel, A. Liang, L. Sandholm, J.L. Keck, University of Wisconsin Madison and Madison West High School

LB254 Developing 3-D Molecular Models to Highlight the Angiotensin II Type 1 Receptor and Olmesaratin Binding for Medical and Educational Applications. E.F. Schmitt Lavin, G. Merus, V. Ramirez, R. Vohra, Nova Southeastern University

LB255 Industry and Community Engagement in a High School Bioscience Course. A.J. Tabor, R.J. Gray, Northern Arizona University, Cacoonia Community College and CAVIAT


LB258 Kinesin, the Workhorse of the Living Cell. J. Blythe, M. Burns, K. Fuchs, Z. Uttley, Pittsburgh High School


LB262 Neuroglobin’s Protective Role in Ischemic Stroke. J. Fangmann, Greenfield High School


LB268 Structural and Evolutionary Insights from the Reconstructed Ancestral Plant Hydroxynitrile Lyase, HNL1. A. Petersen, L. Bunday, E. Bussman, S. Chadha, J. Ridler, E. Romashkova, Minnetonka High School


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