Thinking about a career transition?

Stop by the ASBMB booth #1316 to get started.

The ASBMB provides resources for every career stage. Whether you are just launching your career or exploring a new direction, ASBMB can help you through the next steps in your professional journey.

For current postings, visit the ASBMB job board for recent postings of academic and industry positions from around the world.

WWW.ASBMB.ORG/CAREERS
2018 ASBMB ANNUAL MEETING PROGRAM
San Diego Convention Center
April 21 – 25

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# Program at-a-glance

## FRIDAY APRIL 20

<table>
<thead>
<tr>
<th>Time</th>
<th>Location</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>5:30 PM – 7:00 PM</td>
<td>Convention Center, 6A Lobby</td>
<td>ASBMB Graduate and Postdoctoral Travel Award Professional Networking Event</td>
</tr>
<tr>
<td></td>
<td></td>
<td>By invitation.</td>
</tr>
<tr>
<td>5:30 PM – 7:30 PM</td>
<td>Marriott Marquis &amp; Marina, Presidio</td>
<td>SEBM Mentor Meet-Up and Career Development Workshop</td>
</tr>
</tbody>
</table>

## SATURDAY APRIL 21

<table>
<thead>
<tr>
<th>Time</th>
<th>Location</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30 AM – 4:30 PM</td>
<td>Convention Center, Room 6D</td>
<td>ASBMB Graduate and Postdoctoral Travel Award Career Development Event</td>
</tr>
<tr>
<td></td>
<td></td>
<td>By invitation.</td>
</tr>
<tr>
<td>11:30 AM – 12:00 PM</td>
<td>Convention Center, Room 6C</td>
<td>ASBMB Annual Meeting Orientation for Undergraduate Students</td>
</tr>
<tr>
<td>11:30 AM – 6:00 PM</td>
<td>Convention Center, Room 6E</td>
<td>ASBMB Judges’ Orientation for the Undergraduate Poster Competition</td>
</tr>
<tr>
<td>1:00 PM – 4:30 PM</td>
<td>Convention Center, Room 6B</td>
<td>ASBMB Undergraduate Student Research Poster Competition</td>
</tr>
<tr>
<td>12:00 PM – 6:00 PM</td>
<td>Convention Center, Hall D, Peer Mentor Pod</td>
<td>Poster/Oral Presentation Practice &amp; Mentoring Session</td>
</tr>
<tr>
<td>12:00 PM – 6:00 PM</td>
<td>Convention Center, Hall D, Career Corner</td>
<td>Career Corner Sessions with Dr. Adams</td>
</tr>
<tr>
<td>12:00 PM – 6:00 PM</td>
<td>Convention Center, Hall D, Career Counseling Room</td>
<td>One-on-One Resume Critique/CV, Career Counseling, Essay Personal Statement Assessment</td>
</tr>
<tr>
<td>4:00 PM – 5:00 PM</td>
<td>Convention Center, Hall D, CRC-3</td>
<td>Networking: A Required Life Skill</td>
</tr>
<tr>
<td>4:45 PM – 5:45 PM</td>
<td>Convention Center, Room 6A</td>
<td>ASBMB Exploring Careers Speed Networking for Undergraduates</td>
</tr>
<tr>
<td>5:00 PM – 5:30 PM</td>
<td>Convention Center, Hall D, CRC-1</td>
<td>Elements of a Credible Presentation</td>
</tr>
<tr>
<td>5:30 PM – 6:00 PM</td>
<td>Convention Center, Hall D, CRC-1</td>
<td>Wrap It Up! How to Summarize Your Research Poster in 5 Minutes or Less</td>
</tr>
<tr>
<td>6:00 PM – 7:00 PM</td>
<td>Convention Center, Ballroom 20</td>
<td>EB 2018 Opening Lecture: Tang Prize Award Harnessing Nature’s Diversity for Gene Editing and Beyond F. Zhang</td>
</tr>
<tr>
<td>7:00 PM – 8:30 PM</td>
<td>Convention Center, Sails Pavilion</td>
<td>EB 2018 Welcome Reception</td>
</tr>
<tr>
<td>7:00 PM – 8:30 PM</td>
<td>Convention Center, Sails Pavilion</td>
<td>EB Science Outreach Activity Poster Session</td>
</tr>
<tr>
<td>7:00 PM – 8:30 PM</td>
<td>Convention Center, Sails Pavilion</td>
<td>EB Scientific Highlights Poster Session</td>
</tr>
</tbody>
</table>
# SUNDAY APRIL 22

<table>
<thead>
<tr>
<th>Time</th>
<th>Location</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:00 AM – 7:45 AM</td>
<td>Convention Center, Room 6B</td>
<td>Wake-Up! It’s Trivia Time</td>
</tr>
<tr>
<td>8:00 AM – 8:15 AM</td>
<td>Convention Center, Room 6B</td>
<td>ASBMB Business Meeting</td>
</tr>
<tr>
<td>8:00 AM – 9:00 AM</td>
<td>Convention Center, Room 6B</td>
<td>ASBMB Opening Lecture: Herbert Tabor Research Award</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nutrient Regulation of Signaling and Transcription G.W. Hart</td>
</tr>
<tr>
<td>9:00 AM – 9:30 AM</td>
<td>Convention Center, Room 6B</td>
<td>FASEB Excellence in Science Award</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nonsense-Mediated mRNA Decay and Human Disease: Genome Guardian and Executor L.E. Maquat</td>
</tr>
<tr>
<td>9:00 AM – 10:00 AM</td>
<td>Convention Center, Hall D, CRC-2</td>
<td>How to Choose Your Ideal Career</td>
</tr>
<tr>
<td>9:00 AM – 10:00 AM</td>
<td>Convention Center, Hall D, CRC-3</td>
<td>Get Up With Something on Your Mind</td>
</tr>
<tr>
<td>9:00 AM – 5:00 PM</td>
<td>Convention Center, Hall D, Peer Mentor Pod</td>
<td>Poster/Oral Presentation Practice &amp; Mentoring Session</td>
</tr>
<tr>
<td>9:00 AM – 5:00 PM</td>
<td>Convention Center, Hall D, Career Corner</td>
<td>Career Corner Sessions with Dr. Adams</td>
</tr>
<tr>
<td>9:00 AM – 5:00 PM</td>
<td>Convention Center, Hall D, Career Counseling Room</td>
<td>One-on-One Resume Critique/CV, Career Counseling, Essay Personal Statement Assessments</td>
</tr>
<tr>
<td>9:30 AM – 11:00 AM</td>
<td>Convention Center, Hall D, CRC-1</td>
<td>Career Building: How to Maximize One’s Participation in a Scientific Conference</td>
</tr>
<tr>
<td>10:00 AM – 10:30 AM</td>
<td>Convention Center, Room 6F</td>
<td>Walter A. Shaw Young Investigator Award in Lipid Research</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Probing the Structure, Dynamics and Regulation of Lipid Signalling</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Enzymes and Their Role in Human Disease J. Burke</td>
</tr>
<tr>
<td>10:00 AM – 11:00 AM</td>
<td>Convention Center, Hall D, CRC-2</td>
<td>Negotiation Strategies for Scientists</td>
</tr>
<tr>
<td>10:00 AM – 12:00 PM</td>
<td>Convention Center, Room 6C</td>
<td>Biochemical Communication between the Microbiome and the Host</td>
</tr>
<tr>
<td>10:00 AM – 12:00 PM</td>
<td>Convention Center, Room 6E</td>
<td>Intrinsically Disordered Proteins and Their Regulation and Function</td>
</tr>
<tr>
<td>10:00 AM – 12:30 PM</td>
<td>Convention Center, Room 6F</td>
<td>Lipid Signaling and Metabolism</td>
</tr>
<tr>
<td>10:00 AM – 12:00 PM</td>
<td>Convention Center, Room 6D</td>
<td>Novel Enzymology</td>
</tr>
<tr>
<td>10:00 AM – 12:00 PM</td>
<td>Convention Center, Room 1AB</td>
<td>RNA Form and Function</td>
</tr>
<tr>
<td>10:00 AM – 12:00 PM</td>
<td>Convention Center, Room 6A</td>
<td>Strategically Building Your CV at Every Career Stage</td>
</tr>
<tr>
<td>10:00 AM – 12:00 PM</td>
<td>Convention Center, Room 14A</td>
<td>Synthetic Biology</td>
</tr>
<tr>
<td>11:00 AM – 12:00 PM</td>
<td>Convention Center, Hall D, CRC-1</td>
<td>Understanding Faculty Search Committees &amp; Finding Job Ads</td>
</tr>
<tr>
<td>Time</td>
<td>Location</td>
<td>Event</td>
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<tr>
<td>11:00 AM – 12:00 PM</td>
<td>Convention Center, Hall D, CRC-2</td>
<td>Making Mistakes When Speaking</td>
</tr>
<tr>
<td>11:00 AM – 12:00 PM</td>
<td>Convention Center, Hall D, CRC-3</td>
<td>Career Opportunities in Science Communications</td>
</tr>
<tr>
<td>12:15 PM – 1:15 PM</td>
<td>Convention Center, Exhibit Hall, across from ASBMB Booth 1316</td>
<td>CREST (Connecting Researchers, Educators and Students) Conversations</td>
</tr>
<tr>
<td>12:15 PM – 2:15 PM</td>
<td>Convention Center, Exhibit Halls A-D</td>
<td>ASBMB Poster Presentations Refer to pages 70–87</td>
</tr>
<tr>
<td>12:30 PM – 1:00 PM</td>
<td>Convention Center, Exhibit Hall, across from ASBMB Booth 1316</td>
<td>ASBMB Meet the Speakers</td>
</tr>
<tr>
<td>12:30 PM – 2:00 PM</td>
<td>Convention Center, Room 6A</td>
<td>ASBMB Advocacy Town Hall Meeting</td>
</tr>
<tr>
<td>1:00 PM – 2:00 PM</td>
<td>Convention Center, Hall D, CRC-1</td>
<td>Job Hunting in Biotech Part I: Finding &amp; Applying for Scientist Positions</td>
</tr>
<tr>
<td>1:00 PM – 2:00 PM</td>
<td>Convention Center, Hall D, CRC-2</td>
<td>Networking With Strangers is Required for Your Future</td>
</tr>
<tr>
<td>1:00 PM – 2:00 PM</td>
<td>Convention Center, Hall D, CRC-3</td>
<td>Creating Effective CV’s, Cover Letters, Research &amp; Teaching Statements</td>
</tr>
<tr>
<td>1:00 PM – 2:30 PM</td>
<td>Convention Center, Room 14A</td>
<td>SEBM Special Topics in Science, Student-Organized Symposium</td>
</tr>
<tr>
<td>1:30 PM – 2:00 PM</td>
<td>Convention Center, Exhibit Hall, across from ASBMB Booth 1316</td>
<td>ASBMB Meet the Speakers</td>
</tr>
<tr>
<td>2:00 PM – 3:00 PM</td>
<td>Convention Center, Hall D, CRC-1</td>
<td>But I Have No Skills! Exploding Myths &amp; Exploring Career Options for PhDs</td>
</tr>
<tr>
<td>2:00 PM – 3:00 PM</td>
<td>Convention Center, Hall D, CRC-2</td>
<td>Career Opportunities in Science Communications</td>
</tr>
<tr>
<td>2:00 PM – 3:00 PM</td>
<td>Convention Center, Hall D, CRC-3</td>
<td>Networking: A Required Life Skill</td>
</tr>
<tr>
<td>2:30 PM – 3:45 PM</td>
<td>Convention Center, Room 6C</td>
<td>ASBMB Award for Exemplary Contributions to Education Promoting Hypothesis-Driven Thinking in the Undergraduate Biochemistry Lab P.A. Craig</td>
</tr>
<tr>
<td>2:30 PM – 3:45 PM</td>
<td>Convention Center, Room 31B</td>
<td>Advanced Biophysical and Biochemical Approaches to Membrane Dynamics (I)</td>
</tr>
<tr>
<td>2:30 PM – 3:45 PM</td>
<td>Convention Center, Room 31A</td>
<td>Advances in Mitochondrial Biochemistry</td>
</tr>
<tr>
<td>2:30 PM – 3:45 PM</td>
<td>Convention Center, Room 30E</td>
<td>Cancer Signaling</td>
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<tr>
<td>2:30 PM – 3:45 PM</td>
<td>Convention Center, Room 30D</td>
<td>Glycopolymer Probes</td>
</tr>
<tr>
<td>2:30 PM – 3:45 PM</td>
<td>Convention Center, Room 31C</td>
<td>Herbert Tabor Young Investigator Award Symposium</td>
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<tr>
<td>2:30 PM – 3:45 PM</td>
<td>Convention Center, Room 30C</td>
<td>Motion is Lotion: New Roles of Motion in Enzyme Function</td>
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<tr>
<td>Time</td>
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<td>Event</td>
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<tr>
<td>2:30 PM – 3:45 PM</td>
<td>Convention Center, Room 30B</td>
<td>Plant Bioactive Natural Products: Discovery, Engineering and Applications</td>
</tr>
<tr>
<td>2:30 PM – 3:45 PM</td>
<td>Convention Center, Room 30A</td>
<td>RNA Recognition and Regulation</td>
</tr>
<tr>
<td>3:00 PM – 4:00 PM</td>
<td>Convention Center, Hall D, CRC-1</td>
<td>Job Hunting in Biotech Part 2: Interviewing for Scientist Positions</td>
</tr>
<tr>
<td>3:00 PM – 4:45 PM</td>
<td>Convention Center, Room 14A</td>
<td>Can We Target Aging?</td>
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<tr>
<td>3:30 PM – 4:30 PM</td>
<td>Convention Center, Hall D, CRC-3</td>
<td>Making the Grade: Job Talk/Chalk Talk</td>
</tr>
<tr>
<td>4:00 PM – 5:00 PM</td>
<td>Convention Center, Hall D, CRC-2</td>
<td>Nailing the Job Talk &amp; Interview Prep</td>
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<tr>
<td>4:00 PM – 5:15 PM</td>
<td>Convention Center, Room 31B</td>
<td>Advanced Biophysical and Biochemical Approaches to Membrane Dynamics (II)</td>
</tr>
<tr>
<td>4:00 PM – 5:15 PM</td>
<td>Convention Center, Room 31A</td>
<td>Chemical Biology</td>
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<tr>
<td>4:00 PM – 5:15 PM</td>
<td>Convention Center, Room 31C</td>
<td>Emerging Perspectives on Metabolism and Cell Fate Decisions</td>
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<tr>
<td>4:00 PM – 5:15 PM</td>
<td>Convention Center, Room 30D</td>
<td>Molecular Chaperones and Protease Systems</td>
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<tr>
<td>4:00 PM – 5:15 PM</td>
<td>Convention Center, Room 30C</td>
<td>Physiological Regulation by Cell Signaling</td>
</tr>
<tr>
<td>4:00 PM – 5:15 PM</td>
<td>Convention Center, Room 30B</td>
<td>Reading, Writing and Erasing Epigenetic Marks</td>
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<tr>
<td>4:00 PM – 5:15 PM</td>
<td>Convention Center, Room 30A</td>
<td>Structure and Mechanisms Regulating RNA Function</td>
</tr>
<tr>
<td>4:15 PM – 5:15 PM</td>
<td>Convention Center, Room 31C</td>
<td>BMB Professional Development: Advancing Successful Careers</td>
</tr>
<tr>
<td>5:30 PM – 6:15 PM</td>
<td>Convention Center, Room 31C</td>
<td>Organizing a Successful ASBMB Student Chapter</td>
</tr>
<tr>
<td>5:30 PM – 7:00 PM</td>
<td>Convention Center, Room 31B</td>
<td>The Art of the 3D Cell Culture, from Organoids to Organs-on-a-Chip</td>
</tr>
<tr>
<td>5:30 PM – 7:00 PM</td>
<td>Convention Center, Room 31A</td>
<td>Cryo-EM and Cryo-ET: Step-by-Step</td>
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<tr>
<td>5:30 PM – 7:00 PM</td>
<td>Convention Center, Room 6B</td>
<td>Storytelling and the Art of Giving a Good Presentation</td>
</tr>
<tr>
<td>5:30 PM – 7:00 PM</td>
<td>Convention Center, Room 6A</td>
<td>Strategically Building Your CV at Every Career Stage</td>
</tr>
<tr>
<td>5:30 PM – 7:00 PM</td>
<td>Convention Center, Room 30E</td>
<td>Your Data, Magnified: Success in Scientific Publishing</td>
</tr>
<tr>
<td>7:00 PM – 8:30 PM</td>
<td>Convention Center, Foyer outside Rooms 30–31</td>
<td>ASBMB Annual Meeting Networking Reception</td>
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</table>
### MONDAY APRIL 23

<table>
<thead>
<tr>
<th>Time</th>
<th>Location</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:00 AM – 7:45 AM</td>
<td>Convention Center, Room 6B</td>
<td>Wake-Up! It’s Trivia Time</td>
</tr>
<tr>
<td>8:00 AM – 8:30 AM</td>
<td>Convention Center, Room 6B</td>
<td>Avanti Award in Lipids</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>Phospholipid Regulation of Inflammatory Processes and Viral Infection</em> D.R. Voelker</td>
</tr>
<tr>
<td>8:30 AM – 9:00 AM</td>
<td>Convention Center, Room 6B</td>
<td>Mildred Cohn Award in Biological Chemistry</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>The Origin Recognition Complex: Where It All Begins</em> L. Joshua-Tor</td>
</tr>
<tr>
<td>9:00 AM – 9:30 AM</td>
<td>Convention Center, Room 6B</td>
<td>Earl and Thressa Stadtman Young Scholar Award</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>Visualizing Translation by Ensemble Cryo-Em</em> A. Korostelev</td>
</tr>
<tr>
<td>9:00 AM – 10:00 AM</td>
<td>Convention Center, Hall D, CRC-1</td>
<td>Developing Your Core Message Statement/ “Elevator Speech”</td>
</tr>
<tr>
<td>9:00 AM – 10:00 AM</td>
<td>Convention Center, Hall D, CRC-2</td>
<td>Goal Setting, Prioritizing, Time Management</td>
</tr>
<tr>
<td>9:00 AM – 10:00 AM</td>
<td>Convention Center, Hall D, CRC-3</td>
<td>Networking and Getting Your Foot in the Door</td>
</tr>
<tr>
<td>9:00 AM – 10:30 AM</td>
<td>Convention Center, Room 31A</td>
<td>NIH F Awards: Navigating NIH Programs to Advance Your Career</td>
</tr>
<tr>
<td>9:00 AM – 5:30 PM</td>
<td>Convention Center, Hall D, Peer Mentor Pod</td>
<td>Poster/Oral Presentation Practice &amp; Mentoring Sessions</td>
</tr>
<tr>
<td>9:00 AM – 5:30 PM</td>
<td>Convention Center, Hall D, Career Corner</td>
<td>Career Corner Sessions with Dr. Adams</td>
</tr>
<tr>
<td>9:00 AM – 5:30 PM</td>
<td>Convention Center, Hall D, Career Counseling Room</td>
<td>One-on-One Resume Critique/CV, Career Counseling, Essay Personal Statement Assessments</td>
</tr>
<tr>
<td>10:00 AM – 11:00 AM</td>
<td>Convention Center, Hall D, CRC-3</td>
<td>Career Opportunities in Science Communications</td>
</tr>
<tr>
<td>10:00 AM – 12:00 PM</td>
<td>Convention Center, Room 6C</td>
<td>Adapting Proteostasis to Ameliorate Neurodegenerative Diseases</td>
</tr>
<tr>
<td>10:00 AM – 12:00 PM</td>
<td>Convention Center, Room 6A</td>
<td>Communicating Scientific Ideas to Novice Audiences</td>
</tr>
<tr>
<td>10:00 AM – 12:00 PM</td>
<td>Convention Center, Room 6D</td>
<td>Glycobiology and Functional Glycomics</td>
</tr>
<tr>
<td>10:00 AM – 12:05 PM</td>
<td>Convention Center, Room 6F</td>
<td>New Insights into the Links between Metabolism and Disease</td>
</tr>
<tr>
<td>10:00 AM – 12:00 PM</td>
<td>Convention Center, Room 14A</td>
<td>Regenerative Medicine</td>
</tr>
<tr>
<td>10:00 AM – 12:00 PM</td>
<td>Convention Center, Room 1AB</td>
<td>RNA in Human Disease</td>
</tr>
<tr>
<td>10:00 AM – 12:00 PM</td>
<td>Convention Center, Room 6E</td>
<td>Systems Biology and Proteomics</td>
</tr>
<tr>
<td>10:30 AM – 11:30 AM</td>
<td>Convention Center, Hall D, CRC-1</td>
<td>Job Hunting in Biotech Part 3: Compensation Negotiation for Scientist Positions</td>
</tr>
<tr>
<td>10:30 AM – 11:30 AM</td>
<td>Convention Center, Hall D, CRC-2</td>
<td>Identifying Your Options using MyIPD + LinkedIn</td>
</tr>
</tbody>
</table>

www.asbmb.org/meeting2018
<table>
<thead>
<tr>
<th>Time</th>
<th>Location</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:30 AM – 1:00 PM</td>
<td>Convention Center, Hall D, CRC-3</td>
<td>NIH K Awards: Navigating NIH Programs to Advance Your Career</td>
</tr>
<tr>
<td>12:00 PM – 1:00 PM</td>
<td>Convention Center, Hall D, CRC-2</td>
<td>Constructing Your Elevator Pitch Workshop (presented by ASBMB Outreach Committee)</td>
</tr>
<tr>
<td>12:15 PM – 2:15 PM</td>
<td>Convention Center, Exhibit Halls A-D</td>
<td>ASBMB Poster Presentations Refer to pages 88 – 1105</td>
</tr>
<tr>
<td>12:30 PM – 1:00 PM</td>
<td>Convention Center, Exhibit Hall, across from ASBMB Booth 1316</td>
<td>ASBMB Meet the Speakers</td>
</tr>
<tr>
<td>1:00 PM – 2:00 PM</td>
<td>Convention Center, Hall D, CRC-1</td>
<td>Job Hunting in Biotech Part 1: Finding &amp; Applying for Scientist Positions</td>
</tr>
<tr>
<td>1:00 PM – 2:00 PM</td>
<td>Convention Center, Hall D, CRC-2</td>
<td>Building Your Job Search Skills: Networking &amp; Information Interviews</td>
</tr>
<tr>
<td>1:00 PM – 2:00 PM</td>
<td>Convention Center, Hall D, CRC-3</td>
<td>Successful Behaviors for Winning An Interview</td>
</tr>
<tr>
<td>1:30 PM – 2:00 PM</td>
<td>Convention Center, Exhibit Hall, across from ASBMB Booth 1316</td>
<td>ASBMB Meet the Speakers</td>
</tr>
<tr>
<td>2:00 PM – 3:00 PM</td>
<td>Convention Center, Hall D, CRC-1</td>
<td>Making The Case for Graduate School</td>
</tr>
<tr>
<td>2:30 PM – 3:30 PM</td>
<td>Convention Center, Exhibit Hall, across from ASBMB Booth 1316</td>
<td>ASBMB Accreditation Program Q&amp;A</td>
</tr>
<tr>
<td>2:30 PM – 3:30 PM</td>
<td>Convention Center, Exhibit Hall, across from ASBMB Booth 1316</td>
<td>ASBMB Communication Training Program Q&amp;A</td>
</tr>
<tr>
<td>2:30 PM – 3:30 PM</td>
<td>Convention Center, Hall D, CRC-1</td>
<td>Job Search in Academia &amp; Industry</td>
</tr>
<tr>
<td>2:30 PM – 3:30 PM</td>
<td>Convention Center, Hall D, CRC-3</td>
<td>Career Opportunities in Science Communications</td>
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<tr>
<td>2:30 PM – 3:45 PM</td>
<td>Convention Center, Room 30A</td>
<td>Chromatin Regulation of Gene Expression</td>
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<tr>
<td>2:30 PM – 3:45 PM</td>
<td>Convention Center, Room 30B</td>
<td>Emerging Antibiotics from Nature</td>
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<tr>
<td>2:30 PM – 3:45 PM</td>
<td>Convention Center, Room 30C</td>
<td>New Frontiers in Substrate Metabolism</td>
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<tr>
<td>2:30 PM – 3:45 PM</td>
<td>Convention Center, Room 30D</td>
<td>Plant Metabolism and Photosynthesis</td>
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<tr>
<td>2:30 PM – 3:45 PM</td>
<td>Convention Center, Room 30E</td>
<td>Protein Folding: The Good, the Bad and the Disordered</td>
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<tr>
<td>2:30 PM – 3:45 PM</td>
<td>Convention Center, Room 31A</td>
<td>Proteomics and Lipidomics: Methods and Applications for Human Disease</td>
</tr>
<tr>
<td>2:30 PM – 3:45 PM</td>
<td>Convention Center, Room 31C</td>
<td>Redox Enzymes</td>
</tr>
</tbody>
</table>
### Program at-a-glance continued

#### MONDAY

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<thead>
<tr>
<th>Time</th>
<th>Location</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>2:30 PM – 5:15 PM</td>
<td>Convention Center, Room 31B</td>
<td>Alice and C.C. Wang Award in Molecular Parasitology Symposium</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Using in vitro evolution and chemogenomics to explore the malaria</td>
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<td>parasite drug-able genome</td>
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<td>E. Winzeler</td>
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<tr>
<td>3:00 PM – 5:00 PM</td>
<td>Convention Center, Room 14A</td>
<td>Environmental Health, Biomarkers and Precision Medicine</td>
</tr>
<tr>
<td>3:30 PM – 4:30 PM</td>
<td>Convention Center, Hall D, CRC-2</td>
<td>Ten Ways to Get Lucky in the Job Search</td>
</tr>
<tr>
<td>4:00 PM – 5:00 PM</td>
<td>Convention Center, Hall D, CRC-1</td>
<td>Job Hunting in Biotech Part 2: Interviewing for Scientist Positions</td>
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<tr>
<td>4:00 PM – 5:00 PM</td>
<td>Convention Center, Hall D, CRC-3</td>
<td>Making the Grade: Job Talk/Chalk Talk</td>
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<tr>
<td>4:00 PM – 5:15 PM</td>
<td>Convention Center, Room 31C</td>
<td>BMB Education: Active Learning</td>
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<tr>
<td>4:00 PM – 5:15 PM</td>
<td>Convention Center, Room 30B</td>
<td>DNA Replication Initiation, Progression and Termination</td>
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<tr>
<td>4:00 PM – 5:15 PM</td>
<td>Convention Center, Room 30C</td>
<td>Glycoimmunity</td>
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<tr>
<td>4:00 PM – 5:15 PM</td>
<td>Convention Center, Room 30D</td>
<td>Lipid and Protein Organization in Membranes</td>
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<tr>
<td>4:00 PM – 5:15 PM</td>
<td>Convention Center, Room 30E</td>
<td>Molecular Tools to Study Cell Signaling</td>
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<td>4:00 PM – 5:15 PM</td>
<td>Convention Center, Room 31A</td>
<td>Obesity, Metabolism and Immune Cells in Cancer</td>
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<td>4:00 PM – 5:15 PM</td>
<td>Convention Center, Room 30A</td>
<td>Strange Microbial Transformations</td>
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<tr>
<td>4:30 PM – 5:30 PM</td>
<td>Convention Center, Hall D, CRC-2</td>
<td>Attitude &amp; Behaviors: How Are You Perceived</td>
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<tr>
<td>5:30 PM – 7:00 PM</td>
<td>Convention Center, Room 6A</td>
<td>Molecular Visualization</td>
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<tr>
<td>5:30 PM – 7:00 PM</td>
<td>Convention Center, Room 31B</td>
<td>Optogenetics and Molecular Sensors: Tools and Applications</td>
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<tr>
<td>5:30 PM – 7:00 PM</td>
<td>Convention Center, Room 31A</td>
<td>Research Support Opportunities at NSF in the BIO-Integrative Organismal</td>
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<td>Systems (IOS) and Molecular and Cellular Biosciences (MCB)</td>
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<tr>
<td>5:30 PM – 7:00 PM</td>
<td>Convention Center, Room 30D</td>
<td>Supported Lipid Membranes and Nanodiscs</td>
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<tr>
<td>5:30 PM – 7:00 PM</td>
<td>Convention Center, Room 6B</td>
<td>Transforming Science Research into Science Outreach</td>
</tr>
<tr>
<td>9:00 PM – 11:00 PM</td>
<td>Hilton Bayfront, Aqua A-C.</td>
<td>Young Experimental Scientists (Y.E.S.) Mixer</td>
</tr>
<tr>
<td>Time</td>
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<tr>
<td>7:00 AM – 7:45 AM</td>
<td>Convention Center, Room 6B</td>
<td>Wake-Up! It’s Trivia Time</td>
</tr>
<tr>
<td>8:00 AM – 8:30 AM</td>
<td>Convention Center, Room 6B</td>
<td>ASBMB-Merck Award&lt;br&gt;Black Spot, Black Death, Black Pearl: The Tales of Bacterial Effectors K. Orth</td>
</tr>
<tr>
<td>8:30 AM – 9:00 AM</td>
<td>Convention Center, Room 6B</td>
<td>Ruth Kirschstein Diversity in Science Award&lt;br&gt;Vision Cycle Proteins: Their Function, Structure and Links to Retinal Disease A. Tsin</td>
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<tr>
<td>9:00 AM – 9:30 AM</td>
<td>Convention Center, Room 6B</td>
<td>DeLano Award for Computational Biosciences&lt;br&gt;Solutions to the Computational Protein Folding Problem C. Sander</td>
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<tr>
<td>9:00 AM – 10:00 AM</td>
<td>Convention Center, Hall D, CRC-1</td>
<td>How Sensations and Perceptions Influence Your Behavior</td>
</tr>
<tr>
<td>9:00 AM – 10:00 AM</td>
<td>Convention Center, Hall D, CRC-2</td>
<td>What You Seek is What You Get</td>
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<tr>
<td>9:00 AM – 10:00 AM</td>
<td>Convention Center, Hall D, CRC-3</td>
<td>Career Opportunities in Science Communications</td>
</tr>
<tr>
<td>9:00 AM – 10:30 AM</td>
<td>Convention Center, Room 31A</td>
<td>NIH K Awards: Navigating NIH Programs to Advance Your Career</td>
</tr>
<tr>
<td>9:00 AM – 4:00 PM</td>
<td>Convention Center, Hall D, Peer Mentor Pod</td>
<td>Poster/Oral Presentation Practice &amp; Mentoring Sessions</td>
</tr>
<tr>
<td>9:00 AM – 4:00 PM</td>
<td>Convention Center, Hall D, Career Corner</td>
<td>Career Corner Sessions with Dr. Adams</td>
</tr>
<tr>
<td>9:00 AM – 4:00 PM</td>
<td>Convention Center, Hall D, Career Counseling Room</td>
<td>One-on-One Resume Critique/CV, Career Counseling, Essay Personal Statement Assessments</td>
</tr>
<tr>
<td>10:00 AM – 12:00 PM</td>
<td>Convention Center, Room 6E</td>
<td>Advances in Single Cell Omics</td>
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<tr>
<td>10:00 AM – 12:00 PM</td>
<td>Convention Center, Room 6F</td>
<td>Biochemistry of Autophagy and Organelle Trafficking</td>
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<tr>
<td>10:00 AM – 12:00 PM</td>
<td>Convention Center, Room 6C</td>
<td>Plants Do It All</td>
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<tr>
<td>10:00 AM – 12:00 PM</td>
<td>Convention Center, Room 1AB</td>
<td>RNA-mediated Epigenetics</td>
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<tr>
<td>10:00 AM – 12:00 PM</td>
<td>Convention Center, Room 6D</td>
<td>Signal Transduction, Pathogenesis and Disease</td>
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<tr>
<td>10:00 AM – 12:00 PM</td>
<td>Convention Center, Room 14A</td>
<td>Structural Biology</td>
</tr>
<tr>
<td>10:30 AM – 11:30 AM</td>
<td>Convention Center, Hall D, CRC-1</td>
<td>Job Hunting in Biotech Part 3: Compensation Negotiation for Scientist Position</td>
</tr>
<tr>
<td>10:30 AM – 11:30 AM</td>
<td>Convention Center, Hall D, CRC-2</td>
<td>But I Have No Skills! Exploding Myths &amp; Exploring Career Options for PhDs</td>
</tr>
<tr>
<td>10:30 AM – 11:30 AM</td>
<td>Convention Center, Hall D, CRC-3</td>
<td>Translating Your CV into an Effective Resume + LinkedIn Profile</td>
</tr>
<tr>
<td>12:00 PM – 1:30 PM</td>
<td>Convention Center, Hall D, CRC-2</td>
<td>NIH F Awards: Navigating NIH Programs to Advance Your Career</td>
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<tr>
<td>Time</td>
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<tr>
<td>12:15 PM – 2:15 PM</td>
<td>Convention Center, Exhibit Halls A-D</td>
<td>ASBMB Poster Presentations</td>
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<td></td>
<td></td>
<td>Refer to pages 106 – 123</td>
</tr>
<tr>
<td>12:30 PM – 1:00 PM</td>
<td>Convention Center, Exhibit Hall, across from ASBMB Booth 1316</td>
<td>ASBMB Meet the Speakers</td>
</tr>
<tr>
<td>1:00 PM – 2:00 PM</td>
<td>Convention Center, Hall D, CRC-1</td>
<td>How to Choose Your Ideal Career</td>
</tr>
<tr>
<td>1:00 PM – 2:00 PM</td>
<td>Convention Center, Hall D, CRC-3</td>
<td>Navigating Doctoral Work Protocols/Milestones/Requirements</td>
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<tr>
<td>1:30 PM – 2:00 PM</td>
<td>Convention Center, Exhibit Hall, across from ASBMB Booth 1316</td>
<td>ASBMB Meet the Speakers</td>
</tr>
<tr>
<td>2:00 PM – 3:00 PM</td>
<td>Convention Center, Hall D, CRC-2</td>
<td>Next Gen PhDs and Careers</td>
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<tr>
<td>2:30 PM – 3:30 PM</td>
<td>Convention Center, Hall D, CRC-3</td>
<td>Career Opportunities in Science Communications</td>
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<tr>
<td>2:30 PM – 3:45 PM</td>
<td>Convention Center, Room 30A</td>
<td>DNA Damage and Repair</td>
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<tr>
<td>2:30 PM – 3:45 PM</td>
<td>Convention Center, Room 30B</td>
<td>Mechanisms of G Protein Signaling</td>
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<tr>
<td>2:30 PM – 3:45 PM</td>
<td>Convention Center, Room 30D</td>
<td>Membrane Lipid Biochemistry</td>
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<tr>
<td>2:30 PM – 3:45 PM</td>
<td>Convention Center, Room 30C</td>
<td>Metabolic Reprogramming</td>
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<tr>
<td>2:30 PM – 3:45 PM</td>
<td>Convention Center, Room 30E</td>
<td>Metals in Biology</td>
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<tr>
<td>2:30 PM – 3:45 PM</td>
<td>Convention Center, Room 31A</td>
<td>Protein Folding: Every Which Way but Loose</td>
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<tr>
<td>2:30 PM – 3:45 PM</td>
<td>Convention Center, Room 31B</td>
<td>Structure and Mechanism in Natural Product Biosynthesis Enzymes</td>
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<tr>
<td>2:30 PM – 3:45 PM</td>
<td>Convention Center, Room 31C</td>
<td>Tools for Exploring Glycobiology</td>
</tr>
<tr>
<td>3:00 PM – 4:00 PM</td>
<td>Convention Center, Hall D, CRC-1</td>
<td>Global Interview Skills: A Practice Workshop for International Candidates</td>
</tr>
<tr>
<td>3:00 PM – 4:00 PM</td>
<td>Convention Center, Hall D, CRC-2</td>
<td>The Strategic Postdoc: How to Find &amp; Leverage Your Postdoc Experience</td>
</tr>
<tr>
<td>3:00 PM – 5:00 PM</td>
<td>Convention Center, Room 14A</td>
<td>Novel Antibiotics &amp; Alternatives</td>
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<tr>
<td>4:00 PM – 5:15 PM</td>
<td>Convention Center, Room 31C</td>
<td>Cell Stress, Autophagy and Mitophagy</td>
</tr>
<tr>
<td>4:00 PM – 5:15 PM</td>
<td>Convention Center, Room 31B</td>
<td>Chromatin, Replication and Repair</td>
</tr>
<tr>
<td>4:00 PM – 5:15 PM</td>
<td>Convention Center, Room 31A</td>
<td>Engineering Biology</td>
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### TUESDAY

<table>
<thead>
<tr>
<th>Time</th>
<th>Location</th>
<th>Event</th>
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<tbody>
<tr>
<td>4:00 PM – 5:15 PM</td>
<td>Convention Center, Room 30E</td>
<td>High-throughput Methods for Connecting Transcriptomes, Proteomes, and Secretomes</td>
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<tr>
<td>4:00 PM – 5:15 PM</td>
<td>Convention Center, Room 30D</td>
<td>Molecular Basis of Signaling</td>
</tr>
<tr>
<td>4:00 PM – 5:15 PM</td>
<td>Convention Center, Room 30C</td>
<td>Nutrition, Genetics and Metabolism</td>
</tr>
<tr>
<td>4:00 PM – 5:15 PM</td>
<td>Convention Center, Room 30B</td>
<td>Ribosomes and Translational Regulation</td>
</tr>
<tr>
<td>5:30 PM – 7:30 PM</td>
<td>Convention Center, Room 6A</td>
<td>ASBMB Women Scientists Mentoring and Networking Event</td>
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</table>

### WEDNESDAY APRIL 25

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<thead>
<tr>
<th>Time</th>
<th>Location</th>
<th>Event</th>
</tr>
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<tbody>
<tr>
<td>7:00 AM – 7:45 AM</td>
<td>Convention Center, Room 6C</td>
<td>Wake-Up! It’s The Last Day for Trivia Time</td>
</tr>
<tr>
<td>8:00 AM – 8:30 AM</td>
<td>Convention Center, Room 6C</td>
<td>Bert and Natalie Vallee Award in BioMedical Science How Telomeres Solve the Chromosome End-Protection Problem T. de Lange</td>
</tr>
<tr>
<td>8:30 AM – 9:00 AM</td>
<td>Convention Center, Room 6C</td>
<td>William C. Rose Award What Can Protein Methylation Tell Us About Histones, Ribosomes, Translation Factors and the Biology of Cancer and Aging? S. G. Clarke</td>
</tr>
<tr>
<td>9:00 AM – 12:00 PM</td>
<td>Convention Center, Sails Pavilion</td>
<td>One-on-One Resume Critique/CV, Career Counseling, Essay Personal Statement Assessments</td>
</tr>
<tr>
<td>9:30 AM – 11:30 AM</td>
<td>Convention Center, Room 6D</td>
<td>Biochemical Basis for Epigenetics and Chromatin Remodeling</td>
</tr>
<tr>
<td>9:30 AM – 11:30 AM</td>
<td>Convention Center, Room 1A</td>
<td>Enzyme Dynamics in Catalysis, Spectroscopy and Theory</td>
</tr>
<tr>
<td>9:30 AM – 11:30 AM</td>
<td>Convention Center, Room 6C</td>
<td>Metabolomics and Lipidomics</td>
</tr>
<tr>
<td>9:30 AM – 11:30 AM</td>
<td>Convention Center, Room 1B</td>
<td>Metals in Biology</td>
</tr>
<tr>
<td>12:00 PM – 12:30 PM</td>
<td>Convention Center, Sails Pavilion</td>
<td>ASBMB Meet the Speakers</td>
</tr>
<tr>
<td>12:15 PM – 2:15 PM</td>
<td>Convention Center, Sails Pavilion</td>
<td>ASBMB Late-breaking Poster Presentations Refer to pages 124–131</td>
</tr>
</tbody>
</table>

**WAKE-UP! It's Trivia Time**

Calling all trivia junkies! Join your colleagues for a daily dose of trivia, music, fun & prizes!
FRIDAY
APRIL 20

1. **ASBMB Graduate and Postdoctoral Travel Award Professional Networking Event**
   
   **SOCIETY EVENTS**
   
   5:30 PM – 7:00 PM  
   SAN DIEGO CONVENTION CENTER, 6A LOBBY
   
   CHAIRS: C. Heinen, T. O’Connell
   
   *Invitation only.* Graduate and postdoctoral travel awardees meet for a kick-off reception and networking activity geared to practice networking skills and engage with Saturday’s career program presenters.

2. **SEBM Mentor Meet-Up and Career Development Workshop**
   
   **SEBM EVENTS**
   
   5:30 PM – 7:30 PM  
   SAN DIEGO MARRIOTT MARQUIS & MARINA, PRESIDIO
   
   CHAIR: M. D’Ecclesis
   
   Guest Society: Society for Experimental Biology and Medicine
27 **ASBMB Graduate Student and Postdoctoral Fellow Career Development Event**

SOCIETY EVENTS

8:30 AM – 4:30 PM  SAN DIEGO CONVENTION CENTER, ROOM 6D

CHAIRS: C. Heinen, T. O’Connell

8:30 a.m. begins required check-in in the lobby area outside of room 6A. Invitation only.

Required participation for all Graduate and Postdoctoral Travel Award recipients.

Start the meeting with an exploration of careers, opportunities to network and build new skills, all to help advance your short and long-term career goals.

28 **ASBMB Annual Meeting Orientation for Undergraduate Students**

SOCIETY EVENTS

11:30 AM – 12:00 PM  SAN DIEGO CONVENTION CENTER, ROOM 6C

CHAIR: J. Provost

Feeling overwhelmed by all the options? Not sure what sessions to attend? This meeting orientation will help you craft your personal game plan to get the most out of your national meeting experience.

Orientation open to all ASBMB member and biochemistry registrants.

Attendance required for all ASBMB undergraduate travel award winners.

29 **ASBMB Judges’ Orientation for the Undergraduate Poster Competition**

AWARD COMPETITION

11:30 AM – 6:00 PM  SAN DIEGO CONVENTION CENTER, ROOM 6E

CHAIRS: K. Cornely, K. Dickson, P. Ortiz

Volunteer judges (Undergraduate faculty and PI’s) should report to Room 6E for this orientation/training session.

Drop-in’s welcome (Faculty and PI’s only) and must check-in with organizers during this orientation session.

30 **ASBMB Undergraduate Student Research Poster Competition**

AWARD COMPETITION

1:00 PM – 4:30 PM  SAN DIEGO CONVENTION CENTER, ROOM 6B

CHAIRS: K. Cornely, K. Dickson, P. Ortiz

Advance competitor registration required.

Board assignments distributed during event check-in beginning at 12:00 p.m. Posters must remain on display for the entire event.

Best Poster winners announced on Sunday, April 22, at 2:30 p.m. during the ASBMB Award for Exemplary Contributions to Education Lecture.
3 **Poster/Oral Presentation Practice & Mentoring Session**  
**WORKSHOP**  
12:00 PM – 6:00 PM  
SAN DIEGO CONVENTION CENTER, HALL D, PEER MENTOR POD  
FASEB Diversity Resources Program will sponsor Presentation Practice & Mentoring Sessions beginning Saturday, April 21, to provide FASEB DREAM poster/oral presentation travel award recipients and other interested EB2018 student/postdoc attendees with an opportunity to practice their presentations and obtain feedback from designated Workshop Mentors/Coaches. If you would like to participate in the poster/oral presentation & mentoring sessions, sign-up by using the following link, www.experimentalbiology.org beginning Sunday, April 1.

4 **Career Corner Sessions with Dr. Adams**  
**WORKSHOP**  
12:00 PM – 6:00 PM  
SAN DIEGO CONVENTION CENTER, HALL D, CAREER CORNER  
Drop in for one-on-one or group sessions for career counseling/career planning sessions with Dr. Howard G. Adams in between his presentations in the EB2018 Career Center. Dr. Adams will be available in the “Career Corner” in the EB2018 Career Center located in Hall D beginning on Saturday, April 21.

5 **One-on-One Resume Critique/CV, Career Counseling, Essay Personal Statement Assessment**  
**WORKSHOP**  
12:00 PM – 6:00 PM  
SAN DIEGO CONVENTION CENTER, HALL D, CAREER COUNSELING ROOM  
Sign-up for one-on-one sessions for CV/resume critiques, career counseling, and essay/personal statement assessments will begin on Saturday, April 21. If you’re interested in a one-on-one, advance sign up will start on Sunday, April 1. Click on www.experimentalbiology.org to schedule your session.

6 **Networking: A Required Life Skill**  
**WORKSHOP**  
4:00 PM – 5:00 PM  
SAN DIEGO CONVENTION CENTER, HALL D, CRC-3  
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.  
During the session, Dr. Howard Adams will cover the following key topics: 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.  
SPEAKER: H. Adams, H.G. Adams & Assoc., Norfolk, VA

31 **ASBMB Exploring Careers Speed Networking for Undergraduates**  
**WORKSHOP**  
4:45 PM – 5:45 PM  
SAN DIEGO CONVENTION CENTER, ROOM 6A  
Scientists from a variety of career fields will meet with students and share advice about their career paths. All undergraduate student, ASBMB members and biochemistry registrants are welcome and encouraged to attend.
7 **Elements of a Credible Presentation**  
**WORKSHOP**  
5:00 PM – 5:30 PM  
SAN DIEGO CONVENTION CENTER, HALL D, CRC-I  

8 **Wrap It Up! How to Summarize Your Research Poster in 5 Minutes or Less**  
**WORKSHOP**  
5:30 PM – 6:00 PM  
SAN DIEGO CONVENTION CENTER, HALL D, CRC-I  
This presentation serves to instruct researchers, primarily trainees, on how to effectively summarize their research in five minutes or less. The information presented mainly focuses on poster presentations but can also be applied to other areas such as informational interviews. Emphasis is placed on key points such as knowing the target audience, knowledge of the research/results, and the ability to convey a clear, concise and accurate message. One highlight of this presentation is the incorporation of technology and how to use it to further enhance and disseminate the information.  
SPEAKER: S-G. Scott, American Gastroenterological Assn.

10 **EB 2018 Tang Prize Award Lecture**  
**LECTURE**  
6:00 PM – 7:00 PM  
SAN DIEGO CONVENTION CENTER, BALLROOM 20  
Harnessing Nature’s Diversity for Gene Editing and Beyond  
SPEAKER: Feng Zhang, Broad Institute of MIT and Harvard, Cambridge, MA 02142, USA, McGovern Institute for Brain Research, Department of Brain and Cognitive Sciences; Department of Biological Engineering, Massachusetts Institute of Technology, Cambridge, MA 02139, USA  
Precision genome editing, the ability to alter specific DNA sequences, is a powerful tool for understanding the molecular circuitry underlying cellular processes. Over the past several years, we and others have harnessed microbial CRISPR-Cas systems for use as platforms for a range of genome manipulations, including single and multiplex gene knockout, gene activation, and large-scale screening applications. Recently, we discovered and characterized several novel CRISPR systems that target RNA, including the CRISPR-Cas13 family. We recently reported that Cas13 can be reprogrammed using a single RNA guide to cleave target mRNAs in vivo and that a dead variant of Cas13 (dCas13), created through mutation of the RNase domain, retains target specificity and binding activity. dCas13 provides a platform for a range of RNA-modulation applications, including transcript imaging and RNA editing. Cas13 also exhibits so-called “collateral” activity in vitro, which we capitalized on to create SHERLOCK, a highly sensitive and specific CRISPR diagnostic platform. We are continuing to explore microbial diversity to find new enzymes and systems that can be adapted for use as molecular biology tools and novel therapeutics.

11 **EB 2018 Welcome Reception**  
**SOCIETY EVENTS**  
7:00 PM – 8:30 PM  
SAN DIEGO CONVENTION CENTER, SAILS PAVILION  
Join fellow attendees for our second, inter-disciplinary meet and mingle. Appreciate the power and energy of the EB Meeting as all career levels come together for fun and networking.  
*Light refreshments will be served. Member-attendees receive one complimentary drink ticket when they sign up for the event during EB Meeting registration. Cash bar also available.*
EB Science Outreach Activity Poster Session

**POSTER**

7:00 PM – 8:30 PM SAN DIEGO CONVENTION CENTER, SAILS PAVILION

During the EB Welcome Reception, science outreach programs from around the country will have their activities on display and are certain to spark interest, ideas, networks and great conversation.

*Authors will be at their boards from 7:00–8:00 PM*

7:00 OA1 12.1 #DoSomething! Raising awareness about antibiotic resistance the SWI way. A. M. Barral, E. Kurt, National University and Small World Initiative

OA2 12.2 2nd Grade Students Have PhUn Learning About Thermoregulation. P.A. Halpin, University of New Hampshire at Manchester

OA3 12.3 A Successful STEM Outreach Program at Marshall University. T.J. Whitlow, M. Wilson, T. Cartwright, R. Zuberbuehler, Marshall University


OA5 12.5 Addressing Health Disparities in Los Angeles County via a Medical Outreach Program. A. Jalali, B. Varamini, Biola University

OA6 12.6 Anatomy Explorers: A Pilot Science Outreach Exchange between Bangalore and London. L. Wilson, C. Pym, C. Deshpande, T. Thomas, R. Wingate, King’s College London, United Kingdom


OA9 12.9 Art of Science Communication — Engaging Any and All Audiences. H. Alexander, Public Outreach Committee of ASBMB

OA10 12.10 ArtLab; Exploring the intersection of art and science. K.H. Oliver, Vanderbilt University Medical Center


OA12 12.12 Bringing Rural Areas Interactive Neuroscience: The BRAIN Initiative at the University of Vermont. R. St. Clair, University of Vermont

OA13 12.13 Building and Sustaining QCC-MSEIP Outreach Activities to Ensure Underrepresented STEM Student Engagement. N. Gadura, Queensborough Community College

OA14 12.14 Community of Practice as a Model for Science Education Outreach. E. Li, M. Southwell, B. Forster, K. Sketselaar, Saint Joseph’s University

OA15 12.15 Creating Connections in our Community. G.G. Dachelor, R. Knier, University of Wisconsin-Stout

OA16 12.16 Determination Of Effective Dose Fifty (ED50) Of Scorpion Antivenom Against Scorpion Envenomation Using The Newly Developed Formula. S. Alhaji Saganuwan, University of Agriculture Makurdi, Nigeria

OA17 12.17 Development of a Graduate Minor in Communicating Science at Indiana University. J. Organ, M. Wininger, K. Hoffmann-Longtin, Indiana University School of Medicine and Indiana University–Purdue University Indianapolis

OA18 12.18 Discovery Box Loan Program Provides STEM Engagement Materials to Regional Schools. R.P. Rylaarsdam, K. Tumminello, Benedictine University


OA20 12.20 Evaluating Flipped Teaching in STEM: A Rubric. R. Rockhold, M. Barnard, C. Compretta, E. Dehon, M. Elasri, E. Meyer, A. Notebaert, S. Stray, D. Sullivan, J. Taylor, University of Mississippi Medical Center, University of Mississippi and University of Southern Mississippi

OA21 12.21 Evidence-based resources for evolutionary medicine education. S. Brownell, D. Grunspan, R. Nesse, Arizona State University

OA22 12.22 Falcon Biomanufacturing: Teaching molecular biology, protein expression, and entrepreneurship in a rural high school. M. Koci, R. Ali, B. Boilier, NC State University and Bertie Early College High School
Get Involved with the ASBMB Public Outreach Committee.  D.R. Snowflack, ASBMB

Having “PhUn” Learning About Physiology in Nebraska.  N.M. Sharma, A. Schiller, E.I. Boesen, University of Nebraska Medical Center

Health and Anatomy in the Wiregrass: a unique workshop for high school students in the Southeast region combining physiology, anatomy, scientific research, and creative thought.  A.A. Vasauskas, M.N. Buchman, C.L. Richardson, Alabama College of Osteopathic Medicine

How to Change an Outreach Service into a Scholarly Activity? An Important State Infrastructure with Six Cycles of NIH Funding.  P.S. Klinkhachorn, A. Klinkhachorn, West Virginia University and MetroHealth Hospital

Impact of Immersive STEM Summer Camp for Underprivileged Middle Schoolers.  A.E. Martinez, R. Tirgar, A. Ribes-Zamora, G. Villares, University of St. Thomas

Kentucky Chapter of The American Physiological Society’s Involvement in Science Outreach.  W.K. Sumanasekera, R. Cooper, L. Winchester, F. Andrade, S. Tyagi, I. Joshua, Sullivan University College of Pharmacy, University of KY, Western KY University and Western University of Louisville

LEAP into Research: A program to help transfer students get involved in research.  K. Cooper, S. Brownell, Arizona State University

Mapping the Body: Poetry and Anatomical Art—New Student Exhibit Merges Humanities and Sciences in Higher Education Collaboration.  A.N. Dueñas, B. Barker, N. Beer, D. Royer, University of Colorado, Anschutz Medical Campus and University of Colorado Denver

Michigan Physiological Society introduces an undergraduate Physiology Quiz team competition at their annual meeting.  V.S. VanRyn, E.A. Wehrwein, H-M. Cheng, S. Barman, Michigan State University and University of Michigan


Otterbein University ASBMB Student Chapter: Dropping the Science.  H.M. Bailey, E.K. Hughes, D.T. Wei, J.T. Tansey, Otterbein University

Outreach in New York City! The ASBMB Student Chapter at Marymount Manhattan College.  J. Furnari, K. mora, a. aguanno, marymount manhattan college and marymount manhattan college


PhUn week at San Diego: Giving students the hands-on experience in Physiology to inspire the pursuance of college and career pathways in the Biomedical Sciences.  K. Ananthakrishnan, A. Hernandez-Carrettero, O. Molinar-Inglis, University of California San Diego

Physiology Friday with Michigan Tech University: Using Lumber, Woodscrews, and Power Drills to Facilitate Understanding of Human and Animal Movement in Rural High Schools.  S. Elmer, T. Bye, K. Carter, Michigan Technological University


Sample a Taste of Science.  P.K. Bahia, Scientists and Inc.

Science for Adults.  A. Decker, Fleet Science Center

Science Outreach Program for High Schools That Serve Underrepresented Minorities: Generating a Catalyst for Science.  M.J. Massimelli, K. Denaro, University of California Irvine

Science Stories on Instagram.  T. Willkie, H.S. Kantheti, UT Southwestern Med Center and UT Dallas

Scientific Community Outreach: Promoting Science to Students at the K-12 Level and STEM Students in ASBMB UPR-RP.  E.D. Navarro, M.G. Perez-Oquendo, J.D. Ramirez-Lugo, University of Puerto Rico-Rio Piedras, Puerto Rico

Scientific Community Outreach: Promoting Science to Students at the K-12 Level and STEM Students in ASBMB UPR-RP.  E.D. Navarro, M.G. Perez-Oquendo, J. Ramirez-Lugo, University of Puerto Rico-Rio Piedras, Puerto Rico

Social Synapse: Building a Better Network through Educational Outreach at the Department of Neurological Surgery at Northwestern University.  A. Martiny, K. Peck, M. Walsh, J. Chandler, Northwestern University Feinberg School of Medicine and Northwestern Memorial Hospital
12.46 Students Understanding Principles of Research Education through Medicine, Engineering, and Science (SUPREMES).  B.R. Hoffmann, T. Sobotka, Medical College of Wisconsin
12.47 TAKE SHAPE: Teaching Engineering and Science through Humor, the Arts, and Play.  J.L. DuBois, Montana State University
12.48 The Engaged Scientist: Building Capacity in Science Outreach through Trainings.  C. Vrentas, Engaged Scientist
12.52 The Recreation of the Phineas Gage Accident.  D. Heck, D. Donegan, M. Stabio, University of Colorado Anschutz Medical Campus
12.53 The Role of Informal Youth STEM Program Participation in Undergraduate Student STEM Interest.  Rutland, University of South Carolina - School of Medicine, Goldsmiths, University of London, United Kingdom and North Carolina State University
12.54 Understanding ADCY5 Gene Mutation Biology: Patient-driven Rare Disease Scientific Outreach and iPSCs.  S. Grossman, G. Grossman, ADCY5.org
12.55 University of Arizona ASBMB Student Chapter Outreach Activities.  C.K. Park, A. Tran, H. Fukuzaki, M. Morrow, E. Wu, R. Reilly, University of AZ
12.56 Using Brains to Inspire Minds: A Unique Outreach Collaboration with the Boston Museum of Science.  K.J. Babcock, E. Kong, A.C. Zumwalt, Boston University School of Medicine, Museum of Science and Boston
12.57 Welcoming Future Scientists: Engaging Puerto Rican High School Students in STEM through Community-based Learning and Outreach.  W. Pacheco, K. Munoz, E. Suarez, University of Puerto Rico - Ponce

**EB Scientific Highlights**

**POSTER**

**7:00 PM – 8:30 PM**

**SAN DIEGO CONVENTION CENTER, SAILS PAVILION**

7:00 SH1 Optical Imaging Tools for Elucidating the Roles of Anions in Cellular Signaling.  S. Dodani, The University of Texas at Dallas

SH2 Tissue Factor Enhances the Alveolar Epithelial Barrier Integrity During Acute Lung Injury.  H. Sucharski, N. Putz, C. Shaver, L. Ware, J. Bastarache, Vanderbilt University

SH3 Reinforcing Potency and Effectiveness of Synthetic Cathinones: Potency Versus Selectivity for DAT.  B.M. Gannon, A. Sulima, K.C. Rice, M.H. Baumann, G.T. Collins, The University of Texas Health Science Center at San Antonio, National Institute on Drug Abuse and National Institute on Alcohol Abuse and Alcoholism, National Institute on Drug Abuse and National Institutes of Health Intramural Research Program

SH4 Structure-Based Drug Design to Overcome Temozolomide Resistance in Glioblastoma (Gbm) Through a Dual Inhibition of MGMT and Base Excision Repair.  H. R. Madala, S. R. Punganuru, V. Arutula, K. Srinivagopal, Texas Tech University Health Sciences Center

SH5 Crispr-Cas9 Knock out of Gravin Variant 1 Impairs In Vitro Angiogenic Sprouting.  A. Ali, A. Spagnolia, M. Hull, M. Geffe, P. Bialk, E. Kmiec, B.D. Grove, University of North Dakota School of Medicine and Health Sciences and Helen F. Graham Cancer Center and Research Institute

SH6 Remodeling of Cardiac Energy Metabolism During Heart Failure.  L. Kalfhues, K. Bottermann, L. Leitner, U. Flögel, A. Gödecke, Heinrich-Heine University of Düsseldorf, Germany

SH7 New RiPP Family Incorporates Alpha-N-Methylation into Ribosomally Encoded Peptide Natural Products.  M. Freeman, University of Minnesota

SH8 Dopamine Transporter Activation Reduces Kv2.1 Activation Potential and Cluster Size.  J. Lebowitz, J.A. Pino Reyes, K. Divita, C. Henckel, M. Lin, G.E. Torres, H. Khoshbooei, University of Florida College of Medicine

SH9 The Muscle-Specific Ubiquitin Ligase Murf1 Regulates Autophagy via Foxo3 via Ubiquitination to Inhibit Nf-kb Signaling and Protect Against Cardiac Inflammation in Vivo.  T.L. Parry, J.C. Schisler, J. M. Mwiza, J. K. Durand, A. S. Baldwin, M. S. Willis, University of North Carolina
Malaria Derived Extracellular Vesicles Inhibit Neutrophils Ros Production and Nets Formation.
K.A. Babatunde, M. Walch, I. Fellay, S. Kharoubi-Hess, L. Filgueira, I. Ghiran, P-Y. Mantel, University of Fribourg, Switzerland and Harvard Medical School

Examining the Role of Gut Dysbiosis in Neuroinflammation and Hypertension in a Model of Obstructive Sleep Apnea.
D. Durgan, B.F. Ganesh, J. Nelson, J. Eskew, N. Ajamli, J. Petrinoso, R. Bryan, Baylor College of Medicine, The University of Texas Health Science Center and Mercer University

Cancer-Associated Fusions of the Protein Kinase C Kinase Domain Are Loss-of-Function.

Non Parenchymal Wnts Regulate Beta-Catenin Signaling in Murine Liver Zonation and Regeneration.
M. Preziosi, H. Okabe, M. Poddar, S. Singh, S. Monga, University of Pittsburgh

3D Contrast Techniques for Visualizing Anatomy and Their Application for Human Education, Vertebrate Biomechanics and Paleobiology.

A Conserved Pain Syndrome Resulting from the Acute Activation of Trpα1 by Chemotherapy Drugs.
N. Boiko, E. Montano, K.M. Hargreaves, B.A. Eaton, J.D. Stockand, The University of Texas Health Science Center at San Antonio

Leveraging Mouse Liver Co-Expression Networks and Human Lipid GWAS Data to Identify and Validate Cholesterol Metabolism Genes.
B.W. Parks, Z. Li, J. Nguyen, F. Leyva-Jaimes, University of Wisconsin–Madison

Blood-Brain Barrier Penetrant and Orally Bioavailable Antidotes to Organophosphate Poisoning.
Y-J. Shyong, A. Garcia, Y. Sepulveda, Z. Radi, C. J. Momper, P. Taylor, Skaggs School of Pharmacy and Pharmaceutical Sciences, University of California and San Diego

Desmosomal Cadherins Desmoglein-2 or Desmocollin-2 Regulate Intestinal Epithelial Barrier Function and Mucosal Repair.
D. Kusters, S. Flemming, A-C. Luissint, R. Hilgarch, C. Parkos, A. Nusrat, University of Michigan

New in Vivo MicroRNA Biotechnology Reveals Specific Roles for the mir-200 Family in Craniofacial Development.
M.E. Sweat, W. Yu, S. Ellisson, Y.Y. Sweat, H. Cao, L. Hong, B.A. Amendt, University of Iowa, Craniofacial Anomalies Research Center and University of Iowa College of Dentistry

Metabolic Syndrome and the Role of GIP-1 Receptor Agonists in a Model of Postmenopausal Pcos.
E.D. Torres Fernandez, D.G. Romero, L.L. Yanes Cardozo, University of Mississippi Medical Center

Cohesin Loss Eliminates All Loop Domains.

Determining the Effects of E-Cigarette Vapor on Oral Epithelial Cells in a Cultured Cell Model.
M. Duggar, H. Swanson, M. Hill-Odom, University of Kentucky and Xavier University of Louisiana

Expression of sirps Tailless Mutant in Mice Impairs Naive Cd4+ T Cell Adhesion to Immobilized Icam-1 and Tcr Induced Proliferation.
F.E. Velázquez Planas, A.E. Autio, G. Newton, C. Parkos, F.W. Luscinskas, Brigham and Women’s Hospital and University of Michigan

Use of Systematic Stimulation Mapping and Functional/structural Imaging to Improve Localization of Seizure Onset in Patients with Drug-Resistant Epilepsy.
R.C. Blanco Prado, C. Drees, J.A. Thompson, University of Colorado Anschutz Medical Campus

Ghrelin Directly Stimulates Fatty Acid Oxidation in Skeletal Muscle.
E. Kraft, D. Dyck, University of Guelph, Canada

Quantitative Phosphoproteomic Analysis of Feedback Networks in T Cell Signaling.
A. Salomon, J. Belmont, Q. Ji, Brown University

Influence of Liver-Specific Ablation of Gp78 E3-Ligase on Hepatic Cytochrome P450-Dependent Drug Metabolism: Clinical Implications.
D. Kwon, S-M. Kim, M.A. Correia, University of California and San Francisco

Cxcr3 Regulates Cd4+ T Cell Cardiotropism and Maladaptive Cardiac Remodeling Through Mechanisms Involving Icam1-Mediated Adhesion.
N. Ngwenyama, A. Salvador, T. Nevers, F. Velázquez, M. Aronovitz, P. Alcaide, Tufts University and Tufts Medical Center
<table>
<thead>
<tr>
<th>Session</th>
<th>Title</th>
<th>Authors</th>
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<tr>
<td>SH30</td>
<td>Slc26a3 (Dra) Deficient Mice Display an Acidic Colonic Ph-Microclimate, Develop a Strongly Altered Microbiome and Colonic Inflammation.</td>
<td>A. Kini, M. Basic, A.K. Singh, B. Riederer, D. Romermann, S. Suerbaum, A. Bleich, T. Strouwig, U. Seidler, Hannover Medical School, Germany and Helmholtz Center for Infection Research, Germany</td>
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<td>SH33</td>
<td>Personalized Gene Expression Profile Information Predicts Severity of Systemic Sclerosis Despite Heterogeneity of Disease.</td>
<td>Z.I. Johnson, T. Medsger, T. Li, C. Feghali-Bostwick, Y. Conley, C.C. Yates, University of Pittsburgh, AccuraScience and Medical University of South Carolina</td>
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<td>SH34</td>
<td>Sweet Success: Metabolic Substrate Adaptations to Acute Hypoxia in the Naked Mole Rat (Heterocephalus Glaber).</td>
<td>M.E. Pamenter, A.M. Kirby, A.J. Shuhendler, University of Ottawa, Canada</td>
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<td>SH35</td>
<td>The Effects of Nitric Oxide Synthase Inhibitors on Mitochondrial Respiration in Isolated Mouse Brain Mitochondria.</td>
<td>J.A. Sperling, S.S. V. P. Sakamuri, V.N. Sure, M.H. Dholakia, N.R. Peterson, R. Satou, Tulane University School of Medicine</td>
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<td>SH36</td>
<td>Chemorepulsion as a Novel Therapeutic Concept to Inhibit Pancreatic Cancer Metastasis.</td>
<td>B. Niclou, X. Li, A. Zessler, R. Adam, D. Briscoe, D. Bielenberg, Boston Children's Hospital</td>
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<td>SH37</td>
<td>The Antithrombotic Effects of 12-Lox Derived Metabolites of Dpa, o-6.</td>
<td>A. Chen, J. Yeung, A. Szatkowski, M. Jackson, J. Watson, C. Friedman, A. Das, T. Holman, M. Holinstat, University of Michigan, University of Illinois at Urbana-Champaign, University of California and Santa Cruz</td>
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<td>SH38</td>
<td>Effect of Metabolic Syndrome and Aging on Coronary Artery Disease Severity and CA2+ Dysregulation in Coronary Smooth Muscle in Ossabaw Miniature Swine.</td>
<td>J.K. Badin, R.S. Bruning, M. Sturek, Indiana University School of Medicine</td>
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<td>SH39</td>
<td>Cd99l2 as a Major Regulator in Human Transendothelial Migration.</td>
<td>N.S. Rutledge, W.A. Muller, Northwestern University</td>
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<td>SH40</td>
<td>A Redesigned Pharmacology Series Increases Students’ Satisfaction and Is Associated with Improved Performance in Therapeutics.</td>
<td>K. Brandl, S. Schneid, S. Tsunoda, L. Awdishu, Skaggs School of Pharmacy and Pharmaceutical Sciences, University of California and San Diego</td>
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<td>SH41</td>
<td>Developmental Differences in the Contribution of Pkcδ Signaling to Chronic Hypoxia-Induced Pulmonary Arterial Tone.</td>
<td>S. Yan, J.R. Sheak, N.L. Jernigan, B.R. Walker, T.C. Resta, University of New Mexico Health Sciences Center</td>
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96 **Wake-Up! It’s Trivia Time**

**SOCIETY EVENTS**

7:00 AM – 7:45 AM  SAN DIEGO CONVENTION CENTER, ROOM 6B

Sponsored by ASBMB Membership Committee

Calling all trivia junkies! Join your colleagues for a daily dose of trivia, music, fun and prizes! It’s a lively way to jump-start your day — the complimentary coffee and nosh also helps. Prize values increase over the course of the meeting, so come back each morning! ASBMB members and biochemistry registrants welcome.

*Space is limited with first come, first served.*

97 **ASBMB Business Meeting**

**BUSINESS MEETING**

8:00 AM – 8:15 AM  SAN DIEGO CONVENTION CENTER, ROOM 6B

98 **ASBMB Opening Lecture: Herbert Tabor Research Award**

**LECTURE**

8:00 AM – 9:00 AM  SAN DIEGO CONVENTION CENTER, ROOM 6B

8:00  ASBMB Business Meeting and awardee introduction

8:20  98.1  Nutrient Regulation of Signaling and Transcription.  G.W. Hart, Johns Hopkins University School of Medicine

99 **FASEB Excellence in Science Award**

**LECTURE**

9:00 AM – 9:30 AM  SAN DIEGO CONVENTION CENTER, ROOM 6B

9:00  Awardee introduction

9:05  99.1  Nonsense-Mediated mRNA Decay and Human Disease: Genome Guardian and Executor.  L.E. Maquat, University of Rochester Medical Center

67 **How to Choose Your Ideal Career**

**WORKSHOP**

9:00 AM – 10:00 AM  SAN DIEGO CONVENTION CENTER, HALL D, CRC-2

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?

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.

*Speaker B. Lindstaedt, UCSF*
Get Up With Something on Your Mind

WORKSHOP
9:00 AM – 10:00 AM SAN DIEGO CONVENTION CENTER, HALL D, CRC-3

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.

SPEAKER: H. Adams, H.G. Adams & Assoc., Norfolk, VA

Poster/Oral Presentation Practice & Mentoring Session

WORKSHOP
9:00 AM – 5:00 PM SAN DIEGO CONVENTION CENTER, HALL D, PEER MENTOR POD

FASEB Diversity Resources Program will sponsor Presentation Practice & Mentoring Sessions beginning Saturday, April 21, to provide FASEB DREAM poster/oral presentation travel award recipients and other interested EB2018 student/postdoc attendees with an opportunity to practice their presentations and obtain feedback from designated Workshop Mentors/Coaches. If you would like to participate in the poster/oral presentation & mentoring sessions, sign-up by using the following link, www.experimentalbiology.org beginning Sunday, April 1.

Career Corner Sessions with Dr. Adams

WORKSHOP
9:00 AM – 5:00 PM SAN DIEGO CONVENTION CENTER, HALL D, CAREER CORNER

Drop in for one-on-one or group sessions for career counseling/career planning sessions with Dr. Howard G. Adams in between his presentations in the EB2018 Career Center. Dr. Adams will be available in the “Career Corner” in the EB2018 Career Center located in Hall D beginning on Saturday, April 21.

One-on-One Resume Critique/CV, Career Counseling, Essay Personal Statement Assessments

WORKSHOP
9:00 AM – 5:00 PM SAN DIEGO CONVENTION CENTER, HALL D, CAREER COUNSELING ROOM

Sign-up for one-on-one sessions for CV/resume critiques, career counseling, and essay/personal statement assessments will begin on Saturday, April 21. If you're interested in a one-on-one, advance sign up will start on Sunday, April 1. Click on www.experimentalbiology.org to schedule your session.

Career Building: How to Maximize One's Participation in a Scientific Conference

WORKSHOP
9:30 AM – 11:00 AM SAN DIEGO CONVENTION CENTER, HALL D, CRC-1

First impressions count: Are you ready? This interactive workshop will help you to put your best foot forward and make the most of your time at the Experimental Biology meeting. Scientific conferences provide more than an opportunity to learn about the latest research in your field, they can help you make connections that will build your career both now and into the future. In this workshop you will learn how to define your goals for a meeting, prepare for the conference, and plan your agenda so that you can maximize your experience both scientifically and professionally. Participants will also develop strategies for identifying and capitalizing on important networking opportunities and for maintaining and nurturing the relationships they establish during a conference. Don’t miss this opportunity to learn how you can accelerate your future at the Experimental Biology meeting!

SPEAKER: H. Dillon, The Jackson Laboratory
100 Walter A. Shaw Young Investigator Award in Lipid Research

LECTURE
10:00 AM – 10:30 AM  SAN DIEGO CONVENTION CENTER, ROOM 6F
This award lecture is presented in the session, “Lipid signaling and metabolism,” beginning at 10:00 a.m. Refer to session 103 for details.
10:00  Awardee introduction
10:05  Probing the Structure, Dynamics and Regulation of Lipid Signalling Enzymes and Their Role in Human Disease. J. Burke, University of Victoria, Canada

70 Negotiation Strategies for Scientists

WORKSHOP
10:00 AM – 11:00 AM  SAN DIEGO CONVENTION CENTER, HALL D, CRC-2
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.
SPEAKER: D. Behrens, Univ. of California, Berkeley

101 Biochemical Communication between the Microbiome and the Host

SYMPOSIUM
10:00 AM – 12:00 PM  SAN DIEGO CONVENTION CENTER, ROOM 6C
CHAIR: L. V. Hooper
10:00  101.1 Host Microbe Interactions in the Primate Gut: Implications for Human Origins. A. Gomez, M. Torralba, K.E. Nelson, R. Stumpf, R. Blekhman, K. Petrzelkova, University of Minnesota, J. Craig Venter Institute, University of Illinois and Czech Academy of Sciences, Czech Republic
10:30  101.2 Metabolism, the Microbiome, and the Circadian Clock. L.V. Hooper, Y. Wang, Z. Kuang, The University of Texas Southwestern Medical Center
11:00  101.3 The Diet-Microbiota-Mucus Layer Axis as a Mediator of Intestinal Health and Disease. E. Martens, University of Michigan Medical School
11:30  101.4 The Gut Microbiome Connection to Parkinson’s Disease. S.K. Mazmanian, California Institute of Technology

102 Intrinsically Disordered Proteins and Their Regulation and Function

SYMPOSIUM
10:00 AM – 12:00 PM  SAN DIEGO CONVENTION CENTER, ROOM 6E
CHAIR: J. Dyson
10:00  102.1 Alpha-Synuclein Binds to Neuron-Specific Glycans. E. Rhoades, M. Birol, University of Pennsylvania
10:30  102.2 The Role of Disordered Regions in Gpcr-G Protein Signaling. M.M. Babu, Medical Research Council Laboratory of Molecular Biology, United Kingdom
11:00  102.3 Disordered Regions as Regulators of Phase Transitions in Multivalent Proteins. R.V. Pappu, Washington University in St. Louis
11:30  102.4 How Do Intrinsically Disordered Viral Proteins Hijack the Cell? H.J. Dyson, Scripps Research Institute
103 **Lipid Signaling and Metabolism**

**SYMPOSIUM**

**10:00 AM – 12:30 PM**  SAN DIEGO CONVENTION CENTER, ROOM 6F

**CHAIR:** M. Wakelam

10:00  Walter A. Shaw Young Investigator Award in Lipid Research awardee introduction

10:05  **103.1** Probing the Structure, Dynamics and Regulation of Lipid Signalling Enzymes and Their Role in Human Disease.  J. Burke, University of Victoria, Canada

10:30  **103.2** A Golgi Lipid Signaling Pathway That Controls Neural Stem Cell Polarity in the Developing Neocortex.  V. Bankaitis, Z. Xie, Texas A&M Health Science Center

11:00  **103.3** Fatty Acid Compartmentalization.  R. Coleman, University of North Carolina

11:30  **103.4** Endosomal Lipids in Trafficking and Signaling.  J. Gruenberg, University of Geneva, Switzerland

12:00  **103.5** Using Lipidomics Pathway Analysis to Identify Potential Therapeutic Targets.  M. Wakelam, A. Nguyen, Q. Zhang, Babraham Institute, United Kingdom

104 **Novel Enzymology**

**SYMPOSIUM**

**10:00 AM – 12:00 PM**  SAN DIEGO CONVENTION CENTER, ROOM 6D

**CHAIR:** R. T. Raines

10:00  **104.1** Ribonuclease: From $K_{cat}/K_{m}$ to the Clinic.  R. Raines, Massachusetts Institute of Technology

10:30  **104.2** How Do Enzymes Evolve?  D.S. Tawfik, Weizmann Institute of Science, Israel

11:00  **104.3** Citrullination Inhibits Serpin Activity.  P.R. Thompson, University of Massachusetts Medical School

11:30  **104.4** Connecting Chemistry to Biology to Understand Why O-GlcNAc Transferase Is Essential.  S. Walker, Harvard Medical School

105 **RNA Form and Function**

**ISSUES IN DEPTH**

**10:00 AM – 12:00 PM**  SAN DIEGO CONVENTION CENTER, ROOM 1AB

Sponsored by ASBMB Minority Affairs Committee


10:30  **105.2** How to Balance the Many Roles of Trnas During the Creation of New Genetic Codes.  A. Ellington, A. Maranhao, K. Baldridge, D. Tack, R. Thyer, L. Contreras, The University of Texas at Austin

11:00  **105.3** Bridging the Gap Between RNA Editing and Modification: A 10-Year Solution to a 25-Year Problem.  J.D. Alfonzo, The Ohio State University

11:30  **105.4** Functional Characterization and Design of Regulator RNAs Using Novel High-Throughput Tools.  L.M. Contreras, K. Haning, A.N. Leistra, The University of Texas at Austin
106  **Strategically Building Your CV at Every Career Stage**

**SYMPOSIUM**

**10:00 AM – 12:00 PM**  SAN DIEGO CONVENTION CENTER, ROOM 6A

**CHAIR:** M. Payne

Sponsored by ASBMB Education and Professional Development Committee

With the diverse career options available for scientists as well as the rapid increase in the use of online profiles, it is important to not only gain appropriate skills and experience in support of career development, but also to present a professional profile to the public and/or prospective employers that helps promote specific career objectives. In this session, speakers from both academia and industry will present strategies that students, trainees, faculty, and industrial scientists can use to ensure that their experiences are leading to the career path that they desire and that they are marketing themselves in the best possible manner to achieve their career goals.

Presentations will be followed by a discussion panel.

**SPEAKER/PANELISTS:**

N. Blake, UT Health San Antonio, M. Canady, Comprendia, LLC and San Diego Biotechnology Network, R. To, Bayer Health Care

**PANELISTS:**

R. Booth, Univ. of the Incarnate Word, M. Payne, La Sierra Univ.

- **10:00**  Chair’s introduction.
- **10:05**  Career Visualization and Execution.  N. Blake, UT Health San Antonio
- **10:25**  Finding your inner extrovert for career growth.  M. Canady, Comprendia, LLC and San Diego Biotechnology Network
- **10:45**  An unplanned career path: from research to regulation.  R. To, Bayer Health Care
- **11:05**  Panel discussion.

107  **Synthetic Biology**

**SEBM SYMPOSIUM**

**10:00 AM – 12:00 PM**  SAN DIEGO CONVENTION CENTER, ROOM 14A

**CHAIR:** P. Stambrook

Guest Society: Society for Experimental Biology and Medicine

- **10:00**  Playing with the molecules of life.  P. Schultz, Scripps
- **10:25**  A cargo-sorting DNA robot.  L. Qian, Cal Tech
- **10:50**  Teaching ancient molecules new tricks: unlocking the potential of RNA synthetic biology.  J. Luks, Northwestern Univ.
- **11:15**  Engineering membrane-bound microsystems as artificial cells.  Y. Elani, Imperial Col., London
- **11:40**  General discussion.

71  **Understanding Faculty Search Committees & Finding Job Ads**

**WORKSHOP**

**11:00 AM – 12:00 PM**  SAN DIEGO CONVENTION CENTER, HALL D, CRC-I

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.

**SPEAKER:** A. Green, Univ. of California, Berkeley
Making Mistakes When Speaking

WORKSHOP

11:00 AM – 12:00 PM  SAN DIEGO CONVENTION CENTER, HALL D, CRC-2

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.

SPEAKER: J. Blumenthal, Montgomery Col., Rockville, MD and Univ. of Maryland Univ. Col., Adelphi, MD

Career Opportunities in Science Communications

WORKSHOP

11:00 AM – 12:00 PM  SAN DIEGO CONVENTION CENTER, HALL D, CRC-3

SPEAKER: E. Hayden, Univ. of California, Santa Cruz

CREST (Connecting Researchers, Educators and STudents) Conversations

SOCIETY EVENTS

12:15 PM – 1:15 PM  SAN DIEGO CONVENTION CENTER, EXHIBIT HALLS A-D, ACROSS FROM ASBMB BOOTH #1316

CHAIR: T. Herman

CREST research teams will meet with Herbert Tabor Research Award lecturer, Gerald Hart and colleagues, to present protein models that will be used to aid in-depth discussions. This event is located in the ASBMB Lounge, across from the ASBMB exhibit booth, #1316.

ASBMB Poster Presentations

POSTER SESSIONS

12:15 PM – 2:15 PM  SAN DIEGO CONVENTION CENTER, EXHIBIT HALLS A-D

Refer to pages 70 – 87 for presentation details.

Visit ASBMB Booth #1316

Ask how you can receive a complimentary membership and a free gift!
109 **ASBMB Meet the Speakers**

**SOCIETY EVENTS**

12:30 PM – 1:00 PM  SAN DIEGO CONVENTION CENTER, EXHIBIT HALL, ACROSS FROM ASBMB BOOTH 1316

Visit the ASBMB Lounge (Exhibit Hall across from ASBMB Booth #1316) to meet the morning presenters and continue the scientific discussion— a GREAT networking opportunity for all. Also visit the daily posters while you’re in the exhibit hall.

110 **ASBMB Advocacy Town Hall Meeting**

**SOCIETY EVENTS**

12:30 PM – 2:00 PM  SAN DIEGO CONVENTION CENTER, ROOM 6A

Sponsored by ASBMB Public Affairs Advisory Committee

Join ASBMB’s Public Affairs Advisory Committee (PAAC) for a town hall forum open to all EB registrants to address the impact of the current and future political climate on the life science research enterprise.

Event objectives include briefing the community on local impacts of federal policy decisions and provide real time answers to pressing questions.

Planned mini briefings include:
1) The state of federal investments in life science research
2) Local and national advocacy
3) Policy changes impacting the research community

Briefings will be led by the ASBMB Public Affairs Director, Benjamin Corb, with assistance from an expert panel moderated by PAAC chair, Matthew Gentry.

Pre-submit or post questions live via twitter (#ASBMBTownHall) to generate further discussion. It is anticipated that the town hall forum will be attended by a wide range of stakeholders from all facets of the biochemistry and molecular biology research enterprise.

*Doors will open at 12:20 p.m. and boxed lunches will be provided to the first 75 event participants, first come, first served.*

74 **Job Hunting in Biotech Part 1: Finding & Applying for Scientist Positions**

**WORKSHOP**

1:00 PM – 2:00 PM  SAN DIEGO CONVENTION CENTER, HALL D, CRC-1

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. After this seminar you will understand how to conduct the four job hunting techniques that comprise a comprehensive job search in the biotech industry.

*(THIS IS PART 1 OF A 3-PART SERIES. EACH SEMINAR CAN BE TAKEN SEPARATELY BUT TOGETHER THEY PROVIDE COMPREHENSIVE INFORMATION ABOUT THE INDUSTRY JOB SEARCH PROCESS.)*

**SPEAKER:** B. Lindstaedt, UCSF

75 **Networking With Strangers is Required for Your Future**

**WORKSHOP**

1:00 PM – 2:00 PM  SAN DIEGO CONVENTION CENTER, HALL D, CRC-2

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.

**SPEAKER:** J. Blumenthal, Montgomery Col., Rockville, MD and Univ. of Maryland Univ. Col., Adelphi, MD
76 **Creating Effective CV’s, Cover Letters, Research & Teaching Statements**  
**WORKSHOP**  
1:00 PM – 2:00 PM  
SAN DIEGO CONVENTION CENTER, HALL D, CRC-3  
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.  
SPEAKER: A. Green, Univ. of California, Berkeley

111 **SEBM Special Topics in Science, Student-Organized Symposium**  
**SEBM SYMPOSIUM**  
1:00 PM – 2:30 PM  
SAN DIEGO CONVENTION CENTER, ROOM 14A  
CHAIR: D. Boothman  
Guest Society: Society for Experimental Biology and Medicine  
FEATURING PRESENTATIONS BY: I. Verma, Salk Inst., K. Lamia, Scripps, P. Mischel, UCSD

112 **ASBMB Meet the Speakers**  
**SOCIETY EVENTS**  
1:30 PM – 2:00 PM  
SAN DIEGO CONVENTION CENTER, EXHIBIT HALL, ACROSS FROM ASBMB BOOTH 1316  
Visit the ASBMB Lounge (Exhibit Hall across from ASBMB Booth #1316) to meet the morning presenters and continue the scientific discussion — a GREAT networking opportunity for all. Also visit the daily posters while you’re in the exhibit hall.

77 **But I Have No Skills! Exploding Myths & Exploring Career Options for PhDs**  
**WORKSHOP**  
2:00 PM – 3:00 PM  
SAN DIEGO CONVENTION CENTER, HALL D, CRC-1  
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.  
SPEAKER: J. Lombardo, Med. Col. of Wisconsin and Marquette Univ.

78 **Career Opportunities in Science Communications**  
**WORKSHOP**  
2:00 PM – 3:00 PM  
SAN DIEGO CONVENTION CENTER, HALL D, CRC-2  
SPEAKER: E. Hayden, Univ. of California, Santa Cruz
Networking: A Required Life Skill

WORKSHOP
2:00 PM – 3:00 PM  SAN DIEGO CONVENTION CENTER, HALL D, CRC-3

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. During the session, Dr. Howard Adams will cover the following key topics: 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.

SPEAKER: H. Adams, H.G. Adams & Assoc., Norfolk, VA

ASBMB Award for Exemplary Contributions to Education

LECTURE
2:30 PM – 3:45 PM  SAN DIEGO CONVENTION CENTER, ROOM 6C
Sponsored by ASBMB Education and Professional Development Committee

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

2:30  Awardee introduction
2:35  113.1  Promoting Hypothesis-Driven Thinking in the Undergraduate Biochemistry Lab.  P.A. Craig, Rochester Institute of Technology

Advanced Biophysical and Biochemical Approaches to Membrane Dynamics (I)

SPOTLIGHT SESSION
2:30 PM – 3:45 PM  SAN DIEGO CONVENTION CENTER, ROOM 31B
CHAIR: C. Schlieker


2:45  Nano-Scale Size Holes in Er Sheets Provide an Alternative to Tubules for Highly-Curved Membranes.  S. Bahmanyar, L. Schroeder, A. Barentine, S. Schweighofer, D. Baddeley, J. Bewersdorf, Yale University and Yale School of Medicine

3:00  Biomechanical Control of Lysosomal Secretion via the Vamp7 Hub: A Tug-of-War Mechanism Between Varp and Lrrk1.  T. Galli, G. Wang, S. Nola, S. Bovio, M. Coppey-Moisan, F. Lafont, Institut National de la Santé et de la Recherche Médicale (INSERM) U894, Institute of , France, Institut Pasteur de Lille, National Center for Scientific Research UMR 8204 - INSERM U1019, Centre H, France, Metropolitan, National Center for Scientific Research UMR7592 and Institut Jacques Monod, France

3:15  The Role of the Escrt Pathway in Prion Disease.  J. Lawrence, University of California and San Diego

3:30  114.1  Dynamic Functional Assembly of the Torsin Aaa+ Atpase and Its Modulation by Lap1: A Novel Mode of Regulation for Aaa+ Atpases.  A.R. Chase, Yale University and RIKEN Center for Life Science Technologies, Japan
## Advances in Mitochondrial Biochemistry

### SPOTLIGHT SESSION

**2:30 PM – 3:45 PM**

**SAN DIEGO CONVENTION CENTER, ROOM 31A**

**CHAIR:** E. L. Seifert

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Authors</th>
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<tr>
<td>2:30</td>
<td><strong>115.1 Loss of Mitochondrial Phosphate Carrier in Skeletal Muscle: Dissociation of Muscle Dysfunction from Lower Adp Phosphorylating Potential.</strong></td>
<td>E.L. Seifert, L. Anderson-Pullinger, Y. Sharpadskaya, Jefferson College of Biomedical Sciences</td>
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<td>2:45</td>
<td><strong>Cytoplasmic Pfk-2 Activity Affects Mitochondrial Pdk4 Levels in the Heart.</strong></td>
<td>M.F. Newhardt, M. Kinter, K.M. Humphries, Oklahoma Medical Research Foundation</td>
</tr>
<tr>
<td>3:00</td>
<td><strong>Oxidative Phosphorylation Complex Interactions in Intact Mitochondria.</strong></td>
<td>B.M. Rabbits, F. Liu, P. Lossl, R.S. Balaban, A.J. R. Heck, National Heart, Lung, and Blood Institute, National Institutes of Health, FMP Berlin, Germany and University of Utrecht, Netherlands</td>
</tr>
<tr>
<td>3:15</td>
<td><strong>The L Type Calcium Channel Ca$_{L1.2}$ Modulates Mitochondrial Calcium Homeostasis and Cell Death.</strong></td>
<td>M. Noterman, M-K. Shin, E. Vazquez-Rosa, C. Cintrón-Pérez, A. Rajadhyaksha, E. Taylor, A. Pieper, University of Iowa, Weill Cornell Medicine and Cornell University</td>
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<tr>
<td>3:30</td>
<td><strong>Sirtuin 4 Controls Leucine Metabolism and Insulin Secretion by Reversing Effects of Reactive Metabolites.</strong></td>
<td>F.K. Huynh, K.A. Anderson, J.D. Stuart, Z. Lin, M.D. Hirschey, Duke University Medical Center</td>
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## Cancer Signaling

### SPOTLIGHT SESSION

**2:30 PM – 3:45 PM**

**SAN DIEGO CONVENTION CENTER, ROOM 30E**

**CHAIR:** J. Frost

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<tr>
<th>Time</th>
<th>Title</th>
<th>Authors</th>
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<tr>
<td>2:30</td>
<td><strong>The Aggressive Nature of Prostate Cancer of African Americans Is Correlated with Massive Down-Regulation of Many Immunoregulatory Genes of Microenvironment.</strong></td>
<td>F. Rahmatpanah, X. Zi, A. Sawyers, A. Agrawal, M. Lilly, M. McClelland, D. Merculian, University of California, Irvine and Medical University of South Carolina</td>
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<tr>
<td>2:45</td>
<td><strong>Limd2 Is an Intracellular Activator of Integrin Linked Kinase(IIk) Activity and Gsk-3/akt/β-Catenin Signaling.</strong></td>
<td>S. Dedhar, S. Awrey, University of British Columbia, Canada and BC Cancer Research Centre, Canada</td>
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<td>3:00</td>
<td><strong>A Genome-Wide Crispr-Cas9 Screen Identifies Importin-β11 as a Required Factor for β-Catenin Signaling in Colon Cancer.</strong></td>
<td>M. Mis, Z. Steinhart, S. Angers, University of Toronto, Canada</td>
</tr>
<tr>
<td>3:30</td>
<td><strong>Regulatory Mechanisms Controlling the Subcellular Localization and Activity of the Rhoa GEF Net1 in Breast Cancer.</strong></td>
<td>J.A. Frost, Y. Zuo, A. Ulu, The University of Texas Health Science Center at Houston</td>
</tr>
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### Glycopolymer Probes

**SPOTLIGHT SESSION**

**2:30 PM – 3:45 PM**

**SAN DIEGO CONVENTION CENTER, ROOM 3D**

**CHAIR:** J. Kramer

1. **2:30**
   - **Roles of Glycosaminoglycans in the Ang/Tie Signaling Axis.** M.E. Griffin, G.M. Miller, A.W. Sorum, L.C. Hsieh-Wilson, California Institute of Technology

2. **2:45**

3. **3:00**
   - **Probing the Role of Peptidoglycan Metabolism in Helicobacter Pylori’s Helical Shape.** J.A. Taylor, B.P. Bratton, K.E. DeMeester, H. Liang, H.M. Jacobs, E. Kuru, Y.Y. Brun, M.S. VanNieuwenhze, W. Vollmer, J.W. Shaevitz, C.L. Grimes, N.R. Salama, University of Washington, Princeton University, University of Delaware, Indiana University, Newcastle University, United Kingdom and Fred Hutchinson Cancer Research Center

4. **3:15**
   - **Mucus-Inspired Low-Fouling Barriers Based on Self-Assembled Glycopeptide Nanofibers.** G. Hudalla, A. Restuccia, University of Florida

5. **3:30**
   - **Glycocalyx Engineering with Tunable Synthetic Glycopolyypeptides.** J. Kramer, University of Utah

### Herbert Tabor Young Investigator Award Symposium

**SYMPOSIUM**

**2:30 PM – 3:45 PM**

**SAN DIEGO CONVENTION CENTER, ROOM 3C**

**CHAIR:** G. DeMartino

1. **2:30**
   - **Structural and Functional Studies of the Streptococcal Fibrillar Adhesin Csha.** C. Back, V. Higman-Davies, M. Szutowska, M. Till, M. Crump, R. Lamont, H. Jenkinson, A. Nobbs, P. Race, University of Bristol, United Kingdom and University of Louisville School of Dentistry

2. **2:45**
   - **Sensing Changes in Cellular Iron Metabolism: Regulation of Irp1 by Fbxl5 and Cytosolic Iron-Sulfur Cluster Assembly.** N.B. Johnson, University of Wisconsin–Madison

3. **3:00**
   - **Selective Imaging of Internalized Proteopathic α-Synuclein Seeds in Primary Neurons Reveals Mechanistic Insight into Transmission of Synucleinopathies.** R.J. Karpowicz, C.M. Haney, T.S. Mihaila, E.J. Peterssson, V.M-Y. Lee, University of Pennsylvania

4. **3:15**
   - **Asymmetric Configurations in a Reengineered Homodimer Reveal Multiple Subunit Communication Pathways in Protein Allostery.** M. F. Lanfranco, F. Garate, A. Engdahl, R. Maillard, Georgetown University

5. **3:30**
   - **Complex Interplay of Kinetic Factors Governs the Synergistic Properties of HIV-1 Entry Inhibitors.** K. Ahn, M. Root, Northwestern University and Thomas Jefferson University

### Motion is Lotion: New Roles of Motion in Enzyme Function

**SPOTLIGHT SESSION**

**2:30 PM – 3:45 PM**

**SAN DIEGO CONVENTION CENTER, ROOM 3C**

**CHAIR:** J. Hardy

1. **2:30**
   - **The Structure and Mechanism of a Viral Genome Packaging Motor.** J.A. Hayes, B.J. Hilbert, N.P. Stone, C.M. Duffy, B. Sankaran, B.A. Kelch, University of Massachusetts Medical School and Lawrence Berkeley National Laboratory

2. **2:45**
   - **Small Compounds Modulating Bi-Directional Allostery in Protein Kinases: A New Grip with an Old Trick.** R.M. Biondi, J.O. Schulze, E. Süß, L. Pietsch, K. Busschots, G. Saladino, F.L. Gervasio, M. Raab, M. Sanhaji, K. Strebehardt, IBioBA-CONICET – Partner Institute of the Max Planck Society, Argentina, Frankfurt University Hospital, Germany and University College London, United Kingdom

3. **3:00**
   - **Investigating Carrier Domain Positioning During Catalytic Turnover in Pyruvate Carboxylase.** J. Hakala, M. St. Maurice, Marquette University

4. **3:15**
   - **Caspase-6 Self-Activation Enables Distinct Helix-Strand Interconversion Upon Substrate Binding.** J.A. Hardy, D.M. J., K.B. Dagbay, University of Massachusetts Amherst

5. **3:30**
   - **Evolution of Caspase Allostery and Enzyme Specificity.** C. Clark, R. Grinshpon, M.E. Thomas III, L. Yao, S. Shrestha, The University of Texas at Arlington and North Carolina State University
Plant Bioactive Natural Products: Discovery, Engineering and Applications

SPOTLIGHT SESSION
2:30 PM – 3:45 PM  SAN DIEGO CONVENTION CENTER, ROOM 30B
CHAIR: L. Hicks

2:30  120.1 Natural Product Bioactive Peptide Discovery Using Pepsavi-Ms.  L. Hicks, University of North Carolina at Chapel Hill

2:45 Mitochondria-Targeting Peptide from Hibiscus Sabdariffa.  S. Loo, A. Kam, J.P. Tam, Nanyang Technological University, Singapore

3:00 Investigating Gibberellin Phytohormone Biosynthesis by Plant-Associated Bacteria.  R.J. Peters, Iowa State University

3:15 Type III Polyketide Synthase Involved in Tropane and Granatane Alkaloid Biosynthesis.  N. Kim, J.C. D’Auria, Texas Tech University

3:30 Montmorency Tart Cherry Anthocyanins: Dose-Dependent Antioxidant Activity Against Cholesterol Oxidation.  I.G. Medina Meza, M.D. Schweiss, C. Barnaba, Michigan State University and University of Michigan

RNA Recognition and Regulation

SPOTLIGHT SESSION
2:30 PM – 3:45 PM  SAN DIEGO CONVENTION CENTER, ROOM 30A
CHAIR: A. E. Hargrove

2:30 Cisplatin Induces Differential Expression of Snornas and Affects Ribosome Methylation.  E. Reister, V.J. DeRose, University of Oregon

2:45 Enzymatic Site-Specific Labeling of RNA for Affinity Isolation of RNA-Protein Complexes.  K.N. Busby, N.K. Devaraj, University of California and San Diego

3:00 Multiple Mechanisms Driving Alternative Polyadenylation of Cyclin D1 (ccnd1) Pre-mRNA Processing.  C.P. Masamha, E. Wagner, Butler University and The University of Texas Medical Branch


3:30  121.1 Small Molecule Differentiation of RNA Structures Using Pattern Recognition.  A.E. Hargrove, Duke University

Job Hunting in Biotech Part 2: Interviewing for Scientist Positions

WORKSHOP
3:00 PM – 4:00 PM  SAN DIEGO CONVENTION CENTER, HALL D, CRC-1

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. 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.

(This is Part 2 of a 3-part series. Each seminar can be taken separately but together they provide comprehensive information about the industry job search process.)

SPEAKER: B. Lindstaedt, UCSF
Can We Target Aging?

**SEBM SYMPOSIUM**

**3:00 PM – 4:45 PM**
SAN DIEGO CONVENTION CENTER, ROOM 14A

**CHAIR:** N. Barzilai

Guest Society: Society for Experimental Biology and Medicine

- **3:00** Does targeting senescent cells target aging? Judith Campisi, Albert Einstein Col. of Med.
- **3:25** Young blood for old brains. Tony Wyss-Coray, Stanford Univ. Sch. of Med.
- **3:50** Title tba. Ana Marie Cuervo, Albert Einstein Col. of Med.
- **4:15** General discussion.

Making the Grade: Job Talk/Chalk Talk

**WORKSHOP**

**3:30 PM – 4:30 PM**
SAN DIEGO CONVENTION CENTER, HALL D, CRC-3

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

**SPEAKER:** D. Behrens, Univ. of California, Berkeley

Nailing the Job Talk & Interview Prep

**WORKSHOP**

**4:00 PM – 5:00 PM**
SAN DIEGO CONVENTION CENTER, HALL D, CRC-2

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

**SPEAKER:** A. Green, Univ. of California, Berkeley

Advanced Biophysical and Biochemical Approaches to Membrane Dynamics (II)

**SPOTLIGHT SESSION**

**4:00 PM – 5:15 PM**
SAN DIEGO CONVENTION CENTER, ROOM 31B

**CHAIR:** J. Xiao

- **4:00** MTor-Dependent Selective Translation Rapidly Expands Lysosome Biogenesis, Volume and Retention Capacity During Phagocyte Activation. R. Botelho, V. Hipolito, K. Tandoc, I. Topisirovic, Ryerson University, Canada and McGill University, Canada
- **4:15** Effects of the Cell Cycle on Vacuole Size in *s. Cerevisiae* Yeast. J.C. Sims, San Francisco State University
- **4:30** Deciphering Trapp Complex Function in Yeast. A. Joiner, C. Fromme, Cornell University
- **4:45** Myosin IIA is the Most Important Effector of Zyxin in Camp-Mediated Endothelial Exocytosis. G. Wei, P. Li, L. Chen, J. Luo, Peking University, People's Republic of China
- **5:00** Spatial Organization of RNA Polymerase in e. Coli Cells. J. Xiao, John Hopkins University School of Medicine
**ASBMB oral program SUNDAY continued**

### 124 Chemical Biology
**SPOTLIGHT SESSION**

**4:00 PM – 5:15 PM**  SAN DIEGO CONVENTION CENTER, ROOM 31A

**CHAIR:** B. Dickinson

- **4:00**  
  Anaerobic 4-Hydroxyproline Metabolism by a Widespread Microbial Glycyl Radical Enzyme.  
  Y.Y. Huang, L. Backman, B. Gold, R.T. Raines, C.L. Drennan, E.P. Balskus, Harvard University and Massachusetts Institute of Technology

- **4:15**  
  Ligand Gated Split Lysine Acetyl Transferases (KATs) and Kinases.  
  C.S. de Silva, J. Castillo-Montoya, E. Restituyo, I. Ghosh, University of Arizona

- **4:30**  
  Expanding the Druggable Proteome: Ligand and Target Discovery by Fragment-Based Screening in Cells.  
  C.G. Parker, Scripps Research Institute

- **4:45**  
  Optical Imaging Tools for Elucidating the Roles of Anions in Cellular Signaling.  
  S. Dodani, The University of Texas at Dallas

- **5:00**  
  Chemical Approaches to Probe Signaling by Dynamic Proteome Lipidation.  
  B. Dickinson, University of Chicago

### 125 Emerging Perspectives on Metabolism and Cell Fate Decisions
**SPOTLIGHT SESSION**

**4:00 PM – 5:15 PM**  SAN DIEGO CONVENTION CENTER, ROOM 30E

**CHAIR:** E. Taylor

- **4:00**  
  Loss of Mitochondrial Pyruvate Carrier Activity Short Circuits Hepatocellular Tumorigenesis.  
  E. Taylor, University of Iowa

- **4:15**  
  Fine-Tuning of Hepatocyte Calcium Signaling and Liver Regeneration by the Mitochondrial Calcium Uniporter.  
  A. Noronha Antony, M. Katona, E. Juskeviciute, J.W. Elrod, G. Hajnóczky, J.B. Hoek, Thomas Jefferson University, Lewis Katz School of Medicine and Temple University

- **4:30**  
  Unconventional Pathways of Nitrogen Metabolism in Lung Cancer.  
  J. Kim, The University of Texas Southwestern Medical Center

- **4:45**  
  Understanding the Impact of Idh2 Mutations on the Redox Balance of Cancer Cells.  
  S.J. Gelman, L. McKenzie, M.G. Chheda, G.J. Patti, Washington University in St. Louis

- **5:00**  
  Targeting Glycolytic Metabolism in Cancer.  
  S. Telang, J. Trent, J. Chesney, A. Mojesky, University of Louisville

### 126 Molecular Chaperones and Protease Systems
**SPOTLIGHT SESSION**

**4:00 PM – 5:15 PM**  SAN DIEGO CONVENTION CENTER, ROOM 30D

**CHAIR:** A. L. Lucius

- **4:00**  
  Proteasomal ATPases Hard at Work: The Inner Workings of a Protein Destruction Machine.  
  A.M. Snoberger, D.M. Smith, West Virginia University

- **4:15**  
  Dual Function of the Trigger Factor Chaperone in Nascent Protein Folding.  
  C. Kaiser, K. Liu, K. Maciuba, Johns Hopkins University

- **4:30**  
  Molecular Chaperones Disperse Pab1 Hydrogel More Quickly Than Misfolded Aggregates.  
  H. Yoo, E. Pilipenko, D.A. Drummond, University of Chicago

- **4:45**  
  Dysregulation of Human Mitochondrial ClpP Protease Activity by Acyldepsipeptidase Analogs Leads to Apoptotic Cell Death.  
  W.A. Houry, University of Toronto, Canada

- **5:00**  
  Molecular Mechanisms of Enzyme Catalyzed Protein Unfolding and Translocation by Class I AAA+ Motors.  
  A.L. Lucius, University of Alabama at Birmingham
**I27 Physiological Regulation by Cell Signaling**

**SPOTLIGHT SESSION**

4:00 PM – 5:15 PM  
SAN DIEGO CONVENTION CENTER, ROOM 30C

**CHAIR:** R. Berdeaux

4:00  **I27.1**  
Promotion of Muscle Satellite Cell Proliferation by Camp-Induced Transcription.  
R. Berdeaux, D. Akhmedov, McGovern Medical School at The University of Texas Health Science Center

4:15  **I27.2**  

4:30  
The Function of Wnk1/Osr1 in Cell Migration and Angiogenesis.  
A. Jaykumar, S. Earnest, K. McGlynn, S. Gallolu Kankanamalage, S. Stippec, G. Pearson, M. Cobb, The University of Texas Southwestern Medical Center and Georgetown University

4:45  
Foxa2 Promotes Prostate Cancer Bone Colonization.  
Z.M. Connelly, S. Yang, A.W. Orr, X. Yu, Louisiana State University Health Sciences Center–Shreveport

5:00  
Passing on Signals to Compass: A Novel Intramolecular Interactions in Pas Kinase Controls the Stem Cell Fate via Regulating Compass Protein Complexes.  
C.K. Kikani, X. Wu, J. Rutter, University of Utah and Fred Hutchinson Cancer Institute

**I28 Reading, Writing and Erasing Epigenetic Marks**

**SPOTLIGHT SESSION**

4:00 PM – 5:15 PM  
SAN DIEGO CONVENTION CENTER, ROOM 30B

**CHAIR:** C. Chatterjee

4:00  
Histone Chaperone Nap1 Facilitates Histone Dynamics in the Nucleosome.  
T-H. Lee, J. Lee, Pennsylvania State University

4:15  
Stoichiometry of Multi-Protein Complexes Containing Rtt109, Vps75, and Histone H3-H4.  
S. D’Arcy, N. Akhavantabib, D. Krzizike, The University of Texas at Dallas and Fox Chase Cancer Center

4:30  
B. Fierz, École Polytechnique Fédérale de Lausanne, Switzerland

4:45  
Biochemical Characterization of the Set1 H3k4 Methyltransferase Complexes.  
J. Kim, Korea Advanced Institute of Science and Technology, Republic of Korea

5:00  **I28.1**  
Chemical Tools to Investigate Gene Regulation by Histone Sumoylation.  
C. Chatterjee, University of Washington
ASBMB oral program  SUNDAY continued

129  **Structure and Mechanisms Regulating RNA Function**

**SPOTLIGHT SESSION**

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Authors</th>
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<tbody>
<tr>
<td>4:00</td>
<td>Probing RNA Structure and Dynamics in the HIV-1 5’utr Using Ensemble and Single Molecule Approaches.</td>
<td>K. Musier-Forsyth, B. Brigham, J. Kitzrow, J-P.C. Reyes, J. Munro, <em>The Ohio State University and Tufts University School of Medicine</em></td>
</tr>
<tr>
<td>4:15</td>
<td>Role of RNA Binding Protein Rbm15 in M6a RNA Methylation During Megakaryocytic Differentiation.</td>
<td>N. Ayala-Lopez, R. Ross, S. Halene, P. Limbach, D.S. Krause, <em>Yale University and University of Cincinnati</em></td>
</tr>
<tr>
<td>4:30</td>
<td>Different Classes of RNA Require Distinct Mex67 Paralogs for Processing and Nucleocytoplasmic Export in Trypanosomes.</td>
<td>S. Obado, B. Chait, M. Field, M. Rout, <em>The Rockefeller University and University of Dundee, United Kingdom</em></td>
</tr>
<tr>
<td>5:00</td>
<td>C129.1 Chemo-Transcriptomic Methods to Measure RNA Structure Inside Living Cells.</td>
<td>R. Spitale, <em>University of California and Irvine</em></td>
</tr>
</tbody>
</table>

130  **BMB Professional Development: Advancing Successful Careers**

**SPOTLIGHT SESSION**

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Authors</th>
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<tbody>
<tr>
<td>4:30</td>
<td>Effects of a Data Analysis Intensive Course on Student Critical Thinking Skills, Confidence, and Post-Graduation Success.</td>
<td>K.K. Resendez, <em>Westminster College</em></td>
</tr>
<tr>
<td>4:45</td>
<td>Graduate Student Professional Development and a Cure-Style Course and Peer-Reviewed Student Publications.</td>
<td>J. Baumgartner, J. Lee, M.L. Kuhn, <em>San Francisco State University</em></td>
</tr>
<tr>
<td>5:00</td>
<td>Predictors of Success on the Mcat for Post-Baccalaureate Pre-Medicine Students.</td>
<td>Y. Dobrydneva, L. Schwartz, <em>George Washington University School of Medicine and Health Sciences</em></td>
</tr>
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131  **Organizing a Successful ASBMB Student Chapter**

**WORKSHOP**

<table>
<thead>
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<th>Time</th>
<th>Title</th>
<th>Authors</th>
</tr>
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<tr>
<td>5:30</td>
<td>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 chapter activities.</td>
<td></td>
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</tbody>
</table>
The Art of the 3D Cell Culture, from Organoids to Organs-on-a-Chip

WORKSHOP
5:30 PM – 7:00 PM  SAN DIEGO CONVENTION CENTER, ROOM 31B
CHAIRS: T. Kwok, S. Lelièvre

When 3D cell culture is properly done the cells behave in a manner that allows their organization and function as in vivo. In this workshop participants will become familiar with the concepts used to place cells in an environment appropriate for their needs and for the study of interest, from simple contexts with one cell type, to complex tissue organization, with multiple cellular compartments. They will participate in interactive observations/analyses of cells in 3D culture and build platforms for organs-on-a-chip from kits. Upon completing the workshop, participants will understand why there can be many cell culture models depending on the scientific queries and technical capabilities, with materials ranging from sophisticated polymers to paper; and they will be better prepared to choose a model convenient for their needs.

Cryo-EM and Cryo-ET: Step-by-Step

WORKSHOP
5:30 PM – 7:00 PM  SAN DIEGO CONVENTION CENTER, ROOM 31A
CHAIRS: A. Leschziner, E. Villa

The “resolution revolution” has propelled Cryo-electron microscopy (Cryo-EM) and single-particle approaches as the structural technique of choice for tackling many biological problems. Similarly, technical advances are enabling cryo-electron tomography (Cryo-ET) to provide previously unachievable, high-resolution views of the cell interior. The two techniques are ushering a new era in structural biology, both at the molecular and cellular level. In this workshop, the advances that have made the revolution possible will be briefly introduced, and the workflow in each technique will be explained, step-by-step, using real data.

Storytelling and the Art of Giving a Good Presentation

WORKSHOP
5:30 PM – 7:00 PM  SAN DIEGO CONVENTION CENTER, ROOM 6B
Sponsored by ASBMB Public Outreach Committee

Storytelling is an essential component of communication, used by everyone from journalists to comedians to musicians to bring esoteric subjects to broad audiences. Mastering this skill requires not only topical knowledge but also creative flexibility and dexterity with language. This interactive session presented by the ASBMB Public Outreach Committee will lead participants through hands-on storytelling training, based on one of the modules from ASBMB’s training course, “The Art of Science Communication.”

Strategically Building Your CV at Every Career Stage

WORKSHOP
5:30 PM – 7:00 PM  SAN DIEGO CONVENTION CENTER, ROOM 6A
CHAIR: R. Booth
Sponsored by ASBMB Education and Professional Development Committee

Join in this hands-on workshop where attendees can discuss past or future experiences and how they link to a specific career path along with the best tools for marketing themselves. Workshop participants will be divided into groups based on their interests and career level and session speakers will facilitate the discussions within each group. While all career stages can benefit from this workshop, students, post-docs and early-career scientists are urged to attend. Your next job could depend on it.
Your Data, Magnified: Success in Scientific Publishing

WORKSHOP
5:30 PM – 7:00 PM  SAN DIEGO CONVENTION CENTER, ROOM 30E
CHAIR: K. Sakabe

Are you confident your data will stand the test of time?
Are you writing in a clear and compelling manner to engage readers?
Are you reaching the audience you and your research deserve?

Join us for this 90-minute workshop to get tips on collecting and presenting data, editing text for clarity and reach, and sharing your work. JBC wants to help you achieve your publication goals as part of our mission to bring enduring research to the scientific community.

ASBMB Annual Meeting Networking Reception

SOCIETY EVENTS
7:00 PM – 8:30 PM  CONVENTION CENTER, FOYER OUTSIDE ROOMS 30-31

Join us so we may thank you for being an ASBMB member or share with you the benefits of joining the Society! Meet and mingle with members of the ASBMB leadership, including Natalie Ahn, ASBMB President, Gerald Hart, ASBMB President-elect, and editorial board members from JBC, JLR and MCP, the Society’s three journals. Enjoy light refreshments while exploring research posters from recipients of the ASBMB Graduate Student Travel Awards, sponsored by the ASBMB Minority Affairs Committee.

ASBMB Members and Biochemistry registrants welcome.

Learn about our career and professional development resources

VISIT ASBMB BOOTH #1316
MONDAY
APRIL 23

243 Wake-Up! It's Trivia Time
SOCIETY EVENTS
7:00 AM – 7:45 AM SAN DIEGO CONVENTION CENTER, ROOM 6B
Sponsored by ASBMB Membership Committee
Calling all trivia junkies! Join your colleagues for a daily dose of trivia, music, fun and prizes! It's a lively way to jump-start your day — the complimentary coffee and nosh also helps! Prize values increase over the course of the meeting, so come back each morning for more challenges! ASBMB members and biochemistry registrants welcome.
Space is limited with first come, first served.

244 Avanti Award in Lipids
LECTURE
8:00 AM – 8:30 AM SAN DIEGO CONVENTION CENTER, ROOM 6B
Awardee introduction
8:05 244.1 Phospholipid Regulation of Inflammatory Processes and Viral Infection. D.R. Voelker, National Jewish Health

245 Mildred Cohn Award in Biological Chemistry
LECTURE
8:30 AM – 9:00 AM SAN DIEGO CONVENTION CENTER, ROOM 6B
Awardee introduction
8:30 245.1 The Origin Recognition Complex: Where It All Begins. L. Joshua-Tor, A. Tocilj, K. On, Z. Yuan, J. Sun, H. Li, B. Stillman, Cold Spring Harbor Laboratory, Howard Hughes Medical Institute and Brookhaven National Laboratory

246 Earl and Thressa Stadtman Young Scholar Award
LECTURE
9:00 AM – 9:30 AM SAN DIEGO CONVENTION CENTER, ROOM 6B
Awardee introduction
9:00 246.1 Visualizing Translation by Ensemble Cryo-EM. A. Korostelev, University of Massachusetts Medical School

211 Developing Your Core Message Statement/ “Elevator Speech”
WORKSHOP
9:00 AM – 10:00 AM SAN DIEGO CONVENTION CENTER, HALL D, CRC-I
You can talk about yourself as a professional scientist with confidence, clarity, and comfort as you advance your career. 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 helps open doors for connection, collaboration, and employment. This seminar will provide guidance in a safe place to develop and practice your statement.
SPEAKER: J. Lombardo, Med. Col. of Wisconsin and Marquette Univ.

www.asbmb.org/meeting2018
Goal Setting, Prioritizing, Time Management
WORKSHOP
9:00 AM – 10:00 AM  SAN DIEGO CONVENTION CENTER, HALL D, CRC-2

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.

SPEAKER: H. Adams, H.G. Adams & Assoc., Norfolk, VA

Networking and Getting Your Foot in the Door
WORKSHOP
9:00 AM – 10:00 AM  SAN DIEGO CONVENTION CENTER, HALL D, CRC-3

SPEAKER: J. Sterling, KGI, Claremont, CA

NIH F Awards: Navigating NIH Programs to Advance Your Career
WORKSHOP
9:00 AM – 10:30 AM  SAN DIEGO CONVENTION CENTER, ROOM 31A

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- an postdoctoral fellows and senior investigators.

SPEAKER: M. Matthews, NIH

Poster/Oral Presentation Practice & Mentoring Sessions
WORKSHOP
9:00 AM – 5:30 PM  SAN DIEGO CONVENTION CENTER, HALL D, PEER MENTOR POD

FASEB Diversity Resources Program will sponsor Presentation Practice & Mentoring Sessions beginning Saturday, April 21, to provide FASEB DREAM poster/oral presentation travel award recipients and other interested EB2018 student/postdoc attendees with an opportunity to practice their presentations and obtain feedback from designated Workshop Mentors/Coaches. If you would like to participate in the poster/oral presentation & mentoring sessions, sign-up by using the following link, www.experimentalbiology.org beginning Sunday, April 1.

Career Corner Sessions with Dr. Adams
WORKSHOP
9:00 AM – 5:30 PM  SAN DIEGO CONVENTION CENTER, HALL D, CAREER CORNER

Drop in for one-on-one or group sessions for career counseling/career planning sessions with Dr. Howard G. Adams in between his presentations in the EB2018 Career Center. Dr. Adams will be available in the “Career Corner” in the EB2018 Career Center located in Hall D beginning on Saturday, April 21.
**One-on-One Resume Critique/CV, Career Counseling, Essay Personal Statement Assessments**

**WORKSHOP**

9:00 AM – 5:30 PM  SAN DIEGO CONVENTION CENTER, HALL D, CAREER COUNSELING ROOM

Sign-up for one-on-one sessions for CV/resume critiques, career counseling, and essay/personal statement assessments will begin on Saturday, April 21. If you're interested in a one-on-one, advance sign up will start on Sunday, April 1. Click on www.experimentalbiology.org to schedule your session.

**Career Opportunities in Science Communications**

**WORKSHOP**

10:00 AM – 11:00 AM  SAN DIEGO CONVENTION CENTER, HALL D, CRC-3

SPEAKER: E. Hayden, Univ. of California, Santa Cruz

**Adapting Protesostasis to Ameliorate Neurodegenerative Diseases**

**SYMPOSIUM**

10:00 AM – 12:00 PM  SAN DIEGO CONVENTION CENTER, ROOM 6C

CHAIR: J. W. Kelly

10:00  247.1 Targeting Protein-Protein Interactions in Chaperone Complexes to Normalize Proteostasis.  
J.E. Gestwicki, University of California and San Francisco

10:30  247.2 Adapting the Chemistry and/or Biology of Proteostasis to Ameliorate Protein Aggregation Diseases.  
J.W. Kelly, Scripps Research Institute

11:00  247.3 Systemic Misfolding of Immunoglobulins in the Test Tube and in the Cell.  

11:30  247.4 Regulation of Functional Proteome by the Heat Shock Response and Proteostasis Network.  
R.I. Morimoto, Northwestern University

**Communicating Scientific Ideas to Novice Audiences**

**SYMPOSIUM**

10:00 AM – 12:00 PM  SAN DIEGO CONVENTION CENTER, ROOM 6A

CHAIR: R. Booth

Sponsored by ASBMB Education and Professional Development Committee

Have you ever been the expert in the room trying to explain your scientific ideas or findings and your audience just does not get your message or gets the wrong message? Whether in a symposium, group meeting, classroom, or interview, effectively telling your scientific story to others is vitally important to a successful career. This session brings together speakers from diverse backgrounds to discuss communicating science effectively to non-expert groups. Even experienced communicators will benefit from the cross-disciplinary interactions in this session.

10:00  Chair’s introduction.

10:05  Using Molecular Visualization with the Public—Making a Picture = 1000 Words.  
Paul Craig, Rochester Inst. of Tech.

10:25  Using the Three Minute Thesis for Interviews, Outreach and Networking.  
Nana Lee, Univ. of Toronto

10:45  Communicating Science in Politicized Environments.  
Arthur Lupia, Univ. of Michigan

11:05  Panel discussion.
249 **Glycobiology and Functional Glycomics**

**SYMPOSIUM**

**10:00 AM – 12:00 PM**  SAN DIEGO CONVENTION CENTER, ROOM 6D

CHAIR: L. C. Hsieh-Wilson

- **10:00**  249.1 Precisely Heterogeneous — The Making of N-Glycoproteins.  M. Aebi, ETH Zürich, Switzerland
- **10:30**  249.2 Mapping the O-Glcnac-Cytoprotective Network.  N. Zachara, J. Groves, C. Guo, M. Martinez, K. Fahie, C. McKen, A. Maduka, R. O’Meally, R. Cole, John Hopkins University School of Medicine
- **11:00**  249.3 Cracking the Glycocode: Finding the Signal in the Noise.  L.K. Mahal, New York University
- **11:30**  249.4 A Systems-Level Understanding of Glycosylation Signaling Networks.  L.C. Hsieh-Wilson, California Institute of Technology

250 **New Insights into the Links between Metabolism and Disease**

**SYMPOSIUM**

**10:00 AM – 12:05 PM**  SAN DIEGO CONVENTION CENTER, ROOM 6F

CHAIR: L. C. Cantley

Features the Bert and Natalie Vallee Award in BioMedical Sciences (2017) lecture.

- **10:00**  Bert and Natalie Vallee Award in BioMedical Sciences (2017) awardee introduction
- **10:05**  250.1 Corralling Pancreatic Cancer Through Epigenetic Reprogramming.  R.M. Evans, C. Antal, M. Truitt, G. Liang, M. Sherman, P. O’Dwyer, J. Drebin, M. Downes, D. Tuveson, The Salk Institute for Biological Studies, Perelman School of Medicine, University of Pennsylvania, Memorial Sloan Kettering Cancer Center, Cold Spring Harbor Laboratory and Howard Hughes Medical Institute
- **10:35**  250.2 Metabolism, Inflammation, and Tumor Progression.  M.C. Simon, Perelman School of Medicine and University of Pennsylvania
- **11:05**  250.3 The Role of Altered Metabolic States in Cancer and Other Human Diseases.  R.J. DeBerardinis, The University of Texas Southwestern Medical Center
- **11:35**  250.4 Obesity, Insulin Resistance and Cancer: The Pi3k Connection.  L.C. Cantley, Weill Cornell Medicine and Cornell University

251 **Regenerative Medicine**

**SEBM SYMPOSIUM**

**10:00 AM – 12:00 PM**  SAN DIEGO CONVENTION CENTER, ROOM 14A

CHAIR: J. Kang

Guest Society: Society for Experimental Biology and Medicine

- **10:00**  Neuronal growth cone molecular machinery controlling brain circuit-specific development and diversity, toward regeneration: “Subcellular RNA-proteome mapping”.  Jeffrey Macklis, Harvard Univ.
- **10:50**  Intraoperative Bioprinting of Composite Tissues for Craniofacial Reconstruction.  Ibrahim Ozbolat, Penn State Univ.
- **11:15**  Regeneration of Synovial Joints in Zebrafish.  Gage Crump, USC
- **11:40**  General discussion.
252 RNA in Human Disease
ISSUES IN DEPTH
10:00 AM – 12:00 PM SAN DIEGO CONVENTION CENTER, ROOM 1AB
Sponsored by ASBMB Minority Affairs Committee

10:00 252.1 Understanding and Targeting Spliceosomal Gene Mutations in Cancer. O.I. Abdel-Wahab, Memorial Sloan Kettering Cancer Center

10:30 252.2 RNA and RNP Structures that Contribute to Viral Pathogenesis. B.S. Tolbert, Case Western Reserve University

11:00 252.3 Context-Dependent and Disease-Specific Diversity in Stress Granules Formed from Pre-Existing Protein Interactions. G.W. Yeo, S. Markmiller, S. Soltanieh, K.L. Server, R. Mak, W. Jin, M.Y. Fang, E-C. Luo, F. Krach, D. Yang, A. Sen, A. Fulzele, J.M. Wozniak, D.J. Gonzalez, M.W. Kankel, F-B. Gao, E.J. Bennett, E. Lécuyer, University of California, San Diego, Institut de Recherches Cliniques de Montréal, Canada, National University of Singapore, Singapore, University of Massachusetts Medical School, Biogen and Université de Montréal, Canada

11:30 252.4 Dynamic Mechanisms of Xist RNA Localization in Female Lymphocytes: A New Form of X-Chromosome Inactivation Maintenance. M.C. Anguera, C. Syrett, University of Pennsylvania

253 Systems Biology and Proteomics
SYMPOSIUM
10:00 AM – 12:00 PM SAN DIEGO CONVENTION CENTER, ROOM 6E
CHAIR: I. M. Cristea

10:00 253.1 New Approaches for Localization of Proteins and Interaction Partners in Cells with High Spatial Resolution. S.A. Carr, N. Udeshi, S. Myers, Broad Institute of Massachusetts Institute of Technology and Harvard

10:30 253.2 From Petabytes to Molecular Insights: Building an Operating System for Cancer. K. White, University of Chicago

11:00 253.3 Virion Display (Vird) Approach to Characterizing Non-Odorant Gpcrs in Humans. H. Zhu, P. Desai, G-D. Syu, John Hopkins University School of Medicine and Johns Hopkins University

11:30 253.4 Hybrid Experimental-Mathematical Methods for Probing Dynamic Proteome Organization During Viral Infections. I.M. Cristea, Princeton University

WORKSHOP
10:30 AM – 11:30 AM SAN DIEGO CONVENTION CENTER, HALL D, CRC-I

So you’ve landed a job offer for an industry scientist position! Now, how do you know if the compensation package is competitive, and how do you ask for more? In this seminar you will learn how to:
• Separate out the typical components of an industry job offer letter, so you know what to ask for
• Determine if an offer is competitive and when to ask for more—Ask for additional compensation in a way that represents your interests while maintaining positive relationships.

(This is Part 3 of a 3-part series. Each seminar can be taken separately but together they provide comprehensive information about the industry job search process.)

Speaker: B. Linsdale, UCSF
216 **Identifying Your Options using MyIPD + LinkedIn**

**WORKSHOP**

**10:30 AM – 11:30 AM**  SAN DIEGO CONVENTION CENTER, HALL D, CRC-2

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.

**SPEAKER:** A. Green, Univ. of California, Berkeley

221 **NIH K Awards: Navigating NIH Programs to Advance Your Career**

**WORKSHOP**

**11:30 AM – 1:00 PM**  SAN DIEGO CONVENTION CENTER, HALL D, CRC-3

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.

**SPEAKER:** M. Matthews, NIH

217 **Constructing Your Elevator Pitch Workshop (presented by ASBMB Outreach Committee)**

**WORKSHOP**

**12:00 PM – 1:00 PM**  SAN DIEGO CONVENTION CENTER, HALL D, CRC-2

This interactive workshop will guide you through the process of creating and delivering an effective statement. Presenters will discuss real-life approaches to communication that work (and don’t work) and offer plenty of opportunities for practice and feedback. The skills you’ll gain are not just valuable for communicating with the lay public but with other academics, government officials and potential employers as well.

**SPEAKER:** TBD ASBMB Outreach Committee, TBD

**ASBMB Poster Presentations**

**POSTER SESSIONS**

**12:15 PM – 2:15 PM**  SAN DIEGO CONVENTION CENTER, EXHIBIT HALLS A-D

Refer to pages 88 – 105 for presentation details.

**ASBMB Meet the Speakers**

**SOCIETY EVENTS**

**12:30 PM – 1:00 PM**  SAN DIEGO CONVENTION CENTER, EXHIBIT HALL, ACROSS FROM ASBMB BOOTH 1316

Visit the ASBMB Lounge (Exhibit Hall across from ASBMB Booth #1316) to meet the morning presenters and continue the scientific discussion — a GREAT networking opportunity for all. Also visit the daily posters while you’re in the exhibit hall.

WORKSHOP
1:00 PM – 2:00 PM
SAN DIEGO CONVENTION CENTER, HALL D, CRC-1

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. After this seminar you will understand how to conduct the four job hunting techniques that comprise a comprehensive job search in the biotech industry.

(THE IS PART 1 OF A 3-PART SERIES. EACH SEMINAR CAN BE TAKEN SEPARATELY BUT TOGETHER THEY PROVIDE COMPREHENSIVE INFORMATION ABOUT THE INDUSTRY JOB SEARCH PROCESS.)

SPEAKER: B. Lindstaedt, UCSF

Building Your Job Search Skills: Networking & Information Interviews

WORKSHOP
1:00 PM – 2:00 PM
SAN DIEGO CONVENTION CENTER, HALL D, CRC-2

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.

SPEAKER: A. Green, Univ. of California, Berkeley

Successful Behaviors for Winning An Interview

WORKSHOP
1:00 PM – 2:00 PM
SAN DIEGO CONVENTION CENTER, HALL D, CRC-3

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.

SPEAKER: J. Blumenthal, Montgomery Col., Rockville, MD and Univ. of Maryland Univ. Col., Adelphi, MD

ASBMB Meet the Speakers

SOCIETY EVENTS
1:30 PM – 2:00 PM
SAN DIEGO CONVENTION CENTER, EXHIBIT HALL, ACROSS FROM ASBMB BOOTH 1316

Visit the ASBMB Lounge (Exhibit Hall across from ASBMB Booth #1316) to meet the morning presenters and continue the scientific discussion — a GREAT networking opportunity for all. Also visit the daily posters while you’re in the exhibit hall.
Making The Case for Graduate School
WORKSHOP
2:00 PM – 3:00 PM  SAN DIEGO CONVENTION CENTER, HALL D, CRC-2
Advanced degree level training has emerged as a key requirement for garnering positions of leadership in academia, government, and industry and for careering 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.
SPEAKER: H. Adams, H.G. Adams & Assoc., Norfolk, VA

Job Search in Academia & Industry
WORKSHOP
2:30 PM – 3:30 PM  SAN DIEGO CONVENTION CENTER, HALL D, CRC-1
Are you on the market for both academic and industry jobs, but aren’t 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.
SPEAKER: D. Behrens, Univ. of California, Berkeley

Career Opportunities in Science Communications
WORKSHOP
2:30 PM – 3:30 PM  SAN DIEGO CONVENTION CENTER, HALL D, CRC-3
SPEAKER: E. Hayden, Univ. of California, Santa Cruz

ASBMB Accreditation Program Q&A
WORKSHOP
2:30 PM – 3:30 PM  SAN DIEGO CONVENTION CENTER, EXHIBIT HALL, ACROSS FROM ASBMB BOOTH 1316
What does ASBMB accreditation mean for your department or program? What are the requirements for accreditation? What are the application procedures? How will ASBMB accreditation benefit your program and students? Join us to find out answers to these questions and more at our informal Q&A session.

ASBMB Communication Training Program Q&A
WORKSHOP
2:30 PM – 3:30 PM  SAN DIEGO CONVENTION CENTER, EXHIBIT HALL, ACROSS FROM ASBMB BOOTH 1316
In order to better prepare and motivate our members to get involved with public engagement activities, the Public Outreach Committee is developing a comprehensive communications program. The training offered through this program are available in both online and in-person formats for ASBMB members. Interested in learning more? Join us for this information Q&A.
**Chromatin Regulation of Gene Expression**

**SPOTLIGHT SESSION**

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Speakers</th>
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<tbody>
<tr>
<td>2:30 PM</td>
<td>Elucidating Epigenetic Readers of H3t45ph in S. Cerevisiae.</td>
<td>P. Grant, C. Lee, M. Pray-Grant, S. Bekiranov, University of Virginia School of Medicine</td>
</tr>
<tr>
<td>2:45 PM</td>
<td>Determining the Enhancer Proteomes in Primary Cells and Native Tissue.</td>
<td>D. Steger, D. Cohen, J. Remsberg, S. Sidoli, B. Garcia, University of Pennsylvania</td>
</tr>
<tr>
<td>3:15 PM</td>
<td>Discovering and Exploiting Selectivity in BET Tandem Bromodomain Recognition of Epigenetic Lysine Acylation.</td>
<td>B.C. Smith, M.D. Olp, D.J. Sprague, Medical College of Wisconsin</td>
</tr>
<tr>
<td>3:30 PM</td>
<td>Aging Photoreceptors: Light, Stress and Transcription.</td>
<td>V.M. Weake, Purdue University</td>
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**Emerging Antibiotics from Nature**

**SPOTLIGHT SESSION**

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<tr>
<th>Time</th>
<th>Title</th>
<th>Speakers</th>
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<tr>
<td>2:30 PM</td>
<td>Ni(II) Uptake by Yersiniaibactin, a Metallophore Produced by Uropathogenic e. Coli.</td>
<td>A.E. Robinson, J.E. Lowe, E-I. Koh, J.P. Henderson, Washington University School of Medicine in St. Louis</td>
</tr>
<tr>
<td>2:45 PM</td>
<td>Structural and Functional Large Substrate Binding in Iterative Non-Ribosomal Peptide Synthesis Independent Synthesis (NIS) Enzymes.</td>
<td>K.M. Hoffmann, California Lutheran University</td>
</tr>
<tr>
<td>3:00 PM</td>
<td>Directed Evolution of an Adenylation Domain Specificity Code.</td>
<td>V. Vinnik, K. Throckmorton, T.B. Cook, B.F. Pfleger, M.G. Thomas, University of Wisconsin–Madison</td>
</tr>
<tr>
<td>3:30 PM</td>
<td>Beta-Lactam and Beta-Lactone Antibiotics from Plant Microbiomes.</td>
<td>T. Wencewicz, Washington University in St. Louis</td>
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**New Frontiers in Substrate Metabolism**

**SPOTLIGHT SESSION**

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<tr>
<th>Time</th>
<th>Title</th>
<th>Speakers</th>
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<tbody>
<tr>
<td>2:30 PM</td>
<td>Mechanism of Obesity Suppression by Adipose Tissue Creatine Energetics.</td>
<td>L. Kazak, G.Z. Lu, B.M. Spiegelman, McGill University, Canada and Dana-Farber Cancer Institute</td>
</tr>
<tr>
<td>2:45 PM</td>
<td>Mogat1 Is a Fasting-Induced PPAR a Target Gene That Plays a Role in Coordinating the Hepatic Response to Food Deprivation.</td>
<td>A.J. Lutkewitte, K.S. McComis, K.T. Chambers, M.J. Graham, A.M. Hall, B.N. Finck, Washington University School of Medicine in St. Louis and Ianis Pharmaceuticals Inc.</td>
</tr>
<tr>
<td>3:00 PM</td>
<td>Deletion of Muscle Acsl1 Caused Myopathy and Fiber Switch.</td>
<td>L. Zhao, L. Bacudio, A.L. Suchanek, P.A. Young, F. Pascual, R.A. Coleman, University of North Carolina at Chapel Hill</td>
</tr>
<tr>
<td>3:15 PM</td>
<td>Mtor Signaling in Adipose Tissue Influences Systemic Lipid Metabolism.</td>
<td>R.J., J.B. A., University of Pennsylvania</td>
</tr>
<tr>
<td>3:30 PM</td>
<td>Monomethyl Branched Chain Fatty Acids Link Mitochondrial Amino Acid Metabolism and Adipose Tissue Lipogenesis to Fatty Acid Diversity.</td>
<td>M. Wallace, C. Green, L. Roberts, M. Lee, P. Cabrales, J. Ayres, D. Nomura, R. Loomba, C. Metallo, University of California, San Diego, University of California, Berkeley and Salk Institute</td>
</tr>
</tbody>
</table>
259 **Plant Metabolism and Photosynthesis**  
**SPOTLIGHT SESSION**  
2:30 PM – 3:45 PM  
SAN DIEGO CONVENTION CENTER, ROOM 30D  
CHAIR: J. C. Cameron  

2:30 259.1 "Exploring the Regulation of Photosynthesis in Single-Cell Lineages at Sub-Cellular Resolution".  
J.C. Cameron, University of Colorado Boulder  

2:45 Effects of a Sethoxydim-Based Herbicide on the Photosynthetic Capacity of Chlorella Vulgaris, a Non-Target Organism.  

3:00 The Rising of Acylsugar Diversity: Metabolic Innovation in Tomato Trichomes Through Bahd Enzyme Promiscuity and Pathway Evolution.  
P. Fan, A.M. Miller, A.D. Jones, X. Liu, R.L. Last, Michigan State University  

X. Mao, V.M. Weake, C.C.S. Chapple, Purdue University  

3:30 Increasing Seed Iron Content by Gene Manipulation in Arabidopsis.  
Z. Ghalamkari, T.J. Buckhout, Humboldt Universität zu Berlin, Germany

260 **Protein Folding: The Good, the Bad and the Disordered**  
**SPOTLIGHT SESSION**  
2:30 PM – 3:45 PM  
SAN DIEGO CONVENTION CENTER, ROOM 30E  
CHAIR: J. E. Kim  

2:30 The Intrinsically Disordered PsbO Subunit of Photosystem II: Structure and Role in Photosynthetic Water Oxidation.  
B.A. Barry, U. Brahmachari, C.E. Obi, J.N. He, Georgia Institute of Technology  

2:45 Non-Native Structure Present in the Unfolded Ensemble May Initiate Aggregation of Als Variants of Superoxide Dismutase (Sod1).  
N. Cohen, O. Bilsel, C.R. Matthews, University of Massachusetts Medical School  

3:00 Initially Disordered, Reflectin Assembly Tunably and Reversibly Drives Biophotonic Color.  
R. Levenson, C. Bracken, C. Sharma, J. Santos, C. Arata, D.E. Morse, University of California and Santa Barbara  

3:15 Nmr Structural Studies of Membrane Proteins in Bilayer Environments.  
J. Radoicic, S. H. Park, S.J. Opella, University of California and San Diego  

3:30 260.1 Folding of a Membrane Protein into Nanodiscs.  
D.K. Asamoto, J.E. Kim, University of California and San Diego

261 **Proteomics and Lipidomics: Methods and Applications for Human Disease**  
**SPOTLIGHT SESSION**  
2:30 PM – 3:45 PM  
SAN DIEGO CONVENTION CENTER, ROOM 31A  
CHAIR: A. Nita-Lazar  

2:30 261.1 Targeted Proteomics-Driven Computational Modeling of Macrophage Microbial Sensing Pathways.  
A. Nita-Lazar, N.P. Manes, J.M. Mann, P. Kaplan, M. Meier-Schellersheim, I.D. C. Fraser, R.N. Germain, National Institute of Allergy and Infectious Diseases and National Institutes of Health  

2:45 261.2 Quantitative Phosphoproteomic Analysis of Feedback Networks in T Cell Signaling.  
A. Salomon, J. Belmont, Q. Ji, Brown University  

3:00 Mass Spectrometry of Single Mammalian Cells Quantifies Proteome Heterogeneity During Cell Differentiation.  
E. Levy, B. Budnik, N. Slavov, Northeastern University and Harvard University  

3:15 An Aptamer-Based Approach to Assess the Human Plasma Proteome for Pre-Analytical Variability.  

3:30 Advancement in Atopic Dermatitis Research Through the Use of a Novel Skin Tape Strip Mass Spectrometry Based Processing Protocol.  
E. Berdyshew, E. Goleva, L. Bronova, M.A. Seibold, J. Jung, D.Y.M. Leung, National Jewish Health
262 Redox Enzymes

SPOTLIGHT SESSION

2:30 PM – 3:45 PM  SAN DIEGO CONVENTION CENTER, ROOM 31C

CHAIR: K. Johnson-Winters

2:30  A Novel Radical SAM Mechanism Mediated by the Interferon-Inducible Protein Viperin.

2:45  Determining the Active Site Base and Order of Substrate Addition Within F420-Dependent Glucose-6-Phosphate Using Steady-State and Pre Steady-State Kinetics and Isotope Effects Methods.
K. Johnson-Winters, M. Oyugi, L. Davis, G. Bashiri, E.N. Baker, The University of Texas at Arlington and University of Auckland, New Zealand

3:00  A Bacterial Flavin-Dependent Oxidoeductase That Captures Carbon Dioxide into Biomass.
J. Mattice, B. Streit, G. Prussia, J. Peters, J. DuBois, Montana State University and Washington State University

3:15  Dissecting the Molecular Basis of a Phenylketonuria-Causing Mutation in Phenylalanine Hydroxylase.
C.A. Khan, S.P. Meisburger, N. Ando, P.F. Fitzpatrick, The University of Texas Health Science Center and Princeton University

3:30  Deciphering the Effect of Salts on Bilirubin Oxidases Activity.
E. Roussarie, S. Bichon, G. Perrière, N. Mano, C. Stines-Chaumeil, National Center for Scientific Research, France

263 Alice and C.C. Wang Award in Molecular Parasitology Symposium

AWARD SYMPOSIUM

2:30 PM – 5:15 PM  SAN DIEGO CONVENTION CENTER, ROOM 31B

CHAIR: E. A. Winzeler

2:30  Awardee introduction

2:35  263.1 Using in Vitro Evolution and Chemogenomics to Explore the Malaria Parasite Drug-Able Genome.
E.A. Winzeler, University of California and San Diego School of Medicine

3:00  1+1=1: targeting endosymbiosis for antimalarial drug discovery.
E. Yeh, Stanford Univ.

A. Odom John, Washington Univ. St. Louis

3:50  Molecular and structural mechanisms of malaria parasite invasion.
W.-H. Tham, Walter and Eliza Hall Inst., Australia

4:15  General discussion.

264 Environmental Health, Biomarkers and Precision Medicine

SEBM SYMPOSIUM

3:00 PM – 5:00 PM  SAN DIEGO CONVENTION CENTER, ROOM 14A

CHAIRS: B. Slikker, S. Cormier

Guest Society: Society for Experimental Biology and Medicine

3:00  Precision Prevention.
Kenneth Ramos, Univ. of Arizona

Ruth Roberts, Birmingham Univ., UK

Jennifer Wilson, Stanford Univ.

4:15  Discussion.
Ten Ways to Get Lucky in the Job Search
WORKSHOP
3:30 PM – 4:30 PM  SAN DIEGO CONVENTION CENTER, HALL D, CRC-2
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.

3:30  P. Clifford, J. Lombardo, Univ. of Illinois at Chicago, Med. Col. of Wisconsin and Marquette Univ.

Job Hunting in Biotech Part 2: Interviewing for Scientist Positions
WORKSHOP
4:00 PM – 5:00 PM  SAN DIEGO CONVENTION CENTER, HALL D, CRC-1
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. 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 an end the interview experience with poise and professionalism.

(This is Part 2 of a 3-part series. Each seminar can be taken separately but together they provide comprehensive information about the industry job search process.)

SPEAKER: B. Lindstaedt, UCSF

Making the Grade: Job Talk/Chalk Talk
WORKSHOP
4:00 PM – 5:00 PM  SAN DIEGO CONVENTION CENTER, HALL D, CRC-3
SPEAKER: D. Behrens, Univ. of California, Berkeley

BMB Education: Active Learning
SPOTLIGHT SESSION
4:00 PM – 5:15 PM  SAN DIEGO CONVENTION CENTER, ROOM 31C
CHAIR: M. Payne
Sponsored by ASBMB Education and Professional Development Committee

4:00  Using an Innovative Approach to Teach Students How to Communicate About Scientific Topics to Non-Scientists.  M.A. Rowland-Goldsmith, M. Bisoffi, Chapman University

4:15  Scaffolding Soft-Skill Development Into a Two-Semester Undergraduate Laboratory Course.  D.P. Grilley, T.M. Weaver, University of Wisconsin–La Crosse

4:30  Increasing Active Learning in the Biochemistry Classroom: Using Group Quizzes to Stimulate Discussion.  L.J. Moore, Monmouth College

4:45  When Active Learning Fails: How Faculty Beliefs Inform Their Teaching and Influence Student Outcomes.  S.M. Lo, University of California and San Diego

DNA Replication Initiation, Progression and Termination

SPOTLIGHT SESSION

4:00 PM – 5:15 PM  
SAN DIEGO CONVENTION CENTER, ROOM 30B

CHAIR: D. Smith

4:00  
A Novel Role of the Human Cst Complex in Regulating the DNA Damage Response.  
J.A. Stewart, S.M. Ackerson, University of South Carolina

4:15  
The Highly Conserved Proteins Nucleolin and Sub1 Play Critical Roles in Regulating G4 DNA-Induced Genome Instability.  
N. Kim, The University of Texas Health Science Center at Houston

4:30  
Multisubunit Multiactive Site DNA Polymerase Complexes with Coordinated Activities.  
M.A. Trakselis, Baylor University, University of Toronto, Canada and International Foundations of Medicine, Italy

4:45  
Cdt1 Variants Offer Novel Insights into Cdt1-Mcm Interactions and an Unexpected Mechanism for Cyclin A to Block DNA Re-Replication.  
P.N. Pozo, Y. Cole, J. Matson, Y. Zhuo, B. Temple, J.G. Cook, University of North Carolina at Chapel Hill

5:00  
Molecular Insights into Replication-Associated Genome Instabilities Caused by CST Deficiency.  
W. Chai, Washington State University

Glycoimmunity

SPOTLIGHT SESSION

4:00 PM – 5:15 PM  
SAN DIEGO CONVENTION CENTER, ROOM 30C

CHAIR: C. L. Leimkuhler-Grimes

4:00  
Molecular and Structural Recognition of Listeria Cell-Wall Glycopolymers by Bacteriophage-Encoded SH3b Domains.  
Y. Shen, I. Kalograiak, A. Prunotto, M. Dunne, E. Sumrall, F.J. Cañada, M. Loessner, ETH Zürich, Switzerland, Centro de Investigaciones Biológicas, Spain and Faculdade de Medicina Universidade de Lisboa, Switzerland

4:15  
Rapid Evolution of Bacterial Exotoxin B Subunits Independent of a Subunits: Sialic Acid Binding Preferences Correlate with Host Range and Intrinsic Toxicity.  
N. Khan, A. Verhagen, Z. Khedri, S. Diaz, N. Varki, A. Paton, T. Beddoe, J. Paton, A. Varki, University of California, San Diego, University of Adelaide, Australia and La Trobe University, Australia

4:30  
Elevated O-GlcNAc Exacerbates Pro-Inflammatory Cytokine Secretion from Cd4+ T Cells.  
M. Machacek, J. Li, T. Li, T. Lydic, C. Slawson, P. Fields, University of Kansas Medical Center and Michigan State University

4:45  
Role of the Kdo Glycosyltransferase Kpss in the Biosynthesis of the Polysialyltransferase Acceptor for escherichia Coli K1.  
N. Lanz, V. Thon, W. Yann, U.S. Food and Drug Administration

5:00  
Use of Bioorthogonal N-acetylcysteamine (SNAC) Analogues and Peptidoglycan O-acetylttransferase B (PatB) to Label Peptidoglycan.  
K.M. Lazor, Y. Wang, K.E. DeMeester, H. Liang, T.K. Heiss, C.L. Grimes, University of Delaware

Visit ASBMB Booth #1316
Ask how you can receive a complimentary membership and a free gift!
268 Lipid and Protein Organization in Membranes
SPOTLIGHT SESSION
4:00 PM – 5:15 PM SAN DIEGO CONVENTION CENTER, ROOM 30D
CHAIR: S. L. Veatch


4:30 Interorganelar Phosphatidylserine Transfer by Sec14 Family Protein Sfh1 in Saccharomyces Cerevisiae. A. Mizuike, S. Kobayashi, H. Horiuchi, A. Ohta, R. Fukuda, The University of Tokyo, Japan and Chubu University, Japan

4:45 Regulating a G Protein-Coupled Receptor by Topological Inversion Through Regulated Alternative Translocation. B. Denard, The University of Texas Southwestern Medical Center

5:00 268.1 Probing Membrane-Mediated Forces Between Proteins in Cells Using Super-Resolution Fluorescence Localization Imaging. S. L. Veatch, S. A. Shelby, University of Michigan

269 Molecular Tools to Study Cell Signaling
SPOTLIGHT SESSION
4:00 PM – 5:15 PM SAN DIEGO CONVENTION CENTER, ROOM 30E
CHAIR: M. Tantama

4:00 Revealing Subcellular Redox Dynamics with Multiplex Imaging of Compartment-Specific Redox Probes. M. Tantama, J. Norley, S. Radhakrishnan, M. Rajendran, Purdue University

4:15 Spatial Compartmentalization of Akt/mTOR Signaling: What Happens in the Nucleus. X. Zhou, Y. Zhong, J. Zhang, J. Y.-J. Shyy, J. Zhang, University of California and San Diego

4:30 Temporal Control of Growth Factor-Mediated Signaling Pathways During Cell Differentiation and Xenopus Embryonic Development. P. Mondal, V. V. Krishnamurthy, J. Khamo, S. Sharum, K. Zhang, University of Illinois at Urbana-Champaign

4:45 Allosteric Regulation of Protein Kinases Using Optogenetics. M. Shaaya, V. Huyot, A. Zhurikhina, D. Tsyrankov, V. Natarajan, A. Karginov, University of Illinois at Chicago and Georgia Institute of Technology

5:00 Planar Enteroids Reveal an Autonomous Wnt and Bmp Circuit Controlling Intestinal Epithelial Growth and Organization. C. A. Thorne, I. W. Chen, L. E. Sanman, M. H. Cobb, L. F. Wu, S. J. Altschuler, University of Arizona, University of California, San Francisco and The University of Texas Southwestern Medical Center

270 Obesity, Metabolism and Immune Cells in Cancer
SPOTLIGHT SESSION
4:00 PM – 5:15 PM SAN DIEGO CONVENTION CENTER, ROOM 31A
CHAIR: L. Makowski

4:00 CD8+ T Cells Regulate Liver Injury in Obesity-Related Nonalcoholic Fatty Liver Disease. A. Kennedy, C. Pacheco, M. K. Washington, A. Hasty, Vanderbilt University, Seattle Children’s Hospital and Vanderbilt University Medical Center

4:15 The Role of Effective Energy Restriction on Metastatic Tumor Growth. T. Roy Sarkar, N. Sphyris, E. Schmitt, G. Wyatt, S. Wall, W. Porter, Texas A&M University and Independent Researcher, United Kingdom

4:30 Time-Restricted Feeding Attenuates Breast Cancer Growth in a Mouse Model of Postmenopausal Obesity. M. Das, E. Gross, D. Kumar, C. Sauceda, H. T. Park, D. Sears, L. Ellies, N. Webster, University of California and San Diego

4:45 Biosynthesis of Acyl-CoA Sustains Prostate Cancer Progression. H. Cai, Y. Ma, University of Georgia

5:00 270.1 Myeloid-Specific Glut1 Ablation Attenuates Mammary Gland Inflammation and Claudin-Low Breast Cancer Progression. G. A., M. T. A., S. H. D., University of North Carolina and University of Tennessee Health Science Center
271 **Strange Microbial Transformations**

**SPOTLIGHT SESSION**

4:00 PM – 5:15 PM  SAN DIEGO CONVENTION CENTER, ROOM 30A

CHAIR: M. R. Seyedsayamdost

4:00  **Biosynthesis of Nonproteinogenic Amino Acids Oxyvinylglycines.**  B. Li, J.B. Patteson, Z.D. Dunn, University of North Carolina at Chapel Hill

4:15  **Evidence for Control of Metabolite Flux Through a Bacterial Heme Biosynthetic Pathway.**  A.I. Celis, J. Choby, E. Skaar, J. DuBois, Montana State University and Vanderbilt University Medical Center

4:30  **271.1 New RiPP Family Incorporates Alpha-N-Methylations into Ribosomally Encoded Peptide Natural Products.**  M. Freeman, University of Minnesota

4:45  **Biosynthesis of Non-Ribosomal Peptide Beta-Lactones by Plant-Associated *Pseudomonas Fluorescens.***  J. Schaffer, T. Wenczewicz, Washington University in St. Louis

5:00  **271.2 Eliciting Cryptic Secondary Metabolites Using Antibiotics.**  M.R. Seyedsayamdost, Princeton University

228 **Attitude & Behaviors: How Are You Perceived**

**WORKSHOP**

4:30 PM – 5:30 PM  SAN DIEGO CONVENTION CENTER, HALL D, CRC-2

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.

SPEAKER: J. Blumenthal, Montgomery Col., Rockville, MD and Univ. of Maryland Univ. Col., Adelphi, MD

272 **Molecular Visualization**

**WORKSHOP**

5:30 PM – 7:00 PM  SAN DIEGO CONVENTION CENTER, ROOM 6A

CHAIR: M. Payne

Sponsored by ASBMB Education and Professional Development Committee

This workshop will present to scientists of all levels the practical knowledge for how to communicate molecular structure/ function using low-cost, but powerful methods. Techniques for using molecular visualization software to effectively convey structural features will be demonstrated. Included will be a sample of virtual reality technology that has been shown to enhance understanding of molecular structures.

273 **Optogenetics and Molecular Sensors: Tools and Applications**

**WORKSHOP**

5:30 PM – 7:00 PM  SAN DIEGO CONVENTION CENTER, ROOM 31B

CHAIR: K. Hahn, M. Lin

This workshop will describe new approaches to visualize and manipulate proteins in living cells, including broadly applicable methods to control proteins with light, and approaches to visualize signaling at the single molecule level. Chemogenetic and optogenetic approaches will be discussed, as will engineering allosteric responses to confer protein control by small molecules.
926 Research Support Opportunities at NSF in the BIO-Integrative Organismal Systems (IOS) and Molecular and Cellular Biosciences (MCB)

WORKSHOP
5:30 PM – 7:00 PM  SAN DIEGO CONVENTION CENTER, ROOM 31A
Sponsored by National Science Foundation

This presentation will highlight funding opportunities managed by the Divisions of IOS and MCB within the NSF’s Directorate for Biological Sciences (BIO). New and ongoing NSF-BIO programs, including interdisciplinary and cross-directorate programs, and the new no-deadline process for core research proposals will be covered, followed by a Q&A session for participants.

SPEAKERS: K. Dickson, Div. of Integrative Organismal Systems, NSF, M. Rawat, Div. of Integrative Organismal Systems, NSF, R. Cyr, Div. of Molecular and Cellular Biosciences, NSF, A. Le-Pham, Science Assistant, NSF

274 Supported Lipid Membranes and Nanodiscs

WORKSHOP
5:30 PM – 7:00 PM  SAN DIEGO CONVENTION CENTER, ROOM 30D
CHAIRS: S. Sligar, L. K. Tamm

This workshop will introduce attendants to the preparation and use of supported membranes and nanodiscs in research of membrane proteins, lipids, and interactions between them. Two leaders of the field will give broad overviews and practical advice on the use of these relatively new and surging fields of membrane research. Ample time will be allowed for discussion of these techniques with attendants, who will be encouraged to also share their experiences with these systems.

275 Transforming Science Research into Science Outreach

WORKSHOP
5:30 PM – 7:00 PM  SAN DIEGO CONVENTION CENTER, ROOM 6B
CHAIR: A. Barral
Sponsored by ASBMB Public Outreach Committee

Members of the Public Outreach Committee and other invited speakers will showcase examples of how to turn scientific research projects into outreach activities aimed at diverse audiences. These will include demos and curricular models appropriate for K-12 students; translating detailed research work into policy-relevant summaries; and additional audience-specific outreach. Presenters will discuss the importance of outreach and its impact on various societal issues.

Young Experimental Scientists (Y.E.S.) Mixer

SOCIETY EVENTS
09:00 PM – 01:00 PM  HILTON BAYSIDE HOTEL, AQUA A-C
Undergraduates, Graduate Students and Postdoctoral Fellows welcome. Bring your ID and EB2018 Meeting Badge.
TUESDAY
APRIL 24

374 Wake-Up! It’s Trivia Time
SOCIETY EVENTS
7:00 AM – 7:45 AM  SAN DIEGO CONVENTION CENTER, ROOM 6B
Sponsored by ASBMB Membership Committee

Calling all trivia junkies! Join your colleagues for a daily dose of trivia, music, fun and prizes! It’s a lively way to jump-start your day—the complimentary coffee and nosh also helps! Prize values increase over the course of the meeting, so come back each morning! ASBMB members and biochemistry registrants welcome.

Space is limited with first come, first served.

375 ASBMB-Merck Award
LECTURE
8:00 AM – 8:30 AM  SAN DIEGO CONVENTION CENTER, ROOM 6B
Awardee introduction

8:05  375.1  Black Spot, Black Death, Black Pearl: The Tales of Bacterial Effectors.  K. Orth, Howard Hughes Medical Institute and The University of Texas Southwestern Medical Center

376 Ruth Kirschstein Diversity in Science Award
LECTURE
8:30 AM – 9:00 AM  SAN DIEGO CONVENTION CENTER, ROOM 6B
Awardee introduction

8:35  376.1  Vision Cycle Proteins: Their Function, Structure and Links to Retinal Disease.  A. Tsin, The University of Texas Rio Grande Valley School of Medicine

377 DeLano Award for Computational Biosciences
LECTURE
9:00 AM – 9:30 AM  SAN DIEGO CONVENTION CENTER, ROOM 6B
Awardee introduction

9:05  377.1  Solutions to the Computational Protein Folding Problem.  C. Sander, D. Marks, Harvard Medical School and Dana-Farber Cancer Institute and Harvard Medical School

346 How Sensations and Perceptions Influence Your Behavior
WORKSHOP
9:00 AM – 10:00 AM  SAN DIEGO CONVENTION CENTER, HALL D, CRC-I

The neuroscience of sensations and perceptions is often presented separate from behaviors we choose; yet, they are essential antecedents causing us to behave the way we do. In this seminar, we will review the neuroscience of sensations and perceptions and learn how these unique physiological and cognitive processes influence our behavior. This understanding will help better prepare you to achieve your goals when networking and interviewing, in addition to helping you do well in all interactions, such as with professors and colleagues.

SPEAKER: J. Blumenthal, Montgomery Col., Rockville, MD and Univ. of Maryland Univ. Col., Adelphi, MD

www.asbmb.org/meeting2018
**What You Seek is What You Get**

**WORKSHOP**

9:00 AM – 10:00 AM  
SAN DIEGO CONVENTION CENTER, HALL D, CRC-2

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.

**SPEAKER:** H. Adams, H.G. Adams & Assoc., Norfolk, VA

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**Career Opportunities in Science Communications**

**WORKSHOP**

9:00 AM – 10:00 AM  
SAN DIEGO CONVENTION CENTER, HALL D, CRC-3

**SPEAKER:** E. Hayden, Univ. of California, Santa Cruz

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**NIH K Awards: Navigating NIH Programs to Advance Your Career**

**WORKSHOP**

9:00 AM – 10:30 AM  
SAN DIEGO CONVENTION CENTER, ROOM 31A

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.

**SPEAKER:** M. Matthews, NIH

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Listen to the 2018 ASBMB playlist on Spotify!

Open the Spotify app on your phone, click Search, tap the camera icon, and scan this barcode! These tunes are inspired by California, road trips, and science. Tweet us @ASBMB #ASBMBJams to add your favorite tracks!
### Poster/Oral Presentation Practice & Mentoring Sessions
#### WORKSHOP
**9:00 AM – 4:00 PM**
SAN DIEGO CONVENTION CENTER, HALL D, PEER MENTOR POD

### Career Corner Sessions with Dr. Adams
#### WORKSHOP
**9:00 AM – 4:00 PM**
SAN DIEGO CONVENTION CENTER, HALL D, CAREER CORNER

### One-on-One Resume Critique/CV, Career Counseling, Essay Personal Statement Assessments
#### WORKSHOP
**9:00 AM – 4:00 PM**
SAN DIEGO CONVENTION CENTER, HALL D, CAREER COUNSELING ROOM

### Advances in Single Cell 'Omics
#### SYMPOSIUM
**10:00 AM – 12:00 PM**
SAN DIEGO CONVENTION CENTER, ROOM 6E

**Chair:** J. H. Eberwine

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>10:00</td>
<td>378.1 Super-Resolution Imaging of Transcription in Live Mammalian Cells.</td>
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<tr>
<td>11:00</td>
<td>378.3 Electrophoretic Cytometry: High-Selectivity Measurement of Isoforms Using Microfluidics.</td>
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<tr>
<td>11:30</td>
<td>378.4 Multimodal Single Mouse and Human Cell ‘omics: Is Variability Distinct Across Cellular Modalities?</td>
</tr>
</tbody>
</table>

### Biochemistry of Autophagy and Organelle Trafficking
#### SYMPOSIUM
**10:00 AM – 12:00 PM**
SAN DIEGO CONVENTION CENTER, ROOM 6F

**Chair:** K-L. Guan

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>10:00</td>
<td>379.1 Hippo Pathway in Nutrient Response and Cell Growth.</td>
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<tr>
<td>10:30</td>
<td>379.2 Initiation, Targeting and Sculpting of the Phagophore.</td>
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<tr>
<td>11:00</td>
<td>379.3 Ampk: Guardian of Metabolism and Mitochondrial Homeostasis.</td>
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<tr>
<td>11:30</td>
<td>379.4 Migrosome and Migrocytosis.</td>
</tr>
</tbody>
</table>

### Plants Do It All
#### SYMPOSIUM
**10:00 AM – 12:00 PM**
SAN DIEGO CONVENTION CENTER, ROOM 6C

**Chair:** S. R. Cutler

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>10:00</td>
<td>380.1 Engineering Plant Signal Transduction for Water Smart Crops.</td>
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<tr>
<td>10:30</td>
<td>380.2 Spatiotemporal Phytochrome-Dependent Regulation of Photosynthesis and Growth.</td>
</tr>
<tr>
<td>11:00</td>
<td>380.3 Discovery and Engineering of Plant Chemistry for Plant and Human Health.</td>
</tr>
<tr>
<td>11:30</td>
<td>380.4 Genome Editing and Plant Agriculture.</td>
</tr>
</tbody>
</table>
**381 RNA-mediated Epigenetics**

**ISSUES IN DEPTH**

**10:00 AM – 12:00 PM** SAN DIEGO CONVENTION CENTER, ROOM IAB

- **10:00** 381.1 Exploring the Biosynthesis of Hypermodified Bases One Step at a Time. V. Bandarian, University of Utah
- **10:30** 381.2 The Dynamic Epitranscriptome: Control of mRNA Fate and Function by Nucleotide Modifications. S. Jaffrey, Weill Cornell Medicine and Cornell University
- **11:00** 381.3 Smrt-Cappable-Seq Reveals Complex Operon Variants in Bacteria. L. Ettwiller, B. Yan, New England BioLabs Inc.
- **11:30** 381.4 Beyond the Central Dogma: The Trna Epitranscriptome and an Alternative Genetic Code Tune Translation During Stress in Eukaryotes, Prokaryotes and Viral Infections. P. Dedon, Massachusetts Institute of Technology

**382 Signal Transduction, Pathogenesis and Disease**

**SYMPOSIUM**

**10:00 AM – 12:00 PM** SAN DIEGO CONVENTION CENTER, ROOM 6D

**CHAIR: K. Orth**

- **10:00** 382.1 Single Protein-Catalyzed Ubiquitination: Chemistry and Implications in Cell Signaling. Z-Q. Luo, Purdue University
- **10:30** 382.2 Proteasomal Regulation of Hormone Signaling in Mycobacterium Tuberculosis. K.H. Darwin, New York University School of Medicine
- **11:00** 382.3 Structure and Signaling Mechanisms of G Protein-Coupled and B-arrestin-Biased Chemokine Receptors. T. Handel, M. Gustavsson, Y. Zheng, B. Stephens, G. Baker, T. Ngo, L. Holden, R. Stevens, V. Cherezov, R. Abagyan, I. Kufareva, University of California, San Diego, Scripps Research Institute and University of Southern California
- **11:30** 382.4 New Technologies to Interrogate G Protein-Coupled Receptor Signaling. A. Kruse, Harvard Medical School

**383 Structural Biology**

**SEBM SYMPOSIUM**

**10:00 AM – 12:00 PM** SAN DIEGO CONVENTION CENTER, ROOM 14A

**CHAIR: T. Thompson**

Guest Society: Society for Experimental Biology and Medicine

- **10:00** Molecular Mechanisms in Wnt Signaling. William Weis, Stanford Univ.
- **10:50** Talk tba. Joseph Schlessinger, Yale Univ.
- **11:15** Biased Agonism in Receptor Tyrosine Kinase Signaling. Mark Lemmon, Yale Univ.
- **11:40** General discussion.

**349 Job Hunting in Biotech Part 3: Compensation Negotiation for Scientist Position**

**WORKSHOP**

**10:30 AM – 11:30 AM** SAN DIEGO CONVENTION CENTER, HALL D, CRC-I

So you’ve landed a job offer for an industry scientist position! Now, how do you know if the compensation package is competitive, and how do you ask for more? In this seminar you will learn how to:

- Separate out the typical components of an industry job offer letter, so you know what to ask for
- Determine if an offer is competitive and when to ask for more
- Ask for additional compensation in a way that represents your interests while maintaining positive relationships.

*(This is Part 3 of a 3-part series. Each seminar can be taken separately but together they provide comprehensive information about the industry job search process.)*

**SPEAKER:** B. Lindstaedt, UCSF
**But I Have No Skills! Exploding Myths & Exploring Career Options for PhDs**

**WORKSHOP**

**10:30 AM – 11:30 AM** SAN DIEGO CONVENTION CENTER, HALL D, CRC-2

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.

**SPEAKER:** J. Lombardo, Med. Col. of Wisconsin and Marquette Univ.

**Translating Your CV into an Effective Resume + LinkedIn Profile**

**WORKSHOP**

**10:30 AM – 11:30 AM** SAN DIEGO CONVENTION CENTER, HALL D, CRC-3

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.

**SPEAKER:** A. Green, Univ. of California, Berkeley

**NIH F Awards: Navigating NIH Programs to Advance Your Career**

**WORKSHOP**

**12:00 PM – 1:30 PM** SAN DIEGO CONVENTION CENTER, HALL D, CRC-2

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.

**SPEAKER:** M. Matthews, NIH

**ASBMB Poster Presentations**

**POSTER SESSIONS**

**12:15 PM – 2:15 PM** SAN DIEGO CONVENTION CENTER, EXHIBIT HALLS A-D

Refer to pages 106 – 123 for presentation details.

**ASBMB Meet the Speakers**

**SOCIETY EVENTS**

**12:30 PM – 1:00 PM** SAN DIEGO CONVENTION CENTER, EXHIBIT HALL, ACROSS FROM ASBMB BOOTH 1316

Visit the ASBMB Lounge (Exhibit Hall across from ASBMB Booth #1316) to meet the morning presenters and continue the scientific discussion — a GREAT networking opportunity for all. Also visit the daily posters while you’re in the exhibit hall.
How to Choose Your Ideal Career

WORKSHOP
1:00 PM – 2:00 PM
SAN DIEGO CONVENTION CENTER, HALL D, CRC-1

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?

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.

SPEAKER: B. Lindstaedt, UCSF

Navigating Doctoral Work Protocols/Milestones/Requirements

WORKSHOP
1:00 PM – 2:00 PM
SAN DIEGO CONVENTION CENTER, HALL D, CRC-3

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.

SPEAKER: H. Adams, H.G. Adams & Assoc., Norfolk, VA

ASBMB Meet the Speakers

SOCIETY EVENTS
1:30 PM – 2:00 PM
SAN DIEGO CONVENTION CENTER, EXHIBIT HALL, ACROSS FROM ASBMB BOOTH 1316

Visit the ASBMB Lounge (Exhibit Hall across from ASBMB Booth #1316) to meet the morning presenters and continue the scientific discussion — a GREAT networking opportunity for all. Also visit the daily posters while you’re in the exhibit hall.

Next Gen PhDs and Careers

WORKSHOP
2:00 PM – 3:00 PM
SAN DIEGO CONVENTION CENTER, HALL D, CRC-2

There are more career options than ever before for life science PhDs. This session will provide actionable advice on how to determine what career path to pursue and how to best position yourself for your desired career.

SPEAKER: P. Clifford, Univ. of Illinois at Chicago

Career Opportunities in Science Communications

WORKSHOP
2:30 PM – 3:30 PM
SAN DIEGO CONVENTION CENTER, HALL D, CRC-3

SPEAKER: E. Hayden, Univ. of California, Santa Cruz
### DNA Damage and Repair

**SPOTLIGHT SESSION**

**2:30 PM – 3:45 PM**  
SAN DIEGO CONVENTION CENTER, ROOM 30A

**Chair:** D. Wang

2:30  
**High-Resolution Maps of Genome-Wide Human Damage and Repair.**  
O. Adebali, J. Hu, A. Sancar, University of North Carolina at Chapel Hill

2:45  
**A New Pathway of Transcription-Coupled Repair.**  
K. Myka, R. Washburn, K. Kusters, M. Gottesman, Columbia University, Department of Microbiology and Immunology and Columbia University

3:00  
**Rad5 Prevents the Accumulation of ssDNA Gaps at Stressed DNA Replication Forks.**  
G.W. Brown, D.W. Gallo, S. Kim, Z. Zhang, D. Branzei, University of Toronto, Canada and International Foundations of Medicine, Italy

3:15  
**RecQ4 Helicases Stimulate Nuclease Activity During DNA Inter-Strand Crosslink Repair.**  
M.L. Bochman, C.M. Rogers, Indiana University

3:30  
**Molecular Mechanism of Transcription Transcription-Coupled Repair.**  
D. Wang, University of California and San Diego

### Mechanisms of G Protein Signaling

**SPOTLIGHT SESSION**

**2:30 PM – 3:45 PM**  
SAN DIEGO CONVENTION CENTER, ROOM 30B

**Chair:** A. M. Lyon

2:30  
**Coordinated Cross-Talk Between Calcium and Camp in Regulating Pulsatile Insulin Secretion: A Novel Role for the Unique Inhibitory G-Protein, Gez ,in Regulating β-Cell Function.**  
M. Schaid, J. Harington, H. Wienkes, M. Merrins, M. Kimple, University of Wisconsin–Madison

2:45  
**New Insights into the Role of Smggs as a Major Integrator of Signaling by Ras and Rho Family Members in Cancer.**  
C. Williams, P. Gonyo, A. Brandt, O. Koehn, E. Lorimer, B. Unger, S-W. Tsaih, Y. Sun, M. McNally, H. Rui, M. Flister, C. Bergom, Medical College of Wisconsin

3:00  
**Phosphorylation of G Protein γ Subunit Ste18 and the Ste5 Scaffold Form a Braking System that Governs Pathway Activation Kinetics and Switch-Like Signaling in Yeast.**  
M. Torres, S. Choudhury, P. Baradaran-mashinch, Georgia Institute of Technology

3:15  
**Plasma Membrane Pi(4,5)p2 Threshold Regulates Chemotactic Signaling Pathways and Cell Morphology.**  
N. Bawazir, M. Beshay, A. Ring, C. Janetopoulos, University of the Sciences

3:30  
**Conformational Regulation of Phospholipase C Enzymes.**  

### Membrane Lipid Biochemistry

**SPOTLIGHT SESSION**

**2:30 PM – 3:45 PM**  
SAN DIEGO CONVENTION CENTER, ROOM 30D

**Chair:** J. Burke

2:30  
**Crystallographic and Enzyme Kinetic Analyses of the Human Inositol Polyphosphate Multikinase (IPMK).**  
R. Blind, Vanderbilt University

2:45  
**Structure and Function of Lipins: Key Enzymes in Triglyceride Metabolism.**  
M. Airola, Stony Brook University

3:00  
**A Novel Multi-Domain Phosphatidylinositol Transfer Protein/Oxysterol Binding Protein Senses Specific Phosphoinositide Pools on Toxoplasma Dense Granules.**  
A. Grabon, V.A. Bankaitis, Texas A&M University

3:15  
**Novel Biosensors for an Enigmatic Phosphoinositide.**  
B. Goulden, J. Zewe, R. Wills, G. Hammond, University of Pittsburgh

3:30  
**Sphingomyelin-Cholesterol Complexes in Plasma Membranes.**  
S. Endapally, D. Frias, D. Tomchick, A. Radhakrishnan, The University of Texas Southwestern Medical Center
### Metabolic Reprogramming

**SPOTLIGHT SESSION**  
**2:30 PM – 3:45 PM**  
SAN DIEGO CONVENTION CENTER, ROOM 30C

**CHAIR:** J. Ellis

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<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Authors</th>
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<tr>
<td>2:45</td>
<td>Metabolic Reprogramming of Macrophages Exposed to <em>Pseudomonas Aeruginosa</em> Biofilm.</td>
<td>M. C.B. Ammons, A. Fuchs, V. Copie, Idaho Veterans Research and Education Foundation and Montana State University</td>
</tr>
<tr>
<td>3:00</td>
<td>Distinct Roles of Dietary Fat and Sugar in the Development of Obesity, Insulin Resistance, Atherosclerosis and Cardiac Dysfunction in Ldl Receptor Knockout Mice.</td>
<td>L.R. Perazza, N. Daniel, M.J. Dubois, G. Pilon, P. Mitchell, K. Le Quang, D. Lachance, E. Plante, T. Varin, R. Bouchareb, P. Mathieu, Y. Pouliot, S. Gauthier, D. Roy, C. Asselin, M. Blais, M. Lessard, A. Marette, Laval University, Canada and Sherbrooke University, Canada</td>
</tr>
<tr>
<td>3:30</td>
<td>Impact of Short- and Long-Term Weight Loss on the Inflammatory Profile of Metabolically Healthy and Unhealthy Obese Patients.</td>
<td>M. Clark, F. Barrenäs, M. Rajan, M. Sotak, V. Wallenius, E. Borgeson, Institute of Medicine, University of Gothenburg, Sweden, Department of Cell and Molecular Biology, Uppsala University, Sweden, Institute of Clinical Sciences and University of Gothenburg, Sweden</td>
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### Metals in Biology

**SPOTLIGHT SESSION**  
**2:30 PM – 3:45 PM**  
SAN DIEGO CONVENTION CENTER, ROOM 30E

**CHAIR:** A. E. Palmer

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Authors</th>
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<tr>
<td>2:30</td>
<td>PRL Phosphatases Promote Tumor Progression by Regulating the Level of Intracellular Magnesium.</td>
<td>S. Hardy, E. Kostantin, S. J. Wang, N. Uetani, M. L. Tremblay, McGill University, Canada</td>
</tr>
<tr>
<td>2:45</td>
<td>Zinc-Mediated Oligomerization of S100a12.</td>
<td>S.M. Damo, V. Garcia, S. Little, D. Franklin, J.A. Gaddy, Fisk University and Vanderbilt University</td>
</tr>
<tr>
<td>3:00</td>
<td>Heme-Free H-Nox from <em>Vibrio Cholerae</em> Is Activated by Oxidation via a Zinc Ligand Switch Mechanism.</td>
<td>E. Yukl, K. Chacon, J. Jarvis, New Mexico State University and Reed College</td>
</tr>
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</table>
391 **Protein Folding: Every Which Way but Loose**

**SPOTLIGHT SESSION**

**2:30 PM – 3:45 PM**

**SAN DIEGO CONVENTION CENTER, ROOM 31A**

**CHAIR: J. E. Kim**

2:30 **Modulation of Fluorescent Protein Chromophore to Detect Protein Aggregation.** Y. Liu, C. Wolstenholme, G. Carter, C. Hoelzel, L. Grainger, M. Fares, X. Zhang, Pennsylvania State University

2:45 **The Amyloid-β Peptide in Alzheimer’s Disease: Molecular Interactions and Structure Conversions.** A. Gräslund, Stockholm University, Sweden

3:00 **The Disordered Landscape of the 20s Proteasome Substrates and the Mechanism of Their in Vitro and in Vivo Degradation.** Y. Shaul, N. Myres, A. Biran, N. Reuven, Weizmann Institute of Science, Israel

3:15 **A Nucleotide-Dependent Switch in Proteasome Assembly Mediated by the Nas6 Chaperone.** S. Park, F. Li, V. Sokolova, University of Colorado Boulder

3:30 **Biophysical Analysis of Human Neuropeptide Y: Mutations in the Hairpin Core Reveal Unusual Thermal Stability Linked to Higher-Order Self-Association.** M.M. Hopkins, D.L. Bain, University of Colorado Anschutz Medical Campus

392 **Structure and Mechanism in Natural Product Biosynthesis Enzymes**

**SPOTLIGHT SESSION**

**2:30 PM – 3:45 PM**

**SAN DIEGO CONVENTION CENTER, ROOM 31B**

**CHAIR: A. K. Boal**

2:30 **Transport and Synthesis of a Bacterial Natural Product.** L.M. K. Dassama, G.E. Kenney, A.C. Rosenzweig, Boston Children’s Hospital, Dana-Farber Cancer Institute, and Harvard Medical School and Northwestern University

2:45 **Comparative Analysis of Bacterial Cytochromes P450 Involved in the Biosynthesis of 16-Membered Ring Macrolide Antibiotics.** M.D. DeMars, S. Yang, F. Sheng, N.L. Samora, S. R. Park, A.N. Lowell, K.N. Houk, L.M. Podust, D.H. Sherman, University of Michigan, University of California, Los Angeles, University of California and San Diego

3:00 **Structural Insights into Peptide Recognition and Modification by the Radical SAM Enzyme SuiB.** K.M. Davis, Princeton University

3:15 **Biosynthesis of Oxetanocin: Are Two Cofactors Better Than One?** J. Bridwell-Rabb, H-w. Liu, A. Zhong, C. Drennan, University of Michigan, The University of Texas and Massachusetts Institute of Technology

3:30 **392.1 A Crystallographic View of the Reaction Cycle in Iron(II) and 2-(Oxo)-Glutarate-Dependent Oxygenases.** A.K. Boal, Pennsylvania State University

393 **Tools for Exploring Glycobiology**

**SPOTLIGHT SESSION**

**2:30 PM – 3:45 PM**

**SAN DIEGO CONVENTION CENTER, ROOM 31C**

**CHAIR: K. Godula**

2:30 **Engineering Synthetic Glycan Co-Receptors Into the Glycocalyx of Muscle Cells to Control Early Stages of Neuromuscular Junction Development.** K. Godula, University of California and San Diego

2:45 **Encoding and Estimating the Remarkable Diversity of Possible Sialyltrisaccharides in Nature.** A. Sasmal, Z. Khedri, S. Diaz, N. Lewis, A. Varki, University of California and San Diego


3:30 **393.1 Synthesis of Bioorthogonal Muramyl Glycans That Illuminate and Track Bacterial Peptidoglycan.** K.E. DeMeester, H. Liang, Z. Jones, J.A. Taylor, M.S. Siegrist, N.R. Salama, C.L. Leimkuhler-Grimes, University of Delaware, Fred Hutchinson Cancer Research Center and University of Massachusetts Amherst
357 Global Interview Skills: A Practice Workshop for International Candidates

**WORKSHOP**

3:00 PM – 4:00 PM   SAN DIEGO CONVENTION CENTER, HALL D, CRC-1

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.

**SPEAKER:** D. Behrens, Univ. of California, Berkeley

358 The Strategic Postdoc: How to Find & Leverage Your Postdoc Experience

**WORKSHOP**

3:00 PM – 4:00 PM   SAN DIEGO CONVENTION CENTER, HALL D, CRC-2

Many PhDs just kind of fall into 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 the next step, and how to use your postdoc experience to facilitate the transition to your next position.

**SPEAKER:** A. Green, Univ. of California, Berkeley

394 Novel Antibiotics & Alternatives

**SEBM SYMPOSIUM**

3:00 PM – 5:00 PM   SAN DIEGO CONVENTION CENTER, ROOM 14A

**CHAIR:** D. Hassett

Guest Society: Society for Experimental Biology and Medicine

3:00  A non-toxic “two-headed monster” that kills all bacteria.  Dan Hassett, Univ. of Cincinnati


3:50  Antibiotic Adjuvants Based Upon Marine Natural Products.  S. Martin, NC State Univ.


4:40  General discussion.

395 Cell Stress, Autophagy and Mitophagy

**SPOTLIGHT SESSION**

4:00 PM – 5:15 PM   SAN DIEGO CONVENTION CENTER, ROOM 31C

**CHAIR:** F. Zhang

4:00  IL-6 and Bile Acids Are Skin-Derived Factors That Regulate Whole-Body Metabolism in SCD1 Deficient Mice.  S.N. Dumas, C-A. Guo, J.M. Ntambi, University of Wisconsin–Madison

4:15  Posttranslational Arginylation Enzyme Atel Is a Mitochondrial-Derived Master Regulator That Coordinates Glycolysis and Respiration in the Warburg Effect.  F. Zhang, C. Jiang, D. Patel, B. Moorothy, A. Kumar, M. Birnbaum, J. Huang, A. Barrientos, T. Lampidis, F. Fontanesi, University of Miami


4:45  Zyflamend Induces Apoptosis in Pancreatic Cancer Cells via Modulation of Endoplasmic Reticulum Stress and Autophagy.  D. Puckett, D. Alani, S. Chahed, V. Frankel, J. Whelan, A. Bettaieb, University of Tennessee and Knoxville

5:00  Oleic Acid Protected Pancreatic β-Cell Against Saturated Fatty Acid Induced Lipotoxicity.  X. Liu, X. Chen, L. Li, R. Luo, D. Long, Y. Lu, Y. Chen, West China Hospital and Sichuan University, People’s Republic of China
Chromatin, Replication and Repair

4:00 PM – 5:15 PM
SAN DIEGO CONVENTION CENTER, ROOM 31B

CHAIR: S. Forsburg

4:00 Heterochromatin Proteins Influence the Choice of DNA Repair in Euchromatin Domains. S. Forsburg, A. Jensen, C. Jones, T-T. Li, J-P. Yuan, University of Southern California


4:30 Analysis of Corest Complex-Chromatin Interactions with Chemical Tools. M. Wu, D. Hayward, J.H. Kalin, Y. Song, J. Schwabe, P.A. Cole, Brigham and Women’s Hospital and Harvard Medical School, Johns Hopkins University School of Medicine and University of Leicester, United Kingdom


5:00 Deconstructing Lagging-Strand Synthesis in Vivo. D. Smith, New York University

Engineering Biology

4:00 PM – 5:15 PM
SAN DIEGO CONVENTION CENTER, ROOM 31A

CHAIR: A. Chatterjee

4:00 Engineering Yeast Endosymbionts as a First Step Towards Laboratory Evolution of Mitochondria. A. Mehta, L. Supekova, F. Supek, P. Schulz, Scripps Research Institute and The Genomics Institute of the Novartis Research Foundation

4:15 Base Editing: Chemistry on the Genome. A.C. Komor, University of California and San Diego


4:45 Mini-Ins: A Monomeric Human Insulin Inspired from Cone Snail Venom Peptides. D. Chou, University of Utah

5:00 Development and Applications of Universal Platforms for Genetic Code Expansion. A. Chatterjee, J.S. Italia, Boston College

High-throughput Methods for Connecting Transcriptomes, Proteomes, and Secretomes

4:00 PM – 5:15 PM
SAN DIEGO CONVENTION CENTER, ROOM 30E

CHAIR: S. Zhong

4:00 A System for Global Analysis of Correlation Between Protein Expression and mRNA. K. Johnson, S. Zhong, University of California and San Diego


4:30 Genome-Scale Reconstructions of the Mammalian Secretory Pathway Predict Metabolic Costs and Limitations of Protein Synthesis and Secretion. N. Lewis, University of California and San Diego


5:00 Localized Single Transcript Detection of EML4-ALK in NSCLC Using Co-Localization Quantum Dot Fluorescent in Situ Hybridization (Coqfish). N. Huang, Y. Jiang, S. Zhong, University of California and San Diego
### Molecular Basis of Signaling

**SPOTLIGHT SESSION**

**4:00 PM – 5:15 PM**

**SAN DIEGO CONVENTION CENTER, ROOM 30D**

**CHAIR:** K. Gehring

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<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Speaker(s)</th>
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<tbody>
<tr>
<td>4:00</td>
<td>Regulation of Mitophagy by the Parkin Ubiquitin Ligase and Pink1 Ubiquitin Kinase.</td>
<td>K. Gehring, McGill University, Canada</td>
</tr>
<tr>
<td>4:15</td>
<td>Protein Kinase Cα (PKCα) Gain-of-Function Variant in Alzheimer’s Disease Displays Enhanced Catalysis by a Mechanism That Evades Down-Regulation.</td>
<td>J. Callender, Y. Yang, N. Stephenson, A. Jones, J. Brognard, A. Newton, University of California, San Diego, Cancer Research UK Manchester Institute, United Kingdom</td>
</tr>
<tr>
<td>4:30</td>
<td>Novel Crystal Structure of Calcium Independent Phospholipase Ipla2β: Mechanism of Activity Regulation and Membrane Localization.</td>
<td>S. Korolev, O. Koroleva, K. Malley, Saint Louis University School of Medicine</td>
</tr>
<tr>
<td>4:45</td>
<td>Chemoproteomic discovery of ligand binding hotspots in the lipid kinome.</td>
<td>K. Hsu, University of Virginia</td>
</tr>
<tr>
<td>5:00</td>
<td>Sac1 Degrades Its Lipid Substrate PtdIns4P in the Er to Maintain a Steep Electrochemical Gradient on Donor Membranes.</td>
<td>G. Hammond, J. Zewe, S. Sangappa, R. Wills, B. Goulden, University of Pittsburgh</td>
</tr>
</tbody>
</table>

### Nutrition, Genetics and Metabolism

**SPOTLIGHT SESSION**

**4:00 PM – 5:15 PM**

**SAN DIEGO CONVENTION CENTER, ROOM 30C**

**CHAIR:** C-L. E. Yen

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Speaker(s)</th>
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<tbody>
<tr>
<td>4:00</td>
<td>Decreased Consumption of Specific Dietary Macronutrients Restores Metabolic Health to Diet-Induced Obese Mice.</td>
<td>D.W. Lamming, N.E. Cummings, H. Pak, E.M. Williams, E.N. Konon, M.M. Walter, M.E. Barnes, D. Yu, University of Wisconsin–Madison</td>
</tr>
<tr>
<td>4:15</td>
<td>Leveraging Mouse Liver Co-Expression Networks and Human Lipid GWAS Data to Identify and Validate Cholesterol Metabolism Genes.</td>
<td>B.W. Parks, Z. Li, J. Nguyen, F. Leyva-Jaimes, University of Wisconsin–Madison</td>
</tr>
<tr>
<td>4:30</td>
<td>Selenium and Sex: Competition Between Brain and Testes for Selenium Results in Male-Specific Consequences in Mice and Men.</td>
<td>M.J. Berry, M. Pitts, P. Kremer, A. Hashimoto, L. Seale, A. Ogawa-Wong, D. Torres, University of Hawaii</td>
</tr>
<tr>
<td>4:45</td>
<td>Long-Chain Acyl-CoA Synthetase 6 Deficiency Reduces the Omega-3 Fatty Acid DHA in the Brain and Disrupts Motor Control.</td>
<td>J.M. Ellis, R.F. Fernandez, Y. Zhao, J.L. Counihan, D.K. Nomura, J.A. Chester, Purdue University and University of California</td>
</tr>
</tbody>
</table>
**Ribosomes and Translational Regulation**

**SPOTLIGHT SESSION**

**4:00 PM – 5:15 PM**  SAN DIEGO CONVENTION CENTER, ROOM 30B

**CHAIR:** S. Vasudevan

**4:00**  High Throughput Discovery of Novel Regulators of Human Ribosome Biogenesis.  S.J. Baserga, K.J. Farley-Barnes, K. McCann, L. Ogawa, J. Merkel, Y. Surovtseva, Yale University School of Medicine, Yale School of Medicine and National Institute of Environmental Health Sciences, National Institutes and Yale West Campus


**4:30**  Regulation of Protein Translation Initiation by Estrogen.  M.K. Holz, Yeshiva University

**4:45**  A Post-Transcriptional Program of Chemoresistance Regulators in Quiescent Cancer Cells.  S. Vasudevan, S. Lee, S.I. A. Bukhari, S.S. Truesdell, M. Boukhali, D. Lee, M.A. Mazzola, R. Raheja, A. Langenbucher, N.J. Haradhvala, M. Lawrence, R. Gandhi, D. Sweetser, W. Haas, Massachusetts General Hospital and Harvard Medical School and Brigham and Women’s Hospital

**5:00**  Novel in-Vitro Tag-and-Modify Protein Sample Generation Methods for Multiplexed Single-Molecule FRET Screening.  K.M. Hamadani, N. Hite, J.J. Howe, California State University and San Marcos

**5:15**  How ribosomes stop protein synthesis without a stop codon.  H. Jin, University of Illinois at Urbana-Champaign

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**ASBMB Women Scientists Mentoring and Networking Event**

**SOCIETY EVENTS**

**5:30 PM – 7:30 PM**  SAN DIEGO CONVENTION CENTER, ROOM 6A

**CHAIRS:** K. Allen, K. Ten Hagen, S. Baserga

Join us in discussing strategies for career advancement and how to successfully promote oneself. We will also discuss ideas about the formation of a new advocacy group within the ASBMB to promote the career trajectories and professional growth of all women biochemists at all career stages (Women in Biochemistry and Molecular Biology or WIBMB). All ASBMB members and biochemistry registrants welcome.

---

**WAKE-UP!**

**It’s Trivia Time**

Calling all trivia junkies! Join your colleagues for a daily dose of trivia, music, fun & prizes!
WEDNESDAY
APRIL 25

471 **Wake-Up! It’s The Last Day for Trivia Time**

**SOCIETY EVENTS**

7:00 AM – 7:45 AM  SAN DIEGO CONVENTION CENTER, ROOM 6C

You’ve competed on Sun, Mon and Tues. Way to go! Don’t miss out on our final trivia challenge for 2018! Join your colleagues in a new room on Wed morning. *Room 6C!* ASBMB members and biochemistry registrants welcome. Space is limited with first come, first served.

472 **Bert and Natalie Vallee Award in BioMedical Science**

**LECTURE**

8:00 AM – 8:30 AM  SAN DIEGO CONVENTION CENTER, ROOM 6C
8:00  Awardee introduction
8:05  472.1  How Telomeres Solve the Chromosome End-Protection Problem.  T. de Lange, Rockefeller University

473 **William C. Rose Award**

**LECTURE**

8:30 AM – 9:00 AM  SAN DIEGO CONVENTION CENTER, ROOM 6C
8:30  Awardee introduction
8:35  473.1  What Can Protein Methylation Tell Us About Histones, Ribosomes, Translation Factors and the Biology of Cancer and Aging?  S.G. Clarke, University of California and Los Angeles

470 **One-on-One Resume Critique/CV, Career Counseling, Essay Personal Statement Assessments**

**WORKSHOP**

9:00 AM – 12:00 PM  SAN DIEGO CONVENTION CENTER, SAILS PAVILION
9:00  One-on-One Sessions.  J. Blumenthal, D. Behrens, Montgomery Col., Rockville, MD and Univ. of Maryland Univ. Col., Adelphi, MD, Univ. of California, Berkeley

474 **Biochemical Basis for Epigenetics and Chromatin Remodeling**

**SYMPOSIUM**

9:30 AM – 11:30 AM  SAN DIEGO CONVENTION CENTER, ROOM 6D

CHAIR: B. A. Garcia

9:30  474.1  Quantitative Proteomics for Understanding Modified Proteins and Proteomes.  B.A. Garcia, Perelman School of Medicine and University of Pennsylvania
10:00  474.2  Reading Epigenetic Marks.  T.G. Kutateladze, University of Colorado School of Medicine
10:30  474.3  Misregulation of Polycomb Repressive Complexes by Oncohistones.  P.W. Lewis, University of Wisconsin–Madison
11:00  474.4  Painting Chromatin with Synthetic Protein Chemistry.  T.W. Muir, Princeton University
### Enzyme Dynamics in Catalysis, Spectroscopy and Theory

**SYMPOSIUM**

**9:30 AM – 11:30 AM**  
SAN DIEGO CONVENTION CENTER, ROOM 1A

**CHAIR:** S. Hammes-Schiffer

<table>
<thead>
<tr>
<th>Time</th>
<th>Presentation</th>
<th>Speaker(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:30</td>
<td>Proton-Coupled Electron Transfer in Soybean Lipoygenase: Hydrogen Tunneling, Electrostatics, and Conformational Motions.</td>
<td>S. Hammes-Schiffer, Yale University</td>
</tr>
<tr>
<td>10:00</td>
<td>Seeing the Invisible by Nmr Spectroscopy.</td>
<td>L.E. Kay, University of Toronto, Canada</td>
</tr>
<tr>
<td>10:30</td>
<td>Two Dimensional Infrared Spectroscopic Investigations of Protein and Enzyme Dynamics.</td>
<td>M.D. Fayer, Stanford University</td>
</tr>
<tr>
<td>11:00</td>
<td>Picosecond Active-Site Dynamics Correlate with the Temperature Dependence of KIEs in Enzyme-Catalyzed Hydride Transfer.</td>
<td>C. Cheatum, University of Iowa</td>
</tr>
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</table>

### Metabolomics and Lipidomics

**SYMPOSIUM**

**9:30 AM – 11:30 AM**  
SAN DIEGO CONVENTION CENTER, ROOM 6C

**CHAIR:** D. Nomura

<table>
<thead>
<tr>
<th>Time</th>
<th>Presentation</th>
<th>Speaker(s)</th>
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<tbody>
<tr>
<td>9:30</td>
<td>Chemical-Proteomic Strategies to Investigate Reactive Cysteines.</td>
<td>E. Weerapana, Boston College</td>
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<tr>
<td>10:00</td>
<td>Understanding the Interplay Between Amino Acid and Lipid Metabolism in Tumor Growth.</td>
<td>C. Metallo, University of California and San Diego</td>
</tr>
<tr>
<td>10:30</td>
<td>Shrinking the Metabolome for Systems Biology Reveals a New Metabolic Function of an Old Protein.</td>
<td>G. Patti, Washington University in St. Louis</td>
</tr>
<tr>
<td>11:00</td>
<td>Redefining Druggability Using Chemoproteomic Platforms.</td>
<td>D. Nomura, University of California and Berkeley</td>
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### Metals in Biology

**SYMPOSIUM**

**9:30 AM – 11:30 AM**  
SAN DIEGO CONVENTION CENTER, ROOM 1B

**CHAIR:** A. E. Palmer

<table>
<thead>
<tr>
<th>Time</th>
<th>Presentation</th>
<th>Speaker(s)</th>
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<tbody>
<tr>
<td>9:30</td>
<td>Heme Sensor Proteins for Nitric Oxide: A Versatile Use of Captive Iron.</td>
<td>M.A. Marletta, University of California</td>
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<tr>
<td>10:00</td>
<td>Regulation of Iron Metabolism by [2Fe-2S]-Binding Glutaredoxins.</td>
<td>C.E. Outten, University of South Carolina</td>
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<tr>
<td>10:30</td>
<td>The Struggle for Metal at the Host-Pathogen Interface.</td>
<td>E. Skaar, Vanderbilt University Medical Center</td>
</tr>
<tr>
<td>11:00</td>
<td>Discovery of New Roles for Zinc in Biology from Quantitative Mapping of Zinc in Mammalian Cells.</td>
<td>A. Palmer, University of Colorado Boulder</td>
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### ASBMB Late-breaking Poster Presentations

**POSTER SESSIONS**

**11:45 PM – 2:00 PM**  
SAN DIEGO CONVENTION CENTER, SAILS PAVILION  
Refer to pages 124–131 for presentation details.

### ASBMB Meet the Speakers

**SOCIETY EVENTS**

**12:00 PM – 12:30 PM**  
SAN DIEGO CONVENTION CENTER, SAILS PAVILION  
Visit with the morning presenters in our new location, the Sails Pavilion, next to the ASBMB Late-breaking poster session. This is a GREAT networking opportunity for all, a chance to continue the scientific discussion and take in the late-breaking posters as the ASBMB Annual Meeting 2018 program comes to a close.
# ASBMB Posters

## SUNDAY APRIL 22

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

**Author at boards:**

# ending in 0, 3 or 6: 12:15 – 1:00 PM  
# ending in 1, 4, 7 or 9: 12:45 – 1:30 PM  
# ending in 2, 5, or 8: 1:30 – 2:15 PM

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<tr>
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<th>SESSION TITLE</th>
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<td>1 – 17</td>
<td>Genome Dynamics: DNA Replication, Repair and Recombination</td>
<td>345 – 366</td>
<td>Bacteria and Parasites: From Microbiome to Antibiotics</td>
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<td>18 – 32</td>
<td>Chromatin Structure, Remodeling and Gene Expression</td>
<td>367 – 405</td>
<td>BMB Education and Professional Development</td>
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<tr>
<td>33 – 47</td>
<td>Histone Modifications</td>
<td>406 – 429</td>
<td>Metabolism and Bioenergetics</td>
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<td>48 – 67</td>
<td>Non-coding RNAs</td>
<td>431 – 439</td>
<td>Plant Metabolism and Biosynthetic Pathways</td>
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<td>68 – 115</td>
<td>Protein Synthesis, Structure, Modifications and Interactions</td>
<td>440 – 456</td>
<td>Oxidative Stress and Reactive Oxygen</td>
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<td>116 – 147</td>
<td>Structural Dynamics of Enzymes</td>
<td>457 – 477</td>
<td>Regulation of Lipid Metabolism</td>
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<td>148 – 156</td>
<td>Cytochrome P450</td>
<td>478 – 488</td>
<td>Lipid Signaling</td>
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<td>157 – 190</td>
<td>Chemical Biology, Drug Discovery and Bioanalytical Methods</td>
<td>489 – 502</td>
<td>Membrane Domains, Rafts, Transporters and Channels</td>
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<tr>
<td>191 – 215</td>
<td>Drug Screening and Development</td>
<td>503 – 532</td>
<td>Organelles and Trafficking</td>
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<td>216 – 231</td>
<td>Genomics</td>
<td>533 – 553</td>
<td>Mitochondria in Health and Disease</td>
</tr>
<tr>
<td>232 – 344</td>
<td>Signal Transduction and Cellular Regulation</td>
<td>554 – 576</td>
<td>Glycans and Glycobiology (I)</td>
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522

Genome Dynamics: DNA Replication, Repair and Recombination

B1 522.1 RecQ4 Helicases Stimulate Nucleosome Activity During DNA Intergen-Strand Crosslink Repair.
   M.L. Bochman, C.M. Rodgers, Indiana Univ.

B2 522.2 The Highly Conserved Proteins Nucleolin and Sub1 Play Critical Roles in Regulating G4 DNA-Induced Genome Instability.
   N. Kim, The Univ. of Texas HSC at Houston

B3 522.3 Identification of Genes Involved in Low Temperature Growth of Cronobacter sakazakii ATCC 29544.

B4 522.4 Nelf-E and CdyI: Two Novel Players for Switching off Transcription at DNA Damage Sites.
   N. Ayoub, S.W. Awwad, E.R. Abu-Zhayia, B.M. Ben-Oz, N-R. Guttman-Rawin, Technion, Israel

B5 522.5 Expanding the Role of FDO1 in Yeast Chromosomal Biology.
   M. Samei, T. Hoggard, C. Fox, Univ. of Wisconsin–Madison

B6 522.6 Role of Homology and DNA Double-Strand Breaks in Initiation of Intrachromosomal Recombination in Mammalian Cells.
   A.S. Waldman, K.M. Chapman, M.M. Wilkey, K.E. Potter, B.C. Waldman, Univ. of South Carolina

B7 522.7 Molecular Insights into Replication-Associated Genome Instabilities Caused by CST Deficiency.
   W. Chai, Washington State Univ.

B8 522.8 Tyr1 Phosphorylation of RNA Polymerase II CTD Directs and Expands the CTD Code.
   J.E. Mayfield, M.R. Mehalley, S. Irani, L. Walker, M. Robinson, N.T. Burkholler, N. Prescott, K. Kathuria, J.S. Brodbelt, Y.J. Zhang, UCSD and The Univ. of Texas at Austin

B9 522.9 A Novel Role of the Human Cst Complex in Regulating the DNA Damage Response.
   J.A. Stewart, S.M. Ackerson, Univ. of South Carolina

B10 522.10 Non-Canonical DNA in the C-Myc Hotspot Region.
    K. Long, S.M. Kerwin, W. David, Texas State Univ.

B11 522.11 Cell Cycle Re-Entry from Quiescence Promotes Genome Instability.
    J.P. Matson, J. Limas, J. Perez, K. Kedziora, J.G. Cook, Univ. of North Carolina at Chapel Hill

B12 522.12 Nethyl-2-Acetylimidazole is an Inhibitor of Cyclin A to Block DNA Re-Repair.
    P.N. Pozo, Y. Cole, J. Matson, Y. Zhuo, B. Temple, J.G. Cook, Univ. of North Carolina at Chapel Hill

B13 522.13 Cdt1 Variants Offer Novel Insights into Cdt1-Mcm Interactions and an Unexpected Mechanism for Cyclin A to Block DNA Re-Reparation.
    Y. Lin, The Univ. of Texas HSC at Houston

B14 522.14 Assembly of Fragment Ends After Pcr: An Efficient and Accurate Multi-Part DNA Assembly Method for Large DNA Sequence.
    A. Fei, A. DeMeur, Y. Borde, K. Voelkle-Meiman, A. MacQueen, Wesleyan Univ. and Institut Curie, France

523

Chromatin Structure, Remodeling and Gene Expression

B15 523.15 Scraping the Tip of the ZIPI’s Role in Meiotic Chromosome Dynamics: Using LacO/LacI Corecruitment to Identify Crossover Promoting Factors That Interface with the N-Terminus of a Synaptomere Complex Protein.
    A. Fei, A. DeMeur, Y. Borde, K. Voelkle-Meiman, A. MacQueen, Wesleyan Univ. and Institut Curie, France

B16 523.16 Investigation into the Binding Interactions of Saccaromyces cerevisiae Histone H1 with Holliday Junction.
    C. Little, S. Lahiri, C. Hebner, S. Holmes, I. Mukerji, Wesleyan Univ.

B17 523.17 The Long and Short of Synaptomere Complex Assembly: Investigating the Genesis and Functional Relevance of a Smaller Zip1 Isoform.
    A. Shames, A.J. MacQueen, Wesleyan Univ.

524

Histone Modifications

B18 524.1 Fih Is an Oxygen Sensor for G9a/glpg-Driven Epigenetic Regulation of Metastasis-Related Genes in Ovarian Cancer.
    J. Kang, J-W. Park, Col. of Med. and Seoul Nat’l Univ., Republic of Korea

B19 524.2 1000 Ways to Die: Synthetic Lethality with an Hdc4.

B20 524.3 Determining the Role of the Epigenetic Factor Set4 in Antifungal Drug Resistance in Budding Yeast.
    A. Gress, N. Serratortre, S.D. Briggs, Purdue-Univ.

B21 524.4 Construction of Chimeric Histone Methyltransferase Complexes in Saccaromyces cerevisiae Generate Unique Phenotypes and Clarify the Roles of Mll1 and Set1 Complex Accessory Proteins.
    R.J. Chossed, D. Klein, E. Longan, M. Baker, S. Gogoli, J. Wang, S. Alkoutami, Univ. of Maryland and Baltimore County

B22 524.5 Enhancer Epigenomic Regulation in Differentiation, Development and Cancer.
    K. Ge, Nat’l Inst. of Diabetes and Digestive and Kidney Diseases

B23 524.6 Inhibition of Hdac1 and 2 Modulates the Expression and Signaling of Natriuretic Peptide Receptor A in Male and Female Gene-Targeted Mutant Mice.
    P. Kumar, C. Nguyen, R. Samuel, M. Bloodworth, K.N. Pandey, Tulane Univ. Health Sciences Ctr. and Sch. of Med.
525.1 Non-coding RNAs

525.1 Quantitative Analysis of LncRNA from Human F and Fpe Brain Specimens. Ya Lu, Y. Yao, W. Dong, Shanghui Univ. of Med. and Health Sciences, People’s Republic of China

525.2 Mapping RNA-Chromatin Interactions. S. Zhang, B. Sridhar, M. Rivas-Astroza, T.C. Nguyen, W. Chen, Z. Yan, X. Cao, L. Hebert, UCSF

525.3 Critical RNA Structures Involved in Translation Initiation Mechanism Between 3′ Cite and 5′ Utr of RNA2 of Blackcurrent Reversion Nepovirus (Bvr). S.-W.M. Bean, L.D. Baquerero Galvis, E.J. Morrison, M.E. Filipin-Wong, Metropolitan State Univ. of Denver

525.4 Importance of Unique Secondary Structures in Genomic RNA1 3′ Cite in Blackcurrent Reversion Nepovirus Translation. L.D. Baquerero Galvis, E. Shields, M.E. Filipin-Wong, Metropolitan State Univ. of Denver

525.5 LncRNA GAS8-ASI Directs Epigenetic Modulation and Activation of the Tumor Suppressor GAS8 via MLL1/WDR5 to Suppress Hepatocarcinogenesis. M. Yang, Shandong Cancer Hosp. affiliated to Shandong Univ., People’s Republic of China


525.7 Rift Valley Fever Virus Nucleocapsid Protein Binds to Ctd Box Motifs of Snorna. M. Hayashi, K.E. Hornak, J.-M. Lachy, J.S. Lodmell, Univ. of Montana


525.10 The Function of Noncoding RNA BC200 in a Human Disease. H. Shin, J. Lee, Y. Kim, Y. Lee, KAIST, Republic of Korea


525.12 A Novel Approach to Identify Regulated Long Non-Coding RNAs in Selected Pathways. S.T. Okino, M. Kong, J.M. Flynn, Y. Wang, Bio-Rad Laboratories and Inc.

525.13 Microarray Profiling and Bioinformatic Analysis of Circular RNAs in Raw264.7 Macrophages Under Simulated Microgravity. M. Yuan, J. Wang, M. Yuan, China Aeronaut Res. and Training Ctr, People’s Republic of China

525.14 Micro-RNA-205 Regulates Heart Size Through Direct Modulation of the Hippo Pathway. J.J. Weldonick, L. Kouri, R. Yi, P.G. Burgon, Univ. of Ottawa, Canada, Univ. of Colorado Boulder and Univ. of Ottawa Heart Inst., Canada

525.15 Investigation of Socs5 as a Gene Target of Mir-9 in Inflammatory Monocytes. M. Stander, B. Rabquer, Alston Col.

525.16 The Effect of 1,4-Dimethylnaphthalene on Mir-166 MicroRNA. A. Alharbi, M. Campbell, Penn State Behrend

525.17 Cisplatin Induces Differential Expression of Snornas and Affects Ribosome Methylation. E. Reister, V.J. DeRose, Univ. of Oregon

525.18 PreventingAutoimmunity in Transcription-Dependent Crisp-Cas Systems. K. Johnson, B. Learm, S. Bailey, Johns Hopkins Univ. Sch. of Med.

525.19 The Evf2 Enhancer Long Noncoding RNA regulates Enhancer Interactions Across Megabase Distances. J. Kozht, I. Cajaee, A. Chakraborty, M. Bastidas, K.S. Swyter, S.J. Kozht, F. Ay, Northwestern Univ. and La Jolla Inst. for Allergy and Immunology

525.20 Detection and Comparison of Circular RNAs in Mouse Striatum and Retina. J.-H. Chen, Wu Sch. of Med. and Jiangnan Univ., People’s Republic of China

526.1 Structural and Biochemical Investigation of Plant-Nematode Interactions. A. De Santiago Perez, C. Holland, J. Jex, Univ. of California, Riverside and Washington Univ. in St. Louis

526.2 Overlap Extension Polymerase Chain to Create a New ExpressionVector and the Protein Binding Affinity Analysis Using Mst of Epp Receptors. D. Bowman, J. Muller-Greven, A. Smith, M. Buck, The Univ. of Akron and Case Western Reserve Univ.

526.3 Repeat Problems: Combinatorial Effect of c9orf72-Derived Dipeptide Repeat Proteins. A. Darling, L. Braydo, L. Blair, J. Koren, V. Uversky, Univ. of South Florida

B72 526.5 A Structural Role for the C-Terminal Conserved Lsa Motifs in Arabidopsis Larp6 Proteins. C. Toner, L. Chovanec, C. Foster, J. Foster, C. Otte-Petrell, F. Betancourt, E. Billey, B. Bouquet-Antonelli, K. Lewis, Texas State Univ., Institut de Biociences et Biotechnologies de Grenoble, France and Univ. of Perpignan, France


B74 526.7 Structural and Functional Large Substrate Binding in Iterative Non-Ribosomal Peptide Synthesis Independent Synthesis (NIS) Enzymes. K.M. Hoffmann, California Lutheran Univ.

B75 526.8 Effect of Inhibiting Protein Conformational Changes by Introducing Disulfide Bonds in the Transmembrane Domains of the Hendra Virus Fusion Protein. K. B. Slaughter, R. Dutch, Univ. of Kentucky


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B87 526.19 Investigating Palmitoylation Sites on the Dopamine Transporter. D.J. Stanislawski, R.A. Vaughan, J.D. Foster, Univ. of North Dakota

B88 526.20 NAD+ Bound N-Terminal Domain of Neuronal Pas Domain Protein 2 (Hnpas2). A.T. Woods, J. Segovia, A. Galaleledeen, St. Mary’s Univ. and The Univ. of Texas HSC

B89 526.21 Investigation of the Presence and Implications of N-Palmitoylation on Norepinephrine and Serotonin Transporters. C.R. Brown, D.J. Stanislawski, J.D. Foster, Univ. of North Dakota

B90 526.22 Intrinsically Disordered Regions/ Proteins Compensate for Genomic Ecodinization in Mycobacterium Tuberculosis. N.Z. Ehtesham, J. Ahmad, A. Farhan, M. Khubaib, S. Kaur, R. Pancsa, S. Srinivasan, S. Kumar, M. Babu, S.E. Hasnain, Nat’l. Inst. of Pathology, India, Centre for DNA Fingerprinting and Diagnostics, India, Med. Res. Council Lab. of Molecular Biology, United Kingdom, All India Inst. of Med. Sciences, India and Jamia Hamdard Inst. of Molecular Med., India

B91 526.23 Evidence for Direct Interaction Between RNA Polymerase and the Small Ribosomal Subunit. G. Blaha, S. Diggas, A.B. Conn, P. Williams, Y. Wang, Univ. of California and Riverside


B93 526.25 Translation Termination on mRNAs Lacking a Stop Codon. F. Zeng, H. Jing, Univ. of Illinois at Urbana-Champaign


B97 526.29 Protection of the Quinone Biosynthesis Enzyme Quin from Irreversible Oxidation by a Conserved Intramolecular Disulfide. A. Mohammad, A.B. Ramos, B.W.K. Lee, S.W. Cohen, M.K. Kiani, D. Iwata-Reuyli, B. Stec, M.A. Swaraj, Western Univ. of Health Sciences, Portland State Univ. and San Diego State Univ.

B98 526.30 A Catalytic Null Splice Variant of Human Leucyl-Trna Synthetase with Enhanced Non-Canonical Function. C.M. Forsyth, M. Baymiller, S.A. Martins, Univ. of Illinois at Urbana-Champaign


B100 526.32 Direct Route for Asparaginyl-Trna Formation in Subtilis. R. Wales, K. Sheppard, Skidmore Col.


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B128 527.13 Dynamics of L-Kynureninase Orthologs During Catalysis. S. D’Arcy, C.S. Karamitros, E. Stone, G. Georgiou, K. Murray, The Univ. of Texas at Dallas and The Univ. of Texas at Austin


B130 527.15 The Glucosamine Metabolite Compartment for Glucose Metabolism in Living Cells. M. Jean, C. Kohnhorst, M. Kyoung, S. An, Univ. of Maryland and Baltimore County

B131 527.16 Modified Hela Cells and C.elegans Multicellular Model as Unique Systems for the Study of Purineosoma Formation. V. Skopova, V. Baresova, O. Soucekova, M. Krijt, M. Zikanova, Dept. of Pediatrics and Adolescent Med., First Faculty of Med. and Charles Univ. and, Czech Republic

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B176 530.20 Development of a Microscopic Method to Diagnose Hemoglobin C Conditions for Use in Developing Countries. K.L. Schmidt, T.R. Randolph, Saint Louis Univ.

B177 530.21 The Synthesis and Biochemical Use of N-Hydroxyl-N-(5-Aminopentyl)Succinamic Acid (Hsc) by the Enzyme Fslα. J. Nguyen, K. Hoffmann, California Lutheran Univ.


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B187 S30.31 Searching Protease Inhibitors by a Phage Display Kunzit-Type Library. G. F. da Silva, M. D. L. B. Magalhães, J. C. de Moraes, L. M. S. Echeverri, Universidade de Estudo de Santa Catarina, Brazil

B188 S30.32 Optimization of Extraction and Isolation of Proteins from Eggshells. R. Richter, E. J. Lee, J. E. Grant, Univ. of Wisconsin–Stout

B189 S30.33 Light Triggered Isocell Point and Solubility Shifts Applied to Photoactivated Insulin Depots. K. Nadendla, S. H. Friedman, Univ. of Missouri-Kansas City

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B213 S31.23 Effects of Purified Plant Extracts and Homologous Commercial Derivatives on Entamoeba Histolytica Growth. S. Hunk, Y. Santos, N. Seeram, D. Rowley, H. Ma, A. Espinosa, Roger Williams Univ. and Univ. of Rhode Island


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B218 S32.3 Improved RNA-Modification Mapping Through Employment of Novel Ribonucleases and Lc-Ms. P. Thakur, P. A. Limbach, B. Adddepalli, Univ. of Cincinnati

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B263 533.32 Intact Cell Assay to Measure Agonist- and Gsk2-Dependent Phosphorylation of the β2-adrenergic Receptor. Z. Farina, A.-M. Hebert, E. Weldon, M. Varmey, R. Sterne-Marr, Sena Col.


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B273 533.42 IGF-I Optimizes Mitochondrial Fusion Through AMP-Activated Protein Kinase in Adult Sensory Neurons. M. R. Aghanoori, M. G. Sabir, D. R. Smith, P. Fernyhough, Univ. of Manitoba, Canada


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B282 533.51 Mitochondrial Adenylate Kinase 4 Regulates Dual Ampk and Mtorc1 Activation. C. Ganzales, A. Phuong Nguyen, A. Abdullah, R. Meraz, E. Castellanos, B. N. Nityato, N. Lanning, Caliform State Univ. and Los Angeles


B284 533.53 Regulatory Mechanisms Controlling the Subcellular Localization and Activity of the Rhoa-Rock Pathway. K. R. Ratnayake, J. L. Payton, A. Karunarathne, Univ. of the Sciences

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B288 533.57 The TrpV4-Taz Signaling Axis in Matrix Stiffness- and TGFβ1-Induced Epithelial-Mesenchymal Transition. S.O. Rahaman, S. Sharma, R. Goswami, Univ. of Maryland

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B292 533.61 Structural Basis of Glucocorticoid Receptor Recognition of Both Unmodified and Methylated Ancient Binding Sites, Precursors for a Modern Recognition Element. X. Liu, E. Weikum, E. Ostlund, Emory Univ.

B293 533.62 A Novel Interaction Between Glucocorticoid Receptor and Beta-Arrestin Proteins. M.G. Petrillo, J. Gidwani, Natl. Inst. of Environmental Health Sciences and Natl. Inst. of Health


B295 533.64 Follicle Stimulating Hormone Stimulation of a Murine Monocyte Cell Line. A.B. Leamon, B.D. Cohen, Union Coll.

B296 533.65 Impact of Single Nucleotide Polymorphisms on HPA Axis Functionality in Depression. C.E. Kelly, B.D. Cohen, Union Coll.

B297 533.66 Jaz Proteins Promote Growth and Reproduction by Restraining Transcriptional Programs That Link Primary and Specialized Metabolism. Q. Guo, I. Major, Y. Yoshida, G. Howe, Michigan State Univ. and The Univ. of Tokyo, Japan

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B300 533.69 Defining the Expression Domains of the Arabidopsis Glutaredoxin Genes glr1 and glr6, and glr8. O. Davalos, A. Elhary, M. Rosas, F. Fernandez, M.A. Escobar, California State Univ. and San Marcos

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B304 533.73 PRL Phosphatases Promote Tumor Progression by Regulating the Level of Intracellular Magnesium. S. Hardy, E. Kostantin, S. Wang, N. Uetani, M.L. Tremblay, McGill Univ., Canada

B305 533.74 Acid Phosphatase in Soil. K.E. Ayers, E.J. Fogle, California Polytechnic State Univ.

B306 533.75 Characterization of Acid Phosphatase Adsorption to Montmorillonite. W.S. McTaggart, California Polytechnic State Univ.


B308 533.77 Relaxation of Bladder Smooth Muscle by flavonoids from Sophora flavescens via Direct Activation of the Large-Conductance Calcium-Activated Potassium Channel. J. Han, S. Lee, N. Lee, H.-J. Jo, C.-S. Park, Gwangju Inst. of Science and Technology, Republic of Korea

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B311 533.8 Characterization of the Effects of Novel Positive Allosteric Modulators on the Functionality of the α7 Nicotinic Acetylcholine Receptor (Nachr). F. Reilly-Andujar, J.A. Lasalle, J.O. Colón, Univ. of Puerto Rico and Rio Piedras Campus


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B314 533.83 Measuring the Camp/PKA Signaling Pathway in Stress-Induced Sleep Using c. Elegans as a Model Organism. R. Schuck, A. Cianciulli, T. Buerkert, E. Li, M. Nelson, Saint Joseph's Univ.

B315 533.86 Role of 5- Lo, in the Regulation of Gene Expression. S. Shiu, C. Gu, S.B. Shears, Natl. Inst. of Environmental Health Sciences and Natl. Inst. of Health


B318 533.89 Adaptation to Supraphysiologic Room Air Oxygen Changes the Effects of Nitric Oxide on A549 Lung Cells in Vitro. A. Heen, S. Darou, R. Yerden, BioSpherix

B319 533.91 TdAg51 Is a Key Modulator of Vascular Calcification and Osteogenic Transdifferentiation of Arterial Smooth Muscle Cells. K. Platko, G. Gyulay, P. Lebeau, S. Lhost, J. Hyun Byun, F. Boivin, D. Bridgewater, J. Krepsinsky, R.C. Austin, McMaster Univ., Canada

B320 533.92 Heme-Free H-Nox from Vibrio Cholerae Is Activated by Oxidation via a Zinc Ligand Switch Mechanism. E. Yukl, K. Chacon, J. Jarvis, New Mexico State Univ. and Reed Coll.


B325 533.97 Peroxisome Proliferator-Activated Receptor Gamma Is a Key Regulator of Hepatic Eicosanoid Metabolism. Y. Touhara, T. Funabiki, H. Natsume, A. Chacon, J. Jarvis, New Mexico State Univ. and Reed Coll.

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B344 533.113 Role of Necroptosis in Aging and Age-Associated Inflammation. D. Sathyaseelan, A. Richardson, Univ. of Oklahoma Health Sciences Ctr.

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B347 534.3 Bacteriological Evaluation of Essential Oil-Based Products from a Local Small Business. A. A. Santos, Jr., R. Butler, C. Gillen, A. B. Santos, F. B. O. Santos, Adventist Univ. of Health Sciences and Florida Hosp.

B348 534.4 Effect of Fiber Concentration on the Growth of Lactobacillus Rhamnosus. A. B. Santos, C. Gillen, F. B. O. Santos, A. A. Santos, Jr., Adventist Univ. of Health Sciences and Florida Hosp.

B349 534.5 Effect of Fiber Concentration on the Growth of Lactobacillus Rhamnosus. A. B. Santos, C. Gillen, F. B. O. Santos, A. A. Santos, Jr., Adventist Univ. of Health Sciences and Florida Hosp.

B350 534.6 Sinorhizobium meliloti Bacteriophage HmSp-1: Susan: Genome Sequence, Molecular Characterization and Implications for Symbiosis. B. Pfeagle, A. Imanovick, B. Martinez-Vaz, Habline Univ.


B352 534.8 Changes in Membrane Lipids in Soybean Leaves in Response to Soybean Aphid Infestation. G. C. MacIntosh, K. Nguyen, J. Hohenstein, Iowa State Univ.

B353 534.9 Investigating the Contribution of Sinorhizobium meliloti Flagellin to Biofilm Formation and Symbiosis During Host Colonization. Z. A. Amir, J. C. Chen, San Francisco State Univ.


B357 534.13 The Growth of Fusarium oxysporum Spore Isolates from Potato Is Inhibited by 1,4-Dimethylnaphthalene. R. Adams, M. Campbell, Penn State Behrend.


B359 534.15 Characterizing the Interaction Between Bacterial Derived Carbohydrates and Cyr1 and Its Role in Hypthal Growth in Candida Albicans. S. Mazhayeh, J. Burch, D. Wykoff, C. Grimes, Univ. of Delaware and Wilkes Univ.

B360 534.16 Anaerobic 4-Hydroxyproline Metabolism by a Widespread Microbial Glycol Radical Enzyme. Y.Y. Huang, L. Backman, B. Gold, R.T. Raines, C.L. Drennan, E.P. Balskus, Harvard Univ. and Massachusetts Inst. of Technology.


B362 534.18 The Growth of Fusarium oxysporum Spore Isolates from Potato Is Inhibited by 1,4-Dimethylnaphthalene. R. Adams, M. Campbell, Penn State Behrend.


B364 534.20 Characterizing the Interaction Between Bacterial Derived Carbohydrates and Cyr1 and Its Role in Hypthal Growth in Candida Albicans. S. Mazhayeh, J. Burch, D. Wykoff, C. Grimes, Univ. of Delaware and Wilkes Univ.
B361 534.17 Composition and Viability of the Microbial Flora of the Sigmoid Colon Obtained from Embalmed Human Cadavers. R.E. Fracassi, J. Holz, M. Pace Olivieri, J. Davie, D’Youville Col. and D’Youville Col.

B362 534.18 Dietary Fat Quality and Sex Influence Diversity and Relative Abundance of the Colon Bacterial Community Structure in Aged CD-I Mice. A. Unger, T. Jetton, J. Kraft, The Univ. of Vermont


B366 534.22 The Metabolism of Fluoropyrimidine Anticancer Drugs by the Human Gut Microbiome. P. Spanoianopoulos, A.D. Patterson, P.J. Turnbaugh, Univ. of California, San Francisco and Pennsylvania State Univ.

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B367 535.1 Use of Gradient Gel Filtration as a Refolding, Buffer Exchange and Fine-Tuning Step in Denaturing Protein Purification. C.N. Tovar, S.K. Nguyen, O.O. Odunuga, Stephen F. Austin State Univ.

B368 535.2 Ataxin Inhibition of Murine Electro Transport Chain: A Cure Biochemistry Laboratory. D.J. Martin, Saint Mary’s Univ. of Minnesota


B370 535.4 Crispr/Cas9 in Yeast as a Tool for Teaching and Reinforcing Molecular Biology Concepts to Undergraduates. R.J. Uilbricht, Missouri State Univ.

B371 535.5 Pilot Implementation of a Cell Culture-Based Educational Module in a Gateway Cellular and Molecular Biology Course at a Liberal Arts Pui. B. Tran, A. Aguanno, Marymount Manhattan Col.

B372 535.6 Laboratory Experiences in Sophomore Level Cell and Molecular Biology Laboratories: What Works?. M. Huff, R. Booth, M. Van Stry, Q. Vega, Belkamrine Univ. Univ. of the Incarnate Word, Lone Col. and Montclair State Univ.


B374 535.8 Fresh-Freshman Research Engagement in Science: Early Results. M.K. Watters, P. Bouyer, R. Clark, Valparaiso Univ.


B381 535.15 Mams: A Biochemistry and Molecular Biology Rich Collaborative Bridge Program to Doctoral Graduate and Health Professional School. M. Taylor, Pacific Northwest Univ. of Health Sciences

B382 535.16 Diet and Fitness Genetic Screening as an Approach to Understand Genetic Diversity and Optimize Wellness in Saudi Arabia. F. Dhawi, King Faisal Univ., Saudi Arabia


B384 535.18 “Community Problem Based Learning to Prepare Students for Real-World Stem Opportunities”. A.J. Tabor, R. Woodruff, K.M. Kesler, M. Bell, D.K. Ross, B. Neilson, R. Gray, Northern Arizona Univ., STEM City and CAVAT

B385 535.19 The First-Year Research Advancement Program (Frap): Fostering Persistence of Underrepresented Students in Biology and Chemistry. K.Y. Mills, J. Paxson, Col. of the Holy Cross

B386 535.2 Interdisciplinary Undergraduate Research Program with a Travel Component at Mount Saint Mary’s University Los Angeles to Promote Success of Women in Stem. L.A. Nogaj, Mount Saint Mary’s Univ. and Los Angeles


B388 535.22 Advancing Professional Development Strategies for Undergraduates in Chemistry and Biochemistry. C. Brown, A. Fallucca, T. Makris, Univ. of South Carolina

B389 535.23 Use of Videos in Traditional and Online Classes as Instruction and Assessment. Accessibility Tools. S. Connelly, Rochester Inst. of Technology

B390 535.24 Creativity in Biomedical Science Education. J.O. Macaulay, A.M. Kim, C.J. Speed, Monash Univ., Australia


B393 535.27 Stress and Burnout in Graduate Students: The Role of Work-Life Balance and Mentoring Relationships. T.M. Evans, L. Bira, J.B. Gastelum, L.T. Weiss, N.L. Vanderford, The Coll. of Texas HSC at Santa Ana, St. Mary’s Univ. and Univ. of Kentucky

B394 535.28 Graduate Student Professional Development and a Cure-Style Course and Peer-Reviewed Student Publications. J. Baumgartner, J. Lee, M.L. Kahn, San Francisco State Univ.


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B408  536.3  Quantification of Propionate.  M. Doan, S. Trefely, J. Xu, J. Polanco, N. Snyder, Drexel Univ.

B409  536.4  Elucidating the Role of a Putative Monoamine Oxynxenase in the Catabolism of Nicotinic Acid and Nicotine by Baccilus Niciob.  S. Fine, M.J. Snider, Col. of Wooster


B411  536.6  The Catabolism of Nicotinic Acid and Nicotine and the Role of a Putative Monoxygenase in Baccilus Niob.  S.R. Fine, K.M. Zoretich, M.J. Snider, Col. of Wooster

B412  536.7  Toxic Effect of Resveratrol Induced by Energy Restriction on Mitochondrial Dysfunction in Mouse Hepatocytes.  L. Camacho, M. Ramos Gomez, L. A. Madrigal Perez, J. L. Rosado Loria, Universidad Autonoma De Queretaro, Mexico and Instituto Tecnologico Superior de Ciudad Hidalgo, Mexico

B413  536.8  mTOR Signaling in Adipose Tissue Influences Systemic Lipid Metabolism.  L. M. Polella, C. Tran, K. Chellappa, S. Mukherjee, J. G. Davis, A. Wilson, E. Edouard, S. Shewale, D. J. Rader, J. A. Bauer, Univ. of Pennsylvania


B418  536.13  Chemical Composition of the Pepper Fruit (Dennetta Tripetala) Seed Flour.  F.L. Oyeyato, O.L. Ogundare, Exkit State Univ., Nigeria

B419  536.14  The Dose-Related Effects of Doxorubicin Chemotherapy on Interstitial Amino Acid Concentrations in Skeletal Muscle.  D. MacLean, S. Fabris, Northern Ontario Sch. of Med., Canada and Laurentian Univ., Canada


B421  536.16  Requirement of Fatty Acid Oxidation to Attenuate Cardiac Hypertrophy.  K.L. Harris, A.S. Pereyra, J.M. Ellis, Purdue Univ.

B422  536.17  Effect of a Deletion of Mitochondrial DNA on Cell Growth, Mitochondrial DNA Content, and Metabolic Activity.  C. Keck, M.K. Guifo, W. Pogozelski, State Univ. of New York Col. at Genesee

B423  536.18  Consequences of Cytochrome C Oxidase Assembly Defects for the Yeast Stationary Phase.  A.F. Dubinski, D.M. Glerum, Univ. of Waterloo, Canada

B424  536.19  Oxidative Phosphorylation Complex Interactions in Intact Mitochondria.  B.M. Rabbits, F. Liu, P. Loss, R.S. Balaban, A.J. Heek, Nat.l Heart, Lung, and Blood Inst., Nat.l Insts. of Health, FMP Berlin, Germany and Univ. of Utrecht, Netherlands


B426  536.21  Leigh Syndrome Cell Model Development.  J. Alverado, N. DiCuzzii, J. Huseh, S. Madira, N. Lanning, California State Univ. and Los Angeles

B427  536.22  A Novel Approach to Characterize Size Variance in Third Instar Larvae Following Multi-generational Dietary Modification.  G. Arnal, R.P. Rogers, Wentworth Inst. of Technology

B428  536.23  Ally Sulfide Epigenetically Targets Cellular Senescence and Prevents Age-Related Bone Loss in Mice.  J. Debarra, N.K. Mandal, K.E. Kelly, N. Tyagi, Univ. of Louisville

B429  536.24  Organ Reserve, Excess Metabolic Capacity, and Aging.  H. Atamna, J. Dhabihi, Centre Universitaire de Santé McGill

537  Plant Metabolism and Biosynthetic Pathways

B430  537.1  Identifying Exchangeable Protons in the Q, Site of Photosystem II.  A. Garmany, A.L. Smythers, E. Napier, C. Sun, A.S. Dikanov, D.R.J. Kolling, Marshall Univ. and Univ. of Illinois at Urbana-Champaign

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B440 538.1 Copper and Ros Mediation in Glycoxydation of a Human Serum Albumin (Hsa) Model Peptide: Advanced Glycation End-Products (Age) Generation and Damage in Motor Neuron Cells.
G. Cerchiaro, C.M. Marques, E.A. Nunes, Universidade Federal do ABC, Brazil

B441 538.2 Antioxidants Protect Diaphragm Function Subjected to Ionizing Irradiation.

B442 538.3 Ubiquinone Is a Key Antioxidant During Long Chain Fatty Acid Metabolism in Escherichia Coli.

B443 538.4 Hyperhomocysteinemia-Mediated Endoplasmic Reticulum Stress in Skeletal Muscle Dysfunction via JNK/Pro-Inflammatory Pathway.
A. Majumder, J. Behra, M. Singh, N. Tyagi, S.C. Tyagi, Univ. of Louisville

B444 538.5 The Expression of Glutathione S-Transferase Isotopes, Alpha, Mu, and Pi, in Mice (Mus Musculus) Chronically Exposed to Atrazine.
A. Schadler, D. Martin, Saint Mary’s Univ. of Minnesota

B445 538.6 Role of Gsta1 and Gstml1 Gene Polymorphism for Development of Pneumocystis in Bangladeshi Women.

B446 538.7 Effect of a Sulfophenazine and Maitake Mushroom Extract Combination on the Expression of Glutamate Cysteine Ligase.
S.A. Erwin, S.L. Ownbey, G.A. Cornblatt, Nutramax Laboratories

B447 538.8 Exploring the Role of Trehalose-6-Phosphate Synthase in Oxidative Stress Tolerance of Fusarium Verrucosum.

B448 538.9 Phosphoproteomics Analyses Reveal That Phosphorylation of Heat Shock Protein 70 (Hsp70) by Protein Kinase B (Akt1) on Ser112 Controls Activity of Mitochondrial Superoxide-2 (Sod2).
A.J. Afolayan, S.M. Zemanovic, G.G. Konduri, Univ. of Minnesota

B449 538.1 Characterization of Transferin-I from Drosophila Melanogaster.

B450 538.11 Vespa Amino Acid Mixture (Vam) Enhances Electron and Proton Transport in Mitochondria and Leads to Excessive Reactive Oxygen Production.
A. Mohamed, S. Stowers, K. Clark, M. Dameron, A. Weikel, E. Colon, S.B. Redmond, Radford Univ.

B451 538.12 The L Type Calcium Channel Ca1.2 Modulates Mitochondrial Calcium Homeostasis and Cell Death.

B452 538.13 Protective Effect of L-Arginine Extract from Dicrofuscinic Acid Oxidative Stress in the Brain of Male Wistar Rats.
O. Ometosho, D. Ogunlade, Covenant Univ., Nigeria

B453 538.14 The Role of Glutathione Maintenance in Protection Against Advanced Glycation End Product Induced Neurite Degeneration in SH-Sy5Y Cells.
M.A. Stochelski, T.M. Wilmanski, J.R. Burgess, Purdue Univ.

B454 538.15 Understanding How the Protein Environment Accelerates Cofactor-Free O2 Activation in Antibiotic Biosynthesis Monoxygenases (Abms).
E. Ellis, M.M. Machovina, J.L. Dubois, Montana State Univ.

B455 538.16 Chebulic Acid Against t-BHP-Induced Effect via Modulations of Nrf2 and Its Related Enzymes in HepG2 Cells.
K. Lee, H-L. Jung, S-Y. Yang, Korea Univ., Republic of Korea

B456 538.17 Citrus Polyphenolmyrtiflavones (Pmnfs) Inhibit 12-O-Tetradecanoylphorbol 13-Acetate (TPA) Induced Mouse Skin Jb6P+ Cell Transformation Though the Activation of Nfr2 Pathway.
Z.Y. Su, G-W. Pan, C-L. Tsai, H-X. Wu, G-J. Wei, Chung Yuan Christian Univ., Taiwan and Kainan Univ., Taiwan

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B457 539.1 Feedback Regulation of Hmg-Coa Reductase in Livers of Mice.

B458 539.2 Phosphorylation of Yeast Nem1-Spo7 Protein Phosphatase Complex by Protein Kinase C. P. Dey, W-M. Su, G-S. Han, G.M. Carman, Rutgers Univ.

B459 539.3 Long Non-Coding RNA H19 Serves as a Lipid Sensor to Reprogram Hepatic Lipid and Glucose Homeostasis by Interaction with RNA Binding Protein Pebp1.
Z. Yang, C. Liu, J. Wu, D-J. Shin, M. Tran, L. Wang, Univ. of Connecticut

B460 539.4 A Conserved Degron Containing an Amphipathic Helix Regulates the Cholesterol-Mediated Turnover of Human Squalene Monoxygenase, a Rate-Limiting Enzyme in Cholesterol Synthesis.
N. K. Chua, V. Howe, N. Jatama, L. Thukral, A.J. Brown, Univ. of New South Wales Sydney, Australia and CSIR-In. of Genomics and Integrative Biology, India

B461 539.5 Activation of PPARy Inhibits Hepatic Cholestasis With Involvement of Nogo-B Expression.
S. Zhang, Nankai Univ., People’s Republic of China

B462 539.6 Med17 Is Phosphorylated at S53 by Chk2 for Transcriptional Activation of Lipogenic Genes in Response to Insulin.
J.A. Vacarria, Y. Wang, H. S. Sun, Univ. of California and Berkeley

B463 539.7 Mutation in mon2, Which Encodes a Protein Implicated in Vesicular Transport, Affects Response to Exogenous Fatty Acids in Yeast.

B464 539.8 PCSK9 Reduces Hepatic Lipid Content and Confers Protection Against Er Stress and Ros in HepG2 Cells.
J. H. Byun, P. Lebeau, A. Al-Hashimi, K.C. Platko, B. Trigatti, N.G. Seidah, R.C. Austin, McMaster Univ., Canada, Thrombosis and Atherosclerosis Res. Inst. (TaARI), Canada, Clinical Res. Inst. of Montreal and affiliated to the Univ. of Montreal, Canada
B465 539.9  Effects of Phosphorylation State on Periplus 5 Localization and Trafficking. H.M. Bailey, J.T. Tansey, Otterbein Univ.
B466 539.1  ll-4 and Bile Acids Are Skin-Derived Factors That Regulate Whole-Body Metabolism in SCID1 Deficient Mice. S.N. Dumas, C-A. Guo, J.M. Ntambi, Univ. of Wisconsin–Madison

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B505 542.3 Isolation of Phagosomes Containing Bovine Photoreceptor Outer Segments from Retinal Pigment Epithelial Cells by Magnetic Selection. R. Dorvillier, S. Shelby, Florida Southern Col.

B506 542.4 Increasing Seed Iron Content by Gene Manipulation in Arabidopsis. Z. Ghalamkari, T.J. Buckhout, Hofstra Univ.

B507 542.5 Differential Effect of Ocl1/Patient Mutations on Protein Localization, and Sensitivity to Fds-Approved Drug Suppression of Cellular Phenotypes Associated with Lowe Syndrome. S. Ramadesikan, K. Madhivanan, R.C. Aguilar, Purdue Univ.

B508 542.6 MTor-Dependent Selective Translation Rapidly Expands Lysosome Biogenesis, Volume and Retention Capacity During Phagocyte Activation. R. Botelho, V. Hipolito, K. Tandoc, I. Topisirovic, Ryerson Univ., Canada and McGill Univ., Canada

B509 542.7 Nano-Scale Size Holes in Er Sheets Provide an Alternative to Tubules for Highly-Curved Membranes. S. Bahmanyar, L. Schroeder, A. Barentine, S. Schweighofer, D. Baddeley, J. Bewersdorf, Yale Univ. and Yale Sch. of Med.

B510 542.8 Yck3 Dependent Phosphorylation of Env7 and Its Regulation During Cell Cycle in Saccharomyces Cerevisiae. S. Manandhar, S.P. Valencia, C. Alvarado, I. Mansoroo, E. Gharakhahian, California State Univ. and Long Beach

B511 542.9 Effects of the Cell Cycle on Vacuole Size in S. Cerevisiae Yeast. J.C. Sims, San Francisco State Univ.


B515 542.13 Yvcl Acts as a Novel Suppressor of Vacular Membrane Fusion. G.E. Miner, A. Guo, K.D. Sullivan, R.A. Fratti, Univ. of Illinois at Urbana-Champaign

B516 542.14 The Role of the Escrt Pathway in Prion Disease. J. Lawrence, UCSD

B517 542.15 Dissection of the Erv41-Erv46 Retrieval Pathway Suggests a Redox-Regulated Mechanism. K. Keiser, A. Shibuya, C. Barlowe, Dartmouth Col.


B519 542.17 Deciphering Trapp Complex Function in Yeast. A. Joiner, C. Framme, Cornell Univ.


B521 542.19 “Acetylation Controls Thyroid Hormone Receptor Intracellular Localization and Intranuclear Mobility”. C.S. Anyetei-Anum, L.A. Allison, Cal. of William and Mary


B524 542.22 Lysophosphatidylcholine Analogues Alter Yeast Nuclear Envelope Architecture and Function. M.L. Sosa Ponce, J.A. Cobb, V. Zaremberg, Univ. of Calgary, Canada


B529 542.27 Impaired Insulin-Like Growth Factor-I Function in X-Linked Adrenoleukodystrophy Patients. G.S. Dhaanasi, Kuwait Univ., Kuwait

B530 542.28 Mysis Illa Is the Most Important Effector of Zyxin in Camp-Mediated Endothelial Exocytosis. G. Wei, P. Li, L. Chen, J. Luo, Peking Univ., People’s Republic of China

B531 542.29 Determining the Role of Annexin A6 in Cell Membrane Repair. J. Day, K. Sonnemann, W. Bement, Univ. of Wisconsin-Madison

B532 542.3 Tale of the Two Domains in Twinfilin: Deciphering Phagocytosis Through Actin Dynamics. P.P. Rath, N. Kumar, M. Babuta, A. Bhattacharya, S. Gourinath, Jawaharlal Nehru Univ., India and InterNat’l. Centre for Genetic Engineering and Biotechnology, India
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**B533** 543.1 MtDNA and Dnm1b Cooperate to Methylate Mitochondrial DNA and Regulate Mitochondrial Transcription. L. Shock, E. Burton, J. Robinson, S. Taylor, Virginia Commonwealth Univ.

**B534** 543.2 Mitochondrial Dysfunction in Type 2 Diabetic Skeletal Muscle Cells. D.L. Castaneda, K. Yamazaki, California State Univ. and Los Angeles

**B535** 543.3 Inhibition of Excessive Mitochondrial Fission Protects the Cardiomyocyte Against Palmitate-Induced Lipotoxicity. S.-J. Li, C.Y. Chen, Nat’l. Taiwan Univ., Taiwan

**B536** 543.4 Altered Metabolism and Mitochondrial Lipid Content Drive the Evasion of Apoptosis. K.A. Ross, A.J. Wyeth, K.E. Dittenhafer-Reed, Hope Coll.

**B537** 543.5 Seeking New Molecular Targets to Control Mitochondrial Biogenesis. L.R. Silveira, B.A. Pauletti, A.F. Paes Leme, T.I. Lima, UNICAMP, Brazil and Brazilian Biosciences Nat’l. Lab., Brazil

**B538** 543.6 Protease Om1 Mediates Mitochondrial Metabolism and Cristae Structure Through Interaction with Micos Complex. R.M. Levitsky, M.P. Viana, O. Khalimonchuk, Univ. of Nebraska-Lincoln

**B539** 543.7 Activation of Mitochondrial Calpain I Leads to Degradation of PDH. Q. Chen, J. Thompson, Y. Hu, J. Hollander, E. Lesniesky, Virginia Commonwealth Univ. and West Virginia Sch. of Med.

**B540** 543.8 The Genetic Origin of a Rare Mitochondrial Disorder. L. Bard, B. DeVries, J. Reider, S.P. Vitiello, Augsburger Univ.

**B541** 543.9 Dual Perturbation of Electron Transport Chain (ETC) Complex and ATP Synthase Triggers PINK1/Parkin-Dependent Mitophagy. A.T. Ramirez, X. Liu, Univ. of Colorado Boulder

**B542** 543.11 Investigation of Mitochondrial Metabolism and Aging in the Beer Fermentation Process. D.J. Hall, Lawrence Univ.


**B545** 543.14 What’s Killing the Buzz? The Effects of Neonicotinoids on Apis Mellifera Mitochondrial Metabolism. M. Dickey, Salisbury Univ.


**B548** 543.16 The Protective Role of Paraoxonase 2 in Cardiomyocytes Against Myocardial Ischemia-Reperfusion Injury. D. Subaiman, A. Devarajan, C.M. Cunningham, J. Li, M. Eggbali, S. Reddy, Univ. of California and Los Angeles

**B549** 543.17 The Effects of Zinc on Mitochondrial Morphology. K. Kienes, Q. Lu, Y. Li, Ohio Univ.

**B550** 543.18 Impact of Mitochondrial DNA Haplogroups on Cancer Gene Expression. K. Schneider, M. Chwa, S. Astilano, M.C. Kenney, Univ. of California and Irvine


**B552** 543.2 Potential Mitochondrial Dysfunction in Skeletal Muscle of Mouse Models of Osteogenesis Imperfecta. V. Gremminger, Y. Jeong, R. Cunningham, G. Meers, R.S. Rector, C. Phillips, Univ. of Missouri

**B553** 543.21 A Novel Pharmacological Modulator Abrogates Physiological Mitochondrial Fission Though Specifically Inhibiting the MF-Drp1-Protein-Protein Interaction. O.S. Kornfeld, N. Qvit, M. Shimamoto, D. Mochoy-Rosen, Stanford Univ.

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**B554** 544.1 Role of the Kdo Glycosyltransferase Kps in the Biosynthesis of the Polysialyltransferase Acceptor for echecchial Gm KI. N. Lanz, V. Thon, W. Vann, U.S. Food and Drug Administration

**B555** 544.2 Endoplasmic Reticulum (ER) Stress Is Anti-Angiogenic and Anti-Tumorigenic. A. Rivera Ruiz, J.E. Serrano Negron, K. Baksi, D.K. Banerjee, Univ. of Puerto Rico and Universidad del Caribe

**B556** 544.3 Er Stress Marker Grp78 Is Not Expressed on Er/Pr/h2 Human Breast Cancer Cell Surface or Secreted. D.K. Banerjee, J.E. Serrano Negron, A. Rivera Ruiz, K. Baksi, Univ. of Puerto Rico and Universidad del Caribe


**B559** 544.6 Biochemical Characterization of Missense Mutations in O-Glcnac Transferase Found in Patients with X-Linked Intellectual Disability. S.N. George, N. Selvan, H. Stephen, L. Wells, Univ. of Georgia

**B560** 544.7 Screening Point Mutations of the O-Glcnac Hydrolyase Enzyme, Oga, to Investigate Potential Regulation. G. Crawford, Mercer Univ.

**B561** 544.8 Genotype-Phenotype Correlations for Protein O-Linked Mannose N-Acetylglucosaminyltransferase 1 in Congenital Muscular Dystrophy. J.Z. Ho, S.R. Boyd, D. Singh, S.M. Halmo, L. Wells, Univ. of Georgia

**B562** 544.9 A Novel Monomodular and Multifunctional Procesive β-1,4-Endoglucanase Has Been Identified and Characterized from Porcine Gut Microbiome. W. Wang, T. Archbold, J.S. Lam, M.S. Kimber, M.Z. Fan, Univ. of Guelph, Canada

**B563** 544.10 Molecular and Structural Recognition of Listeria Cell-Wall Glycopolymers by Bacteriophage-Encoded SH3 Domains. Y. Shen, I. Kaloogaiasi, A. Prunotto, M. Dunne, E. Sunram, F.J. Cañada, M. Loesnner, ETH/Zürich, Switzerland, Centro de Investigaciones Biológicas, Spain and Facultade de Medicina Universidad de Lisboa, Switzerland

**B564** 544.11 Characterization of Bacterial Cell Wall Fragment Recognition by the Yeast Protein Cyp1p. D.J. Scanlon, J. Burch, C. Grimes, Univ. of Delaware


B574 544.21 Highly Specific and Rapid Glycan Based Amperometric Detection of Influenza Viruses. X. Cui, A. Das, A. Dhawane, J. Sweeney, X. Zhang, V. Chivukula, S. Iyer, Georgia State Univ. and Atlanta Metropolitan State Col.


B576 544.23 A Novel Systems-Level Approach to Unravel the Regulation and Biosynthetic Steps of Glycosylation. N. Lewis, UCSD

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# ASBMB Poster Sessions

**MONDAY APRIL 23**

**EXHIBIT HALL**

**Poster set up by:** 9:00 AM  
**Poster display:** 9:00 AM – 4:00 PM  
**Poster removal:** 4:00 – 6:00 PM

**Author at boards:**
# ending in 0, 3 or 6: 12:15 – 1:00 PM  
# ending in 1, 4, 7 or 9: 12:45 – 1:30 PM  
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B273 660.2 Investigating the Role of Fló1 in the
Lack of Floculation of Yeast Breeding Strain Thrifty
Pagan Local. A.E. Rieffer, Z. Via, The Coll. of St. Scholas-
tica
B274 660.3 Increases in Transmembrane Glyco-
protein Nmb (GPNMB), Phospho-Erk1/2, and Matrix
Metalloproteinase (MMP)-9 Follow Decline in Aryl-
sulfatase B in Cystic Fibrosis. J.K. Tobacman, S.
Bhaticharyya, L. Feerman, G. Sharma, Univ. of Illinois at
Chicago and Rush Univ. Med. Ctr.
B275 660.4 Phosphopeptideomics Analysis Identifies
Dynamic Regulation of Caveolin-I Phosphorylation
and Caveolae Formation by mTor2c2 in Bladder
Cancer Cells. A. Hau, S. Gupta, M. Leivo, W. Zhou,
A. Hodge, J. Wulfkuhe, B. Conkright, K. Bhuvaneshwar,
S. Rao, S. Madhavan, K. Nakashima, E. Petricoin III,
UCSD, George Mason Univ. and Georgetown Univ.
B276 660.5 Soluble Activin Type IB Receptor
Decoy Changes Gene Expression Profiles of Bone
Cells in the Om and Not the G6 DC Mouse Model of
Osteogenesis Imperfecta. C.L. Omosuye, Y. Jeong,
C. Phillips, F. Pfeiffer, Univ. of Missouri
B277 660.6 Cross-Talk Between Mapk Inhibitors and
Tgf-β Signaling Results in Variable Activation of
Human Dermal Fibroblaststc. D.M. Dolivo,
B278 660.7 Artesunate Antagonizes Myofibroblast
Markers and Fibrosis-Associated Extracellular Matrix
Protein Expression in Human Dermal Fibroblasts.
B279 660.8 The Impact of the Physical Micro-
Environment on Notch Signaling. M.A. Detweiler,
Boise State Univ.
B280 660.9 Alternative Splicing of Mapp2 Generates
a Non-Glycosylated Variant Still Capable of Localizing
to Extracellular Microfilibrils. A.R. Miyamoto, California
State Univ. and Fullerton

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G proteins and
Small GTPases

B281 661.1 Phosphorylation of G Protein Subunit
Stel18 and the Stes1 Scaffold Form a Braking System
that Governs Pathway Activation Kinetics and
Switch-Like Signaling in Yeast. M. Torres, S. Choudhury,
P. Baradar-an-mashinchi, Georgia Inst. of Technology
B282 661.2 Atypical G Protein β5 Promotes
Cardiac Oxidative Stress and Fibrotic Remodeling
in Response to Multiple Cancer Chemotherapeutics.
S. Chakraborti, A. Pramanick, B. Masty, Centre of BioMed.
Res., India
B283 661.3 Effects of Differential Acylation on
Aberrant Growth Signaling by Overexpressed
GRI13. N.F. White, G.R. McDiarmid, A.C. Tagliatela, T.E. Meigs,
Univ. of North Carolina at Asheville
B284 661.4 A Divergent C-Terminal Region of
Gri12 and GRI13 Provides Unique Effector Binding
and Growth Signaling Mechanisms. C.R. Quick,
R.C. Stecky, M.L. Mull, E.N. Dover, T.E. Meigs, Univ.
of North Carolina at Asheville
B285 661.5 Beta-Cell-Specific Loss of the Inhibitory
G Protein, G, Prevents Development of Type
1 Diabetes in Nod Mice. R. Fenske, H. Wienes,
P. Deter, M. Kimple, Univ. of Wisconsin-Madison
662 Protein Kinases

B298 662.6 Deciphering Key Cancer and Inflammation Signaling Pathways with a Novel Homogeneous Biotinylated Cell Based Kinase Activity Assays. B. Hwang, N. Nath, S. Goueli, H. Zegzouti, Promega Corporation
B299 662.7 Protein Kinase Cα (PKCα) Gain-of-Function Variant in Alzheimer’s Disease Displays Enhanced Catalysis by a Mechanism That Evades Down-Regulation. J. Callender, Y. Yang, N. Stephenson, A. Jones, J. Brognard, A. Newton, UCSD, Cancer Res. UK Manchester Inst., United Kingdom, Nat.l. Cancer Inst. at Frederick and Nat.l. Insts of Health
B300 662.8 Rare-Alzheimer’s Disease-Associated Protein Kinase Cα Variant Displays Altered Pharmacological Profile in a Cellular Environment. Y. Yang, J. Callender, A. Newton, UCSD
B301 662.9 Trans-Phosphorylation Activates the Yeast Protein Kinase Kin2, an Ortholog of Human Microtubule Affinity Regulating Kinase. C. Ghosh, L. Sathe, M. Dey, Univ. of Wisconsin–Milwaukee
B304 662.12 A Luminal Kinase Regulates Sarcomplastic Reticulum Calcium Cycling and Heart Disease. A. Pollak, S. Wiley, J. Dixon, UCSD
B308 662.16 The PkC Inhibitor Bmi Functions as a Bi-Topic Ligand That Toggles a Conserved Allosteric Switch to Drive Potent Kinase Inhibition. N. Ma, S. Lee, T. Devaman, M. Sandhu, R. Sommese, S. Sivaramakrishnan, N. Vaidhe, City of Hope Beckman Res. Inst. and Univ. of Minnesota Twin Cities
B309 662.17 Ca(2+/Calmodulin-Dependent Protein Kinase Kinase β Negatively Regulates Progesterone Mediated Pgmr-1 Signaling and the Warburg Effect. M.G. Sabbir, P. Fernyhough, St. Boniface Hosp. Albrechtsen Res. Centre, Canada and Univ. of Manitoba, Canada
B310 662.18 Intracellular Zinc as a Phosphorylation Modulator of Protein Kinase C Delta. K. Stepchenko, J. Holub, T.V. Li, Ohio Univ.
B312 662.2 Identification of Proteins Interacting with Fyn Kinase at Fertilization in Patina Miniotia. L.S. Bates, D. Carroll, Florida Inst. of Technology
B313 662.21 Mk5 and Erk3 Play Overlapping but Distinct Roles in Regulating Cardiac Fibroblast Function. P. Sahadevan, S.A. Nawais, A. Calderone, M. Gaestel, B.G. Allen, Montreal Heart Inst., Canada and Hannover Med. Sch., Germany
B314 662.22 Deciphering Dyrlk1a Signaling Using Proteomics and Transcriptomics. Z. Pass, C. Ebeling, H. Simpson, M. Pagratis, T. McClure-Begley, W. Old, Univ. of Colorado

Active Learning in the Molecular Life Sciences

B315 663.1 When Active Learning Fails: How Faculty Beliefs Inform Their Teaching and Influence Student Outcomes. S.M. Lo, UCSD
B317 663.3 Effects of a Data Analysis Intensive Course on Student Critical Thinking Skills, Confidence, and Post-Graduation Success. K.K. Resendes, Westminster Col.
B318 663.4 Understanding Curriculum Effectiveness and the Student Experience in a Modular Undergraduate Laboratory Experience Integrating Research and MALDI-TOF MS. J.E. Grant, C. Lutz, D. Huffman, Univ. of Wisconsin–Stout, Anoka-Ramsey Community Col. and Univ. of Kansas
B319 663.5 Addressing Enzyme-Substrate Interaction Misconceptions with 3D Physical Models in an Undergraduate Biochemistry Course. T.L. Ekstrom, C.R. Terrell, Univ. of Minnesota
B320 663.6 A Toxic Collaboration: Using Spions and Shrimp to Bridge Courses in Chemistry and Biology for Undergraduate Engineering Students. R.P. Rogers, L.E. Grove, Wentworth Inst. of Technology
B321 663.7 Introducing Students to Biochemistry Through an Inquiry-Based Curriculum Documented Using Electronic Notebooks on Scinote. S. C. Daubner, V. Gutierrez, M. Rodriguez, St. Mary’s Univ.

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B323 663.9 Increasing Active Learning in the Biochemistry Classroom: Using Group Quizzes to Stimulate Discussion. L.J. Moore, Monmouth Coll.

B324 663.1 Enhancing Scientific Communication About and Ethical Reasoning Surrounding Gene Modifications Through a Collaborative Learning Experience. A.M. Danowitz, V.M. Ehret, Mercyhurst Univ.


B326 663.12 Blended Instruction in Introduction to Biochemistry Class. T. Nicholas, N. Reddy, R. Srinivasan, Case Western Reserve Univ.

B327 663.13 Use of a Research-Based Framework to Guide Instructional Design and Assessment Related to Noncovalent Interactions in a Biochemical Context. J. Loetscher, S. Feola, P. Lemons, J. Lewis, A. Mercer, V. Minderhout, Seattle Univ., Univ. of South Florida and Univ. of Georgia

B328 663.14 Development of a Computationally-Based Medicinal Chemistry Course at a Small, Primarily Undergraduate Institution. B.L. Hall, Grand View Univ.


B330 663.16 Assessment of Visual Literacy Skill Gains in Graduate Biochemistry. K. Procko, D.M. Dean, Univ. of Saint Joseph

B331 663.17 Using an Innovative Approach to Teach Students How to Communicate About Scientific Topics to Non-Scientists. M.A. Rowland-Goldsmith, M. Bisoffi, Chapman Univ.

B332 663.18 Deep Reading of the Literature and the Biosynthesis of Nucleotides. E. Anderson, Univ. of Saint Joseph

B333 663.19 Scaffolding Soft-Skill Development Into a Two-Semester Undergraduate Laboratory Course. D.P. Grilley, T.M. Weaver, Univ. of Wisconsin–La Crosse


B335 663.21 Implementing the Cure: Combining Wet-Lab Protein Biochemistry with Computational Analysis to Provide Gains in Student Learning in the Biochemistry Teaching Lab. M. Pikaart, Hope Coll.


B337 663.23 Developing a Physical Model of O-Glcnac Transferase (Ogt) in Complex with Tab I. V. Perez Hernandez, S. Nguyen, A. Chabbra, E.F. Schmitt Lavin, Nova Southeastern Univ.


B339 663.25 Visualizing Biochemistry: The Implementation of Biomolecular Visualization and Structure-Function Conceptual Game-Based Card Sorting Activities. A. Bates, C.R. Terrell, Univ. of Minnesota

B340 663.26 Authentic Research in the Teaching Laboratory at a Large University: Comparative Studies of Malate Dehydrogenase Isomers in Trypanosomes. A. Springer, Univ. of Massachusetts Amherst

B341 663.27 Improving Student/Faculty Engagement: Impact of End of Lecture Classroom Surveys on Student Evaluations and Motivation. K.R. Miller, Univ. of Mount Union


B343 663.29 Measurement of Enterocecci and Other Water Quality Parameters as an Active Learning Module in Introductory Life Science Courses. C.D. Spence, A. Ler, Marymount Manhattan Coll.

B344 663.3 Moving a Biochem Majors Lab Course into Discovery Based Research. C.K. Park, Univ. of Arizona

B345 663.31 Using a Laboratory Teaching Module to Train Undergraduate Students in Cell Culture Based Research. J.L. Furnari, A. Aguiannio, Marymount Manhattan Coll.


B347 663.33 Are Lab Courses Worth the Investment: Factors That Affect Student Success in a Biochemistry Lab Course. O.M. Hart, Purdue Univ.

B348 663.34 Developing Professionalism in Research Through Journals Clubs. G. Mendez, F. Prokopczuk, California State Univ. and Northridge


B352 663.38 Use of a Synchronous Collaborative Learning Environment in a Face-to-Face Molecular Biology Classroom. C. Clauson-Kazina, G. Kurtzweiler, Saint Leo Univ.


B354 663.4 In Silico Research as an Active Learning Platform in a Molecular Biology Course. E. Beaulieu, Univ. of Ottawa, Canada

B355 663.41 Teaching Biochemistry Based Research Driven Course Through Active Learning to Accelerate Student’s Adaptation to College Study and Promote Freshman Research. S. Ray, J. Freguose, R. Esper, J. Clark, G. Corral, C. Xiao, The Univ. of Texas at El Paso

B356 663.42 Three Web Tools to Aid Genetics Instruction Developed by Students in a Unique Undergraduate Bioinformatics Projects Course. R. Rutherford, N. Garcia, R. Charzenko, S. Levy, B. Bjelajac, Seattle Univ.

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Aptosis and Cell Death

B357 664.1 Zyflamend Induces Apoptosis in Pancreatic Cancer Cells via Modulation of Endoplasmic Reticulum Stress and Autophagy. D. Puckett, D. Alan, S. Chahed, F. Frankel, J. Whelan, A. Bettaieb, Univ. of Tennessee and Knoxville

B358 664.2 Induction of Immunogenic Cell Death of Cancer Cell by Using Chemical Detergent Treatment and Its Activation of Immune System. T. Kimura, N. Nakamura, Y. Hashimoto, A. Kishida, Tokyo Med. and Dental Univ., Japan and Shiba Inst. of Technology, Japan

B359 664.3 Perturbation of Homocysteine Homeostasis Leads to Cellular Epigenetic Modification and Endothelial Injury in Acute Myocardial Infarction. C. Chang, T-C. Yang, S-C. Lu, M-S. Lee, P-Y. Chang, Taipei American Sch., Taiwan and Nat’l Taiwan Univ. Coll. of Med., Taiwan
665 Cell Stress and Xenobiotics

665.1 Modulation of Phospho Tension Homolog (Pten) in Cancer Cells and Lipid Peroxides in Peripheral Blood Mononuclear Cells (Pbmc)s Following Exposure to Flavonoids. A. S. Garcia, E. Myles, W. Y. Boadie, Tennessee State Univ.


665.4 Thermal Manipulation During Broiler Chicken Embryogenesis Increases the Basal mRNA Levels of Antioxidant Factors and Alters Their Production Dynamics During Thermal Stress. M. B. Al-Zghoul, Jordan Univ. of Science and Technology, Jordan


666 Signaling Integration and Cross-regulation

666.1 Lmd2 Is an Intracellular Activator of Integrin Linked Kinase (Ilk) Activity and Gsk-3/akt/-Catenin Signaling. S. Dedhar, S. Awey, Univ. of British Columbia, Canada and BC Cancer Res. Centre, Canada

666.2 Regulation of Notch Signaling by Src Kinase. B. LaFoya, J. A. Munroe, A. R. Albig, Boise State Univ.

666.3 Opening the Doors for Nuclear Gln3 Entry in Saccharomyces Cerevisiae. J. J. Tate, R. Rai, T. G. Cooper, Univ. of Tennessee HSC

666.4 14-3-3 Protein-Dependent Gata Transcription Factor Control in Saccharomyces Cerevisiae. J. J. Tate, R. Rai, D. Buford, T. G. Cooper, Univ. of Tennessee HSC

666.5 Intersection of Cell Death Machinery: Akt Meets Vrk2 at the Lysosome to Control Induction of Autophagy. M. Noguchi, F. Suzu, N. Hirata, Inst. for Genetic Med. and Hokkaido Univ., Japan

666.6 Exploring the Structural Basis of the Cross-Talk Between Gcn5acetylation and Phosphorylation Using Physical Models. S. Shani, M. Schwabe, N. M. Garcia, H. Sonnenschein, E. Bell, Univ. of San Diego

666.7 Determining the Role, Expression and Interactions of Fap-1 in s. Cerevisiae, Cultivated in a Nitrogen-Limited Medium. A. C. Rodriguez Velez, E. Pares Matos, Univ. of Puerto Rico at Mayaguez

666.8 Exploration of Novel Markers of Posterior Capsular Opacification. E. Jackson, M. Shihan, Y. Wang, M. Duncan, Univ. of Delaware

666.9 Coordinated Cross-Talk Between Calcium and Camp in Regulating Pulsatile Insulin Secretion: A Novel Role for the Unique Inhibitory G-Protein, Grz. in Regulating j(2)-Cell Function. M. Schaid, J. Harington, H. Winkes, M. Merrins, M. Kimple, Univ. of Wisconsin–Madison
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### 667. Cell Motility and Migration


**B395 667.2** Hct116 Colorectal Cancer Cells Secrete Chemokines Which Induce the Chemotaxis and Intracellular Calcium Mobilization of Nk3.2 Cells. Influence of Dimethyl Fumarate and Monomethyle Fumarate. A. Maghazachi, N. Eltemam, Z. Al-Jaderi, Cal. of Med. and Univ. of Sharyah, United Arab Emirates

**B396 667.3** The Biological Impact of the Golgi Membrane Protein Tmem165 for Breast Cancer. P. Murdali, Univ. of Arkansas for Med. Sciences and Emary Univ.

**B397 667.4** Defining the Role of Protein Interactions at WRAMP Structures in Directional Migration. S. Miller, B. Murillo, M.K. Connacher, N. Ahn, Univ. of Colorado Boulder


**B399 667.6** The Non-Canonical Wnt/Ca++ Pathway Regulates the Migration and Function of Primary Mesenchyme Cells. A. George, T. McCann, J. Song, Univ. of Delaware

**B400 667.7** Ky Hemp-Induced Modulation of Ovarian Cancer Cell Metastasis. S. Biela, A. Wang, W.K. Sumanasekera, Sullivan Univ. Col.of Pharmacy

**B401 667.8** Glioblastoma Cells Respond Directionally to L1 cam Protein Ectodomain. A.I. Stubbolo, K. Plisch, C. Bernheimer, D.S. Galileo, Univ. of Delaware

**B402 667.9** Crosstalk Between Tetrascaprin-Interacting Protein Igf3 and Sphingolipid Metabolism. K. Schweitzer, K. Ni, I. Petracek, Natl. Jewish Health


**B404 667.11** Microtubule Involvement with the WRAMP Structure, a Mechanism for Rear Membrane Rearrangement in Mammalian Cells. B. Murillo, S. Miller, M.K. Connacher, N. Ahn, Univ. of Colorado Boulder

**B405 667.12** Sike Affects Processes Involving Cytoskeletal Rearrangement. R. McCool, C.A. Quintero, J.E. Bell, J.K. Bell, Univ. of San Diego

### 668. Tumor Suppressors and Tumor Drivers

**B406 668.1** Astrocyte-Derived Ccl20 Reinforces Hif-I-Mediated Hypoxic Responses in Glioblastoma by Stimulating the Cxcr4-NF-Kb Signaling Pathway. P. Jin, J-W. Park, Col. of Med. and Seoul Natl. Univ., Republic of Korea

**B407 668.2** Validation of arid 1a as a Mammary Tumor Driver in Mice. M. Winters, N. Kartha, J. Schimenti, Cornell Univ.

**B408 668.3** Investigation of Phkdl1’s Localization and Potential Function as a Tumor Suppressor. X. Shi, L. Yoo, Denison Univ.

**B409 668.4** Med28 Modulates Transcription Factor FOXM1-Associated Migration and Invasion in Human Non-Small Cell Lung Cancer (NSCLC) Cells. N.T. Hsieh, C-Y. Huang, C-C. Li, I-C. Wang, M-F. Lee, China Med. Univ., Taiwan, Nat’l. Tsing Hua Univ., Taiwan and Chang Jung Christian Univ., Taiwan

**B410 668.5** Ese-1 Represses Formation of Tumor in Vivo and Growth, Invasion and Migration of Human Nascl Cells in Vitro. Z. Lou, B-S. Lee, T. Ha, Y. Xu, H-J. Kim, C-H. Kim, S-H. Lee, Univ. of Maryland and Ajou Univ., Republic of Korea

**B411 668.6** Dysregulation of the Tumor Suppressor Tip60 and Atm Signaling Paradigm by the HIV Transactivator of Transcription. A. Simenauer, A. Cota-Gomez, Univ. of Colorado Anschutz Med. Campus

**B412 668.7** Cloning the P53 DNA Binding Domain. J. Jones, V. Faustino, L.A. Nagaj, Mount Saint Mary’s Univ.

**B413 668.8** Prostate Specific Membrane Antigen Promotes Prostate Tumor Progression and Survival by Confering Resistance to Hypoxic Stress. A. Ponce, A. Lewis, D. Anukam, S. Abdulsalam, L. Shapiro, L. Caromile, A. I. Stubbolo, M. Sofowote, Trinity Christian Col.

**B414 668.9** Ww Domain-Containing Oxidoreductase Induces Cellular Senescence in Response to Replication Stress. H-C. Cheng, L-J. Hu, Natl. Cheng Kung Univ., Taiwan


**B416 668.11** Converting the Tumor Suppressor Function of Wwox to Tumor Promoting by Serine 14 Phosphorylation. P-C. Ho, H-L. Kuo, N-S. Chang, Natl. Cheng Kung Univ., Taiwan

**B417 668.12** Tce3 Impacts Cancer Growth and Functions as a Tumor Suppressor. N. Kazim, J. Davie, Southern Illinois Univ. Sch. of Med.

B430 669.13 Structural Basis of Heme Acquisition from Human Hemoglobin by the Gram-Positive Pathogen Streptococcus Pyogenes. R. Macdonald, M. Phillips, D. Cascio, M. Collazo, R.T. Clibb, Univ. of California, Los Angeles

B431 669.14 Correlation of Oyster Disease with Vibrio Parahaemolyticus Accumulation in Oyster Tissue. K. Jackson, A. Scro, R. Smolowitz, Roger Williams Univ.

B432 669.15 Characterizing Nucleic Acid Association with Bacterial Membrane Vesicles and Their Transfer to Host Cells. B.V. Rodriguez, M.J. Kuehn, Duke Univ.

B433 669.16 The Supersweet Survival of the Opportunistic Pathogen Staphylococcus lugdenensis Within Macrophages as an Immune Evasion Strategy. D. Heinrichs, R. Flannagan, D. Watson, Univ. of Western Ontario, Canada

B434 669.17 Pasteurella Multocida PhbB2 Toxin Displays a Novel Unconventional Cysteine Protease Fold. S. Mattao, S. Kumar, Purdue Univ.


B436 669.19 Variation in Predation Phenotype Among Predatory Bacteria Bdellovibrio. K. Martinez, M. Oser, L.E. Williams, Providence Col.

B437 669.2 Phenotypic Variation and Genomics of Bdellovibrio Predatory Bacteria from the Built Environment. L. Zappia, J. Mangiamele, L.E. Williams, Providence Col.


B439 669.22 Legionella Effector Rvad Binds Host Phosphoinositide-3-Phosphate and Contributes to Lysosomal Avoidance. R. Neuneubel, Univ. of Delaware

B440 669.23 Metallo-Repigmenting of Macrophages Exposed to Pseudomonas Aeruginosa Biofilm. M. C.B. Ammons, A. Fuchs, V. Copie, Idaho Veterans Res. and Education Foundation and Montana State Univ.

670 Diabetes, Obesity and Metabolic Syndrome


B442 670.2 Effects of Capsaicin G on Lipolysis and Fatty Acid Oxidation in 3t3-L1 Adipocytes. J. Lee, Y. Kim, J. Sung, Chungbuk Natl. Univ., Republic of Korea, Kyungang Univ, Republic of Korea and Univ. of Florida


B444 670.4 Great, Green, Glowing Worms: The Insulin/IGF-1 Signaling Pathway Regulates C. Elegans Feeding Behavior. N. Gouspy, P. Quadros-Mennella, Bay Path Univ.


B446 670.6 Fibroblast Growth Factor 21 Promotes Glucose Uptake in Adult Skeletal Muscle Fibers from Mice. G. Rosales-Soto, A. Diaz-Vegas, P. Llanos, E. Jaimovich, A. Contreras-Ferrat, Ctr. for Molecular Studies of the Cell, Facultad de Medicina, Universidad de Chile, Chile, Inst. for Res. in Dental Science, Facultad de Odontología, Universidad de Chile, Chile, Inst. of BioMed. Sciences, Facultad de Medicina, Universidad de Chile, Chile, Exercise Physiology Lab, Facultad de Medicina y Universidades Fins, Tenero, Chile


B449 670.9 Serum Leptin Is Associated with Fasting Plasma Glucose and Serum Insulin Levels Independently of BMI in Haitian Americans with Type 2 Diabetes. J. Ametz, W. Proulx, S. Sullivan, R. Livin, M. Bellavia, State Univ. of New York Col. at Oreya


B454 670.14 Janus-Faced Role of Atp1b4 Gene Co-Option in Mammalian Evolution. N. Modyanov, Univ. of Toledo Col. of Med. and Life Sciences

B455 670.15 HUNK, a Serine/threonine Protein Kinase, Regulates Insulin Secretion from Pancreatic Islets. A. Lakhaman, M. Rabaglia, R. Das, K. Schueler, D. Stapleton, S. Simonett, M. Keller, A. Attie, Univ. of Wisconsin--Madison

B456 670.16 Attenuation of FFA-Induced Skeletal Muscle Insulin Resistance by Rosemary Extract. F. Vlachovskai, E. Tisani, Brock Univ., Canada


B460 670.2 Physiological Regulation of Brown Adipose Tissue with Obesity by Mid-Cold Exposure, a J3-Agonist and Exercise Training at Thermoneutrality. P. Aldiss, J. Lewis, F. Ebling, H. Budge, M. Symonds, The Univ. of Nottingham, United Kingdom

B461 670.21 Dendropanax Improve Kidney Function by Inhibiting Oxidative Stress via Upregulating SIRT-1 in Streptozotocin-induced Diabetic Rats. R. Sachan, SuryakunWan Univ., Korea and Democratic People’s Republic of China

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B470 670.3 Restoration of Hepatic Tdag51 Expression Improves Insulin Signaling and Reduces Weight Gain in Mouse Models of Non-Alcoholic Fatty Liver Disease. T.R. Yousouf, C. Bouchard, M. Alb, E. Lynn, S. Lhotak, H. Jiang, H. Li, K.N. Maclean, J. Cherrington, J. Krepsinsky, G. Steinberg, R.C. Austin, McMaster Univ., Canada, St. Joseph’s Health Care, Canada, Univ. of Colorado and Univ. of Arizona


B472 670.32 Examination of Piccolo SpliceVariants in Regulated Insulin Secretion from Pancreatic β-Cells. V.G. Quintana, R. Salamon, S.D. Fenster, Fort Lewis Col.

B473 670.33 Synergistic Anti-Adipogenic Effect of 3,3′-Dinitrobenzylidine and Capsaicin in 3T3-L1 Adipocytes. J. Lee, S-H. Lee, Univ. of Maryland

B474 670.34 Tissue-Specific Genetic Targeting of iNOS Reveals an Unexpected Role of Adipocyte iNOS in the Development of Insulin Resistance, Dyslipidemia and Altered Energy Metabolism in Diet-Induced Obese Mice. V. Rodriguez Vilela, G. Lachance, R.T. Nachbar, C. Centano-Baez, K. Bellmann, A. Marette, Laval Univ., Canada

B475 670.35 How Do You Measure Up? BMI Versus Waist to Height Ratio. K. Smolinski, T. Ward, B. Hall, S.E. Hurst, Univ. of Arizona, Lincoln Memorial Univ. and Boston Univ.


B477 670.37 Id2 Deficiency Aggravates Fructose-Induced Nafld by Activating Inflammatory Signaling in Female Mice. K.E. Beane, A.M. Montalbano, J. H. Pan, B.C. Kong, J. K. Kim, Univ. of Arkansas

B478 670.38 Enhancement of Biological Activity Through Conversion of Rutin to Quercetin Using Fecal Fermentation Products of Justicia Spicigera in Kidney from Diabetic Rats. V. Houde, M. Schwab, K. Bellmann, Y. Deshaies, M. Sola-Penna, A. Marette, Universidade Federal do Rio de Janeiro, Brazil and Laval Univ., Canada

B479 670.39 Betulinic Acid Alleviates Body Fat Accumulation and Dyslipidemia by Inhibiting de Novo Lipogenesis and Stimulating Lipolysis in Vivo. H. Kim, Y. Ryu, G-W. Go, Kookmin Univ., Republic of Korea

B480 670.40 Antihyperglycemic, Neuroprotective and Antioxidative Effects of White and Yellow Fleece Products of Justicia Spicigera in Diabetic Mice. V. G. Quintana, R. Salamon, S. D. Fenster, Fort Lewis College

B481 670.41 In Vivo Effects of Adipose-Specific Deletion of Jagged 1 in Mice Administered a High Fat Diet. A. Langlais, Univ. of New England

B482 670.42 Anti-Adipogenic and Anti-Diabetic Activities of Patchouli Alcohol. T. Aitken, S. Grover, P. Booren, L. Ramalingam, A. Marette, Laval Univ., Canada, St. Joseph’s Health Care, Canada, Univ. of Colorado and Univ. of Arizona

B483 670.43 Targeting and Tracking Cardiac Myocytes with fgf1 Expression in Fla-CreER2 Transgenic Mice. I-M. Chiu, T-Y. Chung, M-S. Chen, S-T. Jiang, Y-C. Hsu, Nat’l Health Res. Insts., Taiwan, Nat’l. Applied Res. Lab., Taiwan and Mackay Med. Col., Taiwan


B488 670.48 Obesity-Related Stressors Repress Gonadotropin-Releasing Hormone Gene Expression via the Transcription Factor C-Fos. W. Museman, A. Bertsch, H.E. Walsh, Wobal Col.

B489 670.49 Changes in Spexin Levels Are Influenced by the Presence or Absence of Gestational Diabetes in Pregnant Subjects. N. Aldaghri, King Saud Univ., Saudi Arabia


B491 670.51 Syntaxin 4 (Syc4)- More Than Just a Snare Protein: Elevating Syc4 Content in Skeletal Muscle to Prevent Insulin Resistance/Prediabetes. K.E. Merz, E. Olson, J. Zhang, R. Veluthakat, E. Oh, A. Hamilton, J. Huss, D.C. Thurmond, City of Hope

B492 670.52 Regulation of Insulin Sensitivity by Skeletal Muscle Specific Modulation of P21-Activated Kinase 1 (Pak1). V.A. Salunkhe, R. Tunduguru, M. Ahn, E.M. Olson, R. Veluthakal, J. Zhang, A. Aslamy, D.C. Thurmond, City of Hope


B494 670.54 Regulation of Hif1α Alpha in Hyperoxia and Hyperglycemia. B.I. Iwuagwu, Robert Gordon Univ., United Kingdom
671 Lipids and Membranes

B495 670.55 The Protein Phosphatase Phipp Suppresses Insulin Signaling and Inflammation in Mouse Model. G. Lorden, S. Skovsø, M. Ropel, K. Cohen-Katsnelson, J.D. Johnson, A.C. Newton, UCSD and Univ. of British Columbia, Canada

B496 670.56 Hepatocyte Early Growth Response 1 (Egr1) Regulates Lipid Metabolism in Nonalcoholic Fatty Liver Disease. N.S. Magee, Y. Zhang, Univ. of Kansas Med. Ctr.

B497 670.57 Molecular Characterisation of Small Molecule Agonists and Internalisation of Gip-1r. V. Kanamarlapudi, Swansea Univ., United Kingdom

B498 670.58 Perturbation of Fuxo1 Expression Levels in 3t3-L1 Pre-Adipocytes Using Cinnamon Extract. A. Dingis, K. Bova, A. Aulthouse, A. Stockert, Ohio Northern Univ.

B499 670.59 Does This Gene Make Me Look Fat? Atp10a Expression in Targeted Human Populations. S.E. Hurst, T. Ward, B. Hall, K. Smolinski, Univ. of Arizona, Lincoln Memorial Univ. and Boston Univ.

B500 670.6 Comparison of Antioxidant and Anti-Inflammatory Activity of Quercetin, Isocoumarin and Rutin Against Alcohol-Induced Liver Injury in Hepg2 Cells. J. Song, Y. Kim, J. Lee, The Univ. of Texas Southwestern Med.

B501 670.61 The Effects of Physical Activity and Omega 3 FattyAcids on Glucose Levels and Neuropathy Symptoms in Hispanic Diabetics in the “En BalancePlus” Study. D. Patel, Loma Linda Univ.


B503 670.63 Understanding the Role of Pancreatic \( \beta \)-Cell Cd36 in the Development of Type 2 Diabetes. E.A. Kolar, E. Gajrawala, J. Deeny, J. Hamilton, Boston Univ. Sch. of Med. and Mary Baldwin Univ.


B507 671.4 Probing the Two Orientations of Pal in Vesiculating e. Coli. M. Vaca, Rochester Inst. of Technology

B508 671.5 Bacterial-Triggered Triglyceride Synthesis in Coccomyxa Subellipsoidea Coincident with Biore-mediation of EPA-Regulated Municipal Wastewater. T. Nicodemos, P. Black, Univ. of Nebraska-Lincoln

B509 671.6 Crystallographic and Enzyme Kinetic Analyses of the Human Insoluble Polyphosphate Multikinase (IPMK). R. Blind, Vanderbilt Univ.

B510 671.7 A New Model for Understanding the Egg Cell Surface at Fertilization. E. Wiseman, D. Carroll, Florida Inst. of Technology

B511 671.8 Designing a Model Skin Cell Membrane to Investigate the Extent of Nanoparticle Absorption. B. Yoder, A.G. Sostarecz, Monmouth Col.

B512 671.9 Repurposing Fendiline as a Novel Anti-Viral Therapeutic. M.L. Husby, R. Stahelin, Purdue Univ.


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B521 672.7 Human CoQ10a and CoQ10b Are Distinct Putative Start Domain Proteins That Restore Q Biosynthesis and Function in Yeast. H.S. Tsui, N.V. Pham, L. Fernández-Del-Rio, B.R. Amer, M.C. Bradley, R.T. Clubb, C.F. Clarke, Univ. of California, Los Angeles

B522 672.8 Identification of the Major Diosglycerol Acyltransferase mRNA in Eukaryotic Cells. H. Cao, United States Dept. of Agriculture and Agricultural Res. Service

B523 672.9 Identifying Genes Required for the Use of p-Coumarate in Coenzyme Q Biosynthesis in Saccharomyces Cerevisiae. A. Nag, Y. Li, G. Basset, O. Kwon, C. Clarke, Univ. of California, Los Angeles and Univ. of Florida


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B528 673.4 Beyond ERAD: Glucosamine Will Bring You to Tears. M. Tumb, B. Ng, H. Freeze, Sanford Burnham Prebys Med. Discovery Inst.

B529 673.5 The Heparan Sulfate Degradating Enzyme Heparanase Is Up-Regulated by the EWS-FLI Fusion Protein in Ewing Sarcoma. S. Gaskin, La Trobe Inst. for Molecular Science and La Trobe Univ., Australia
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B531 673.7 Anti-Aging Effect and Gene Expression Profiling of Bumblebee (Bombus Terrestris) Queen Glycosaminoglycan in Aged Rats. M. Y. Ahn, H. J. Yun, J. S. Hwang, Nat’l Academy of Agricultural Science and RDA, Republic of Korea


B533 673.9 Elevated O-Glcnac Exacerbates Pro-Inflammatory Cytokine Secretion from CD4+ T Cells. M. Machacek, J. Li, T. Li, T. Lydic, C. Slawson, P. Fields, Univ. of Kansas Med. Ctr. and Michigan State Univ.

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B542 673.18 Isolation, Characterization and Biochemical Effects of the Different Polysaccharides from Trametes/Versicolor. S.L. Badshah, A. Muhammad, Islamia Col. and Pes枢纽or, Pakistan


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B547 673.23 Combining Mass Spectrometry and Glycan Array Data to Explore Invertebrate Glycomes. I. Wilson, B. Eckmair, A. Hyytiainen, S. Yan, J. Vanbeselaere, M. Paschinger, Universität für Bodenkultur Wien, Austria


B550 673.26 Analyzing the Stabilizing Effects of O-Fucose Glycans on Thrombospondin Type I Repeats. S.J. Berardinelli, R.S. Hultanwinger, Univ. of Georgia


B552 673.28 The Development and Characterization of Antibodies to Site-Specific O-Glycan Modified Histones for Epigenetic Research. R. Orlando, M. Popov, G. Gutierrez-Sanchez, GlycoScientific


B554 673.3 Use of Bioorthogonal N-Acetylcysteamine (SNAC) Analogues and Peptidoglycan O-acetyltansferase B (PatB) to Label Peptidoglycan. K.M. Lazor, Y. Wang, K.E. DeMeester, H. Liang, T.K. Heiss, C.L. Grimes, Univ. of Delaware

B555 673.31 Fractones: Protopolygn Matrix for Growth Factor Activity in Health and Disease. H. Davis, F. Mercier, Univ. of Hawaii

B556 673.32 Structural and Functional Characterization of Ulvan Degradating Polysaccharide Lyase Enzymes. T. Uluganathan, W. Helbert, E. Banin, M. Cygler, Univ. of Saskatchewan, Canada, Recherches sur les Macromolécules Végétales, France and Bar-Ilan Univ., Israel

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B558 674.2 Stainless Imaging to Identify the Biochemical Changes During Bleomycin-Induced Pulmonary Fibrosis by Fourier Transform Infrared Technique. V. Suryadavara, S.S. Nazeer, H. Sreedhar, V. Natarajan, M. Walsh, Univ. of Illinois at Chicago

B559 674.3 RCSB Protein Data Bank: Sustaining a Living Digital Data Resource That Enables Breakthroughs in Scientific Research and Biomedical Education. S.K. Burley, H.M. Berman, C. Christie, J.M. Duarte, Z. Feng, J. Westbrook, J. Young, C. Zardecki, RCSB Protein Data Bank

B560 674.4 Quantification of Total HIV-1 DNA in Seminal and Blood Samples in Men Under Cart. R.J. Torres-Strubbe, L.J. Goday-Muñoz, L.J. Figueroa, M.J. Hill, Univ. of Puerto Rico at Ponce, Puerto Rico and Ponce Health Sciences Univ., Puerto Rico

B561 674.5 The Impact of the Affordable Care Act on Rural Healthcare. T.L. Boyd-Seng, G.P. Einstein, O.L. Tulp, Univ. of Science, Arts and Technology Montserrat,Montserrat and Einstein Med. Inst.


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B3 786.3 Investigating the Link Between Mutations in Muts DNA Repair Protein and Lynch Cancer Syndrome. E. Kessler, J. Liu, H. Awad, M. Hingorani, Wesleyan Univ.

B4 786.4 Generating and Characterizing Resistance to Ionizing Radiation in Experimentally Evolved Populations of Escherichia Coli. J. D. Trimarco, S.T. Bruckbauer, M.M. Cox, Univ. of Wisconsin–Madison

B5 786.5 Mass Spectrometry-Based Proteomics Reveals a Regulatory Role for Dyrk1a in DNA Damage Repair. S.E. Guard, Z. Poss, C. Ebmeier, W. Old, Univ. of Colorado Boulder

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B7 786.7 Role of Spontaneous DNA Damage and Single-Stranded DNA in Generation of Enlarged G1 Phase Cells in Rad52 Mutants of Saccharomyces Cerevisiae. C. J. England, M.F. Weis, L.K. Lewis, Texas State Univ.

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B15 786.15 Roles of Cell Cycle Phases and DNA End Structures in Determining Requirements for the Yku, Mrx and Ligase IV Complexes in Nonhomo- logous End-Joining Repair of Plasmid DNA. N.D. Rodriguez, L.K. Lewis, Texas State Univ.

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B125 792.29 A Analysis of Spin Probe Viability for Protein Structure Investigation Using Advanced Epr Techniques. L. Ebersol, A. Bokhari, A. Silakov, Pennsylvania State Univ.

B126 792.3 Crossroad Control of Cell Proliferation and Apoptosis by Pea-15 Phosphorylation Homeostasis and Allosteric Regulation of Protein Conformations and Interactions. Y. Wei, S. Crespo, S. Hassan, New Jersey City Univ.


B128 792.32 N-lys and Other Atomic Level Interactions of Formamides with Nucleobases and Base Analogues in Water. R. Karim, X. Cheng, M.T. Record, Univ. of Wisconsin–Madison

B129 792.33 Free-Based Measurements of Protein Multimerization in Pyruvate Carboxylase. A.L. Koza, J. Hakala, M. St. Maurice, Marquette Univ.

B130 792.34 Reconstitution of a Tail-Anchored Mitochondrial Membrane Protein. A.L. Bakkum, B. Hill, Med. Col. of Wisconsin

B131 792.35 Optimizing Protein Crystal Formation of a Heterocylization Domain from Yersiniabactin Synthetase. M. Patterson, V. Dieu, M. MacRae, B. Henrikuez, J. Soule, A. Grann, D.P. Dowling, Univ. of Massachusetts Boston


B133 792.37 The Importance of Salt-Bridge Formation of Lysine 52 and 54 from Apolipoprotein III for Protein Structure and Function. A. Tran, K. Shah, P.M. Weers, California State Univ, Long Beach


B136 792.4 Zinc-Mediated Oligomerization of S100A12. S.M. Dano, V. Garcia, S. Little, D. Franklin, J.A. Gaddy, Fisk Univ. and Vanderbilt Univ.

B137 792.41 Utilizing Homology of Wound Inducible Transcript 3.0 (Wit3) as Stepping Stone to Investigate the Function of Suppressor of Ikekpsion (Sike). M. Davood, J.E. Bell, J.K. Bell, Univ. of San Diego

B138 792.42 Biophysical Characterization of Suppressor of Ikekpsion Structure, Stability, and Metal Binding Properties. F. Shikwana, J.E. Bell, J.K. Bell, Univ. of San Diego

B139 793.1 Dual Function of the Trigger Factor Chaperone in Nascent Protein Folding. C. Kaiser, K. Liu, K. Maciuba, Johns Hopkins Univ.

B140 793.2 Tuning Hsp70 Function: Investigating the Ability of Hsp40/hsp70 Extragonal Suppressors to Promote Prion Propagation in Yeast. E. Kamiya, B.A. Shlikke, E.A. Craig, J.K. Hines, Lafayette Col. and Univ. of Wisconsin–Madison

B141 793.3 Evolutionary Conservation of Variant-Dependent Prion-Promoting Hsp40 Functions in Plants. R.E. Brown, J.K. Hines, Lafayette Col.

B142 793.4 Complex Effects of f-1-Protein Alterations on Hsp104-Mediated Curing of Prion 1”. S.E. Berger, E. Kamiya, M.T. Astor, J.K. Hines, Lafayette Col.


B144 793.6 Atf6 Ubiquitylation Is Required for Its Transcriptional Activity and Degradation. C. Alvati, D.J. Thuerauf, C.C. Glemsbotski, San Diego State Univ. Heart Inst.


B146 793.8 Increasing Surface Expression of Pancreatic β Cell-Ki67 Channels Attenuates Palmitic Acid-Induced Lipotoxicity in Vitro and in Vivo. P-C. Chen, J-S. Ruan, Y-Y. Kuo, R-Y. Chao, Y-W. Chen, Nat’l Cheng Kung Univ, Taiwan

B147 793.9 An Engineered e. Coli Ribosome with Tunable Translation Rates Enhances Recombinant Protein Expression. J.P. Oza, B. Des Soyse, M.C. Jewett, California Polytechnic State Univ. and Northwestern Univ.


B149 793.11 Development of an in Vitro Proinsulin Folding Assay. R.B. Mackin, Creighton Univ.
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B156 794.1 The Effects of Copper and Zinc on Psn Gene Expression in a Drosophila Alzheimer’s Model. K. DeGouveia, R.P. Rogers, Wentworth Inst. of Technology

B157 794.2 LDLR Processing Dysregulation by Statin Treatment of Class II Transport Mutant Cells. L. Omer, N.L. Boyd, Univ. of Louisville


B160 794.5 The Parkinson’s Disease Protein α-Synuclein Alters the Microenvironment of the Endoplasmic Reticulum in Saccharomyces Cerevisiae. V.M. Haak, T.J. McBride, M.J. Haverly, N. Austriaco, Providence Col.


B162 794.7 Disulfide Bridge Formation Contributes to Histone Ligand Recognition by the ATAD2 Bromodomain. C.M. Evans, Albany Col. of Pharmacy and Health Sciences


B164 794.9 Investigating the Mechanism of Ce Amide Bond Stabilization in Phosphoserine-Proline Sequences. N.R. Raniszewski, H.K. Ganguly, N. Zondlo, Univ. of Delaware

B165 794.10 The Er Hasp70 HspA13 Redirects an Amyloidogenic Protein to Aggregation. J. Genereux, Univ. of California

B166 794.11 Expression and Purification of Human Brain and Muscle Armt-Like 1 Protein (Hbmal1). B. Moreno, D. Li, A. Sarabia-Gonzalez, J. Rodriguez, J. Choi, S. Ray, C. Xiao, The Univ. of Texas at El Paso


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Intrinsically Disordered Proteins and Amyloids


B169 795.2 Discovery of Protein Phosphatase 2a Substrates. X. Wang, R. Page, P. Wolfgang, Brown Univ. and Univ. of Arizona

B170 795.3 Investigating Effects and Determinants of Pnpase-Membrane Interactions: Membrane Leakage and Peptide/lipid Co-Aggregation. E. Vane, A. Nath, Univ. of Washington

B171 795.4 Development of a Cell-Based Assay for Tau Strain Discrimination. L.M. Angeles-Perez, J. Vaquer-Alicea, V. Manon, M. Diamond, Univ. of Puerto Rico and The Univ. of Texas Southwestern Med. Ctr.

B172 795.5 The Autophagy Inducers AR-12 and AR-14 Control Prion Infection. B. Abdulrahman, D. Abdelaziz, S. Thapa, L. Lu, S. Gileh, H. Schatz, Univ. of Calgary, Canada


B174 795.7 Initially Disordered, Reflectin Assembly Tunnably and Reversibly Drives Biophotonic Color. R. Levenson, C. Bracken, C. Sharma, J. Santos, C. Arata, D.E. Morse, Univ. of California, Santa Barbara

B175 795.8 The Intrinsically Disordered PsoB Subunit of Photosystem II: Structure and Role in Photosynthetic Water Oxidation. B.A. Barry, U. Brahmacari, C.E. Obi, J.N. He, Georgia Inst. of Technology


B177 795.10 A Polypeptide from the Brine Shrimp Artemia Franciscana Is Related to Plant Seed Maturation Proteins and Protects Lactate Dehydrogenase During Freezing and Desiccation. S. Gurung, M.A. Menze, Eastern Illinois Univ. and Univ. of Louisville

B178 795.11 The Amyloid-β Peptide in Alzheimer’s Disease: Molecular Interactions and Structure Conversions. A. Graslund, Stockholm Univ., Sweden


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Enzyme Chemistry and Catalysis


B183 796.2 Bioactive Fungal Screening to Find Efficient Biomass-Degrading Enzymes. U.A. Vazquez, D. Conrad, H. Ma, T. Woodard, S. Wu, Humline Univ, Rose Hulman Univ. and Univ. of Oklahoma

B184 796.3 Two Distinct Evolutionary Engineering Pathways of Human Kynureninase Confer Different Substrate Specificities and Rate-Limiting Steps. C.S. Karamitros, K. Murray, J. Blazec, S. D’Arcy, K. Johnson, E. Stone, G. Georgiou, The Univ. of Texas at Austin and The Univ. of Texas at Dallas

B185 796.4 Biosynthesis of Nonproteinogenic Amino Acids Oxyvinylglycines. B. Li, J.B. Patteson, Z.D. Dunn, Univ. of North Carolina at Chapel Hill
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**B187 796.6** Altering the Specificity Properties of 2-(2’-Hydroxyphenyl) Benzensulfinate Desulfinase from *n. asteroides* A3H1. E. E. Smith, D. Hoang, D. Cromwell, L. Watkins, James Madison Univ. and Texas State Univ.


**B189 796.8** Expression and Functional Characterization of Active Nicotinic Acid Dehydrogenase from Pseudomonas fluorescens P5. N. M. Brownstein, M. J. Snider, The Coll. of Wooster.

**B190 796.9** Structural Insights into Peptide Recognition and Modification by the Radical SAM Enzyme Subtil. K. M. Davis, Princeton Univ.

**B191 796.1** Screening for Novel Long-Chain Bacterial Esterase Activity. J. L. Jawikowski, R. J. Johnson, Butler Univ.


**B193 796.12** Engineering the Petase Enzyme to More Efficiently Break Down Pet Plastics. A. Duplan, B. L. Hall, Grand View Univ.

**B194 796.13** “The Importance of a Phenolic Group in the Substrates of Isotrotylosine Dehydrogenase”, C. M. Qinones, A. Kozyrvey, S. Rakita, Universidad de Puerto Rico, Rio Piedras Campus and Johns Hopkins Univ.


**B196 796.15** Escherichia Coli Heptosyltransferase I: Examining Protein Dynamics with Pyrene Excimer Fluorescence and Tryprophan-Induced Quenching. C. Hecht, Western Univ.


**B198 796.17** Engineering of Enzymes to Improve Lignin Breakdown for Use in Fuel Ethanol Production. R. D. Greene, B. L. Hall, Grand View Univ.

**B199 796.18** Defining the Fumarase Water Binding Site. T. M. Weaver, Univ. of Wisconsin–La Crosse.

**B200 796.19** Effectiveness of in Silico Engineering of the β-Glucosidase B Enzyme. K. R. Boulanger, B. L. Hall, Grand View Univ.

**B201 796.2** Tuberculosis Serine Hydrolase Variable Expression, Isolation, and Characterization Under Hypoxia Conditions. L. E. Severinac, R. J. Johnson, Butler Univ.

**B202 796.21** Kinetic Characterization and Chemo-therapeutic Relevant Inhibition of Human Malate Dehydrogenase 1 and 2. S. Wardenfelt, T. Dwyer, Stevenson Univ.


**B205 796.24** Exploring the Molecular Determinants of Heterocycle Formation in Hybrid Nonribosomal Peptides/Polyketides. D. P. Dowling, Y. Kung, A. Croft, K. T. Tazhizadeh, W. Kelly, C. T. Walsh, C. L. Drennan, Univ. of Massachusetts Med. Sch. Boston, Bryn Mower Coll., Univ. of Nottingham, United Kingdom, Massachusetts Inst. of Technology, Georgia Inst. of Technology and Stanford Univ.

**B206 796.2** Biosynthesis of Oxetanocin: Are Two Cofactors Better Than One? J. Bridwell-Rabb, H-W. Liu, A. Zhang, C. Drennan, Univ. of Texas and Massachusetts Inst. of Technology.


**B209 796.28** Biosynthesis and Production of Granatane Alkaloids in Hairy Root Cultures of Punica Granatum. K. Glockzin, J. D’Auria, Texas Tech Univ.

**B210 796.29** Engineer Alkane Hydroxylating Properties into Phenol Hydroxylase: A Look at the 2nd Coordination Sphere. E. Guillet, M. Szajinsky, Pomona Coll.

**B211 796.3** Initial Characterization of DazA, a Monoxygenase from the Rhodococcus Bidesulphurization Pathway. S. Truong, M. Sanchez, California State Univ. Northridge.

**B212 796.31** Screemong, Expression, and Characterization of Bayer-Villger Monoxygenase for the Biotransformation of Ricinoleic Acid. J. Yun, K-Y. Choi, Ajou Univ., Republic of Korea.

**B213 796.32** The Molecular Mechanism of Intermolecular Signal Transduction in Cystathionine-β-Synthase (CBS). S. S. Chandrasekaran, D. G. Ruiz, D. R. Kennedy, R. M. Esqueira, San Francisco State Univ., Univ. of California and San Francisco.


**B217 796.36** Investigation of the Iterative Methylation by a Cobalamin-Dependent Radical Sam Methyltransferase. Y. Wang, T. P. Begley, Texas A&M Univ.

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**Enzyme Inhibitors and Drug Design**

**B218 797.1** Selective Inhibition Atp Synthase in Combating Microbial Infections. Z. Ahmad, A.T. Still, Univ.


**B220 797.3** Synthesis of Mono-Substituted Anthraquinone Derivatives to Be Used in the Purification of Lactate Dehydrogenase. B. D. Retzlaff, J. Mueller, Saint Mary’s Univ. of Minnesota.


**B224 797.7** Examining Fmoc-Amino Acid Derivatives as Selective Inhibitors of Butyrylcholinesterase. J. Ramirez, R. Gonzalez, J. Schwans, California State Univ. and Long Beach.
798.1 Mutagenesis of the Human α-Galactosidase Active Site, Dimer Interface, and Glycosylation Region. E. Stokes, City Col. of New York

798.2 Small Molecule AllostERIC Modulation of Protein Tyrosine Kinases in Live Cells. D. Lasansky, M. Bienick, I. Ghosh, Univ. of Arizona

798.3 Development of New Molecular Tools for Antibody Detection and Purification. M. de Lourdes Borba Magalhães, G.F. da Silva, L.M.S. Echeverri, L.A. Fernandes, F. Batista, Universidade do Estado de São Catarina, Brazil


798.5 Construction of Hybrid Inhibitors for Metalloproteinase Targeting. L.B. Quinto, G.L. Berumen, H.P. Kehoe, J.A. Van Deventer, Tufts Univ.

698.6 Designed Metal-Mediated Protein Dimerization. B.J. Maniacci, J.J. Love, San Diego State Univ.

798.7 Engineering Tissue Inhibitor of Metalloproteinases-1 (Timp-1) as a Selective Inhibitor of Matrix Metalloproteinase-3 (Mmp-3) for Therapeutic Targeting. M. Raeeszadeh Sarmazdeh, B. Sankaran, D. Radisky, E. Radisky, Mayo Clinic and Berkeley Ctr. for Structural Biology

798.8 Rational Design of a pH Sensitive MS2 Virus-Like Particles for Drug Delivery Applications. E. Alvarado-Benedicto, E. Hartman, M.B. Francis, Univ. of Puerto Rico, Rio Piedras Campus, Puerto Rico, Univ. of California and Berkeley


798.10 Bioioluminescent Aequorin Fusion Proteins (AFPs) for Atherosclerosis Detection. T. Head, P. Dau, S. Deo, P. Daafarin, P. Goldschmidt-Clermont, S. Daumert, Univ. of Miami, Miller Sch. of Med., JSR Micro and Inc.


798.12 Engineering a VEGF Fusion Protein for Use with an Artificial Extracellular Matrix with Programmable Binding Affinities. R. Elliott, A. Barkas, E.R. Balog, Univ. of New England

798.13 The Role of the Furin-Cleavable Linker and KDEL Sequence in Cytotoxicity of Recombinant Immunoglobulin. J. Baker, Towson Univ.


798.15 Assessing Efficiency of the New England Biolabs Q5 Site-Directed Mutagenesis Kit to Produce a Library of Aminoglycoside n-Acetyletransferase Mutants. J. Macias, O. Pham, A. Vaca, P. Pennings, M.L. Kuhn, San Francisco State Univ.

798.16 Mini-Ins: A Monomeric Human Insulin Inspired from Cone Snail Venom Peptides. D. Chou, Univ. of Utah


798.18 Discovery of Tumor Necrosis Factor Receptor Binders Using Yeast Surface Display. N. Vunnan, S. Zmyslonski, J.N. Sachs, B. Hackel, Univ. of Minnesota

798.19 Construction of Chimera Prolyl Endopeptidases to Determine Role of Domains in Substrate Size Specificity. F. Alakija, B. Clack, Stephen F. Austin State Univ.

798.20 Covalent Attachment of Protein Cargo to a Computationally Designed Toroid Scaffold. C.R. Polkinghorn, J. Hallinan, L. Doyle, P. Bradley, B. Stoddard, B.K. Kaiser, Seattle Univ. and Fred Hutchinson Cancer Res. Ctr.

798.21 Engineering Starch Kinases for Increased Biofuel Production Efficiency. A. Rondon, S. Emanuelle, Univ. of Kentucky


798.23 Computational Design and Simulation of a Cyclic Dimeric Mutopass Transmembrane Protein. J.A. Aldana-Mendoza, W.A. DeGrado, California State Univ., Los Angeles, Univ. of California and San Francisco

798.24 Computational Insights into the Structure and Epitope Locations for Two Idiopathic Membranous Nephropathy Antigens: Phospholipase A Receptor and the Thrombospondin Type-I Containing Domain 7a and Design of Antigen Binding Proteins. S. Stoddard, Rhodes Col.


799.2 Utilization of Multiple Lipid Sources in the Production of Biodiesel by Using Lipase Nanoparticles from Candida Rugosa in a Nonaqueous System. H.A. Rivera, Universidad de Puerto Rico and Rio Piedras Campus


799.4 Exploring Binding Determinants of (S)-Allantoin with Proteins via Docking and Molecular Modelling. M.E. Reeves, M.M. Allard, M.A. Payne, La Sierra Univ.
B259 799.5 Computational Design of a Mimic Against Neurodegenerative Diseases Based on Vegf-D. C. Mason, N. Bibi, M. Zahran, New York City Col. of Technology and City Univ. of New York

B260 799.6 Biophysical Investigation of Gastrointestinal Fatty Acid Binding Proteins (FABPs) with Fatty Acid Ethanolamides (FAEs). M.P. Lai, F. Katz, R.E. Stark, City Col. of New York

B261 799.7 Differential Modulation of Microtubule Stability by Inhibitor-Bound Kinesin-5. C. Kim, E. Kim, L. Liu, E. Wojcik, Louisiana State Univ. Sch. of Med. and Health Sciences Ctr.


B263 800.0 Development of a Multimodal Cancer Theranostic Platform for X-Ray Imaging and Targeting of Apoptotic Peptide NuBCP with NIR light control. E. Omanovich, J. Donels, T. Li, Y. Geng, Z. Chen, H. Yang, C. Wu, Y. Liu, Dept. of Biophysics, Sch. of Life Science and Technology and Univ. of Electronic Science and Technology of China.

B264 800.1 Development of a Bio-Analysis Methodology for the Analysis of Novel Compound Rpm. A. Fraser, E.S. P. Reddy, A. Basu Sarkar, Univ. of Findlay, Morehouse Sch. of Med. and Univ. of Findlay Col. of Pharmacy.

B265 800.2 Biochemical Characterization of Novel Compound Rmbr. C. Higley, A. Basu Sarkar, E.S. P. Reddy, Univ. of Findlay, Univ. of Findlay Col. of Pharmacy and Morehouse Sch. of Med.

B266 800.3 Development of Polymeric Nanoparticles for Monitoring Cellular Activity. O. Soderberg, Uppsala Univ., Sweden.

B267 800.4 DNA-Based Molecular Tools for Monitoring Cellular Activity. O. Soderberg, Uppsala Univ., Sweden.


B269 800.6 Towards a Point-of-Care Test for Bacterial Vaginosis: Design and Development of a Rapid Test for Vaginosis. D.C. Pawley, E. Eikicci, S. Deo, M. Fischl, S. Daunert, Univ. of Miami.


B274 800.11 Rapid Prototyping of Microfluidic Conductivity Detectors via Extrusion-Based 3D Printing. B. Strong, S. Prabhu, A. Jangid, B. Liu, N. Martinez, California Polytechnic State Univ.


801 Nanotechnology

B276 801.1 The Hybrid Plga-Based Nanoparticles as a Smart Nanoplatform for Imaging-Guided and Near-Infrared Light-Triggered Combination Cancer Therapy. X. Shen, X. Xie, H. Yang, C. Wu, Y. Liu, Dept. of Biophysics, Sch. of Life Science and Technology and Univ. of Electronic Science and Technology of People’s Republic of China.


B278 801.3 Light Controlled Intracellular Protein Release: Tracking Ras Interactions with Superresolution Fluorescence Microscopy. J. Yun, C. Phelps, D. Morales, X. Nan, N. Reich, Univ. of California, Santa Barbara and Oregon Health & Science Univ.


B282 801.7 Towards Independent Cellular Release of a Multi-Biomolecule System Using Gold Nanorods: Simultaneous Up and Down Regulation of Cellular Pathways with Light Control. S. Grossman, E. Morgan, N. Reich, Univ. of California and Santa Barbara.


B288 801.13 A Delivery Method for Poly-histidine Tagged Proteins and Peptides for Transient Protein Expression with Light Control via Hollow Gold Nanoshells: Successful delivery of CRISPR Cas9 and Apoptotic Peptide NuBCP with NIR light control. E. Morgan, P. Jain, M. Pearce, S. Bhatia, S. Kolluri, N. Reich, Univ. of California, Santa Barbara, Massachusetts Inst. of Technology and Oregon State Univ.
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Proteomics

B289 802.1 High Throughput Proteomics Applications Using Anti-Dykkeddk Magnetic Agarose. B. Benton, J. Geddes, K. Vattem, B. Patel, B. Kaboord, thermo Fisher Scientific


B291 802.3 Changes of Urinary Proteins in Ddx-Induced Chronic Pancreatitis Rat Model. L. Zhang, Y. Gao, Beijing Normal Univer., People's Republic of China


B294 802.6 Tracking Protein Expression, Post-Translational Modifications and Interactions with High Content Antibody Microarrays. S. Pelech, L. Yue, Kinexus Bioinformatics Corporation, Canada and Univer. of British Columbia, Canada

B295 802.7 Altered Protein Expression of Primary Sea Turdle Cells Exposed to Contaminants Indicates the Potential for in Vitro Proteomics as a High Throughput Tool to Support Biomarker Discovery in Threatened Wildlife. S. Choudhuri, F.D. I. Leusch, A. Nouwens, J. van de Merwe, Griffith Univ., Australia and Univer. of Queensland, Australia

B296 802.8 Expression of Plasmodium Falciparum Glutamic Acid-Rich Protein (Pigarp) in Recombinant Pichia Pastoris for Malaria Vaccine Development. A.E. Martinez-Muniz, Univer. of Puerto Rico at Mayaguez, Puerto Rico


B298 802.1 ITRAQ-Based Proteomics Analysis of Colon Mucosal Proteins in a Dextran Sulfate Sodium (DSS)-Induced Colitis Mouse Model and the Effects of Dietary Treatments with Edible Mushroom Pleurotus Eryngii. B. Yuan, X. Xu, Y. Han, X. Cao, Q. Hu, X. Hang, China Pharmaceutical Univer., People's Republic of China, Nanjing Agricultural Univer., People's Republic of China and Univer. of Massachusetts Amherst

B299 802.11 Liver Protein Comparison of Warm-Adapted Versus Cold-Adapted Populations of Thripsse Sticklebacks (Gasterosteus Aculeatus). B.B. Leitvan, S. Gomez-Jimenez, J. Li, D. Kultz, Univer. of California, Davis and Centro de Investigación en Alimentación y Desarrollo (CIAD), Mexico

B300 802.12 Validation of in Vivo Protein Surface Accessibility Method. M. Ma, Univer. of California and Berkeley

B301 802.13 High Sensitivity Top-Down Proteomics: Cooamassie for In-Gel Proteof orm Detection Rivals Ms-Based Peptide Detection. N. Noaman, P.S. Abbineni, M. Withers, J.R. Coerssen, Western Sydney Univer., Australia, Univer. of Michigan Med. Sch. and Brock Univ., Canada

B302 802.14 Differentially Expressed Proteins Are Changed by Increased Chemokine Ligand 2 in Mice Hippocampi After Alcohol Treatment. R. Cook, J. Lawrence, J. Bray, Univer. of Wisconsin—Stevens Point


B304 802.16 A Bioinformatics Approach to Discover the Evolutionary Origin of the Ptpb Splicing Regulators. J. Pina, B.J. Ontiveros, N. Keppepolo, N. Nikolaida, California State Univer., Fullerton and Univer. of Pennsylvania

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Systems Biology and Regulatory Networks


B309 803.5 Signed Differential Co-Expression Network Analysis Suggests Differential Regulation of Sp/Klf Family of Transcription Factors in Dilated Cardiomyopathy. K. Mukund, S. Subramaniam, UCSD

B310 803.6 Integrated Therapeutic Dynamics by Applications of Multi-Mathematical Functions in Multiple Degenerative Chronic Physiological Processes. A. Case Study. G.P. Einstein, O.L. Tulip, C.M. Kosnyk, N.P. Kealoha, Einstein Med. Inst., Univ. of Science and Arts and Technology Montserrat, Montserrat

B311 803.7 Integrative Analysis of Sex Differences in Adipose Tissue Gene Expression. W. Anderson, M. Guertin, M. Civilek, Univer. of Virginia

B312 803.8 Can We Capture an Accurate View of Tissue Metabolism from an Expression Profile? N. Lewis, UCSD

B313 803.9 Nano-Biomaterials and Functional Genomics Research. R. B.S. M. N. Mydin, Advanced Med. and Dental Inst. and Universiti Sains Malaysia, Malaysia

B314 803.1 Royal Road Functions in Evolutionary Computations and Modular Organization of a Gene: Applications to Directed and Molecular Evolution. A.V. Spivak, I.M. Secherov Inst. of Evolutionary Physiology and Biochemistry, Russian Academy of Sciences, Russian Federation

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Cancer Signaling and Therapeutics


B316 804.2 Targeting the Myristoylation of Fns2r Inhibits Fgf/fgfrs-Mediated Oncogenic Signaling and Tumor Progression. H. Cai, Q. Li, Univer. of Georgia

B317 804.3 The Role of the Vacular (+) Atapase in Neuroblastoma Cell Differentiation Induced by Microrna 5063p. G. Medrano, Z. Zhao, L. Du, Texas State Univer.

B318 804.4 The Combined Effect of Canagliflozin and Metformin in Human Prostate Cancer Cells. K. Ware, L. Stewart, Tennessee State Univer. and Meharry Med. Col.

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B320 804.6 Knockdown of Tm9sf4 Triggers Er Stress Exerts Anti-Growth Effect on Drug-Resistant Breast Cancer Cells. Y. Zhu, X. Yao, The Chinese Univ. of Hong Kong, Hong Kong

B321 804.7 Small Molecule Targeting of Cd73 Offers Better Selective Strategy Than Targeting Cd39 in Counteracting Tumor Mediated Immunosuppression by Adenosine. S. Gouvei, K. Hsiao, Protagene Corporation

B322 804.8 Ascites Tumor Microenvironment and Chemoresistance in Ovarian Cancer. S. Kim, Seoul Nat'l. Univ. Hosp., Republic of Korea

B323 804.9 The Effect of Resveratrol in the Proliferation and Autophagy of Breast Cancer Cell Lines. M. Martinez Casillas, K. Munoz Forti, J. Robles Rivera, G. Trossi Torres, E. Suarez Martinez, A. Ruiz Rivera, Univ. of Puerto Rico at Ponce, Puerto Rico, Pontifical Catholic Univ. of Puerto Rico, Puerto Rico Univ. and Univ. of Puerto Rico at Mayaguez, Puerto Rico


B325 804.11 A Genome-Wide Crisp-Cas9 Screen Identifies Importin-β11 as a Required Factor for β-Catenin Signaling in Colon Cancer. M. Ma, Z. Steinhardt, S. Angers, Univ. of Toronto, Canada


B327 804.13 Cell Surface Grp78 Activation by Anti-Grp78/Autoantibodies in Relation to Prostate Tumour Growth via Tissue Factor Activation. A. Al-Hashimi, B. Shayegan, R. Austin, McMaster Univ.


B329 804.15 Foxa2 Promotes Prostate Cancer Bone Colonization. Z.M. Connelly, S. Yang, A.W. Orr, X.Y. Xu, Louisiana State Univ. Health Sciences Ctr.-Shreveport

B330 804.16 Rara Is a Direct Target Gene of Mir-506-3p That Regulates Oncogene myc Expression and Cell Differentiation in Neuroblastoma. S.D. Shelton, Z. Zhao, L. Du, Texas State Univ.

B331 804.17 27-Hydroxycholesterol Decreases Cell Proliferation in Colon Cancer Cells. J.A. Warns, N. Freking, O. Ghrbi, Univ. of North Dakota

B332 804.18 Paper-Based Breast Tumor Model Reveals New Insights into the Hypoxic Regulation of Estrogen Receptor Alpha. N. Whitman, Z-W. Lin, R. Kenney, M.R. Lockett, Univ. of North Carolina at Chapel Hill


B335 804.21 Expression and Regulation of CHP and NHE in Cancer. C. Bakker, M. Wallert, J. Prowost, Univ. of San Diego and Bemidji State Univ.


B337 804.23 Inhibition of Endothelial Scube2, a Novel VEGFR2 Co-Receptor, Suppresses Tumor Angiogenesis. Y.-C. Lin, C.-Y. Liu, R. Kannagi, R.-B. Yang, Academia Sinica, Taiwan and Taipei Veterans General Hosp., Taiwan

B338 804.24 Role of mTor2 and Nicotine Oxide in Bladder Cancer Invasion. D. Sahu, R. Klemke, G.R. Boss, D.E. Hansel, UCSD

B339 804.25 The Impact of PLGA Nanoparticle 3-Bromopyruvate and SC-514 on ABC Transporter Mediated Multidrug Resistance in Prostate Cancer Treatment. T.O. Famuyiwa, Florida Atlantic Univ.


B341 804.27 Receptor Tyrosine Kinase Signalling in the Absence of Kinase Activity and Cancer of Non-Genetic Origin. J. Ladbury, Univ. of Leeds, United Kingdom


B343 804.29 HSP60 Is a Novel Target in Lethal Prostate Cancer. J. O’Malley, C. Donnelly, J. Inigo, R. Kumar, D. Chandra, Roswell Park Cancer Inst., Univ. of Buffalo and State Univ. of New York


B345 804.31 Identification of Fzd5 as Genetic Vulnerability in Rnf43 Mutant Cancer. Z. Steinhardt, Z. Pavlovic, M. Chandra, K.R. Brown, J. Adams, J. Pan, S. Sidhu, J. Moffat, S. Angers, Univ. of Toronto, Canada and The Univ. of Texas MD Anderson Cancer Ctr.


B348 804.34 Elucidating Interactions Between Zebrafish Innate Immune System and Cancer Progression. M. Lou, D. Powell, A. Huttenlocher, Univ. of Wisconsin--Madison

B349 804.35 Growth Inhibition of Breast Cancer by Two Flexible Heteroarotinoid Enantiomers. E. Ginn, J. Baek, H. Zou, M.M. J. Fallatath, E. Cayton, S. Liu, M. Louie, Dominican Univ. of Califormia and Touro Univ.-California


B351 804.37 Real Time Pcr Analysis of Ewing’s Sarcoma Cell Lines in Response to Chemotherapeutic Treatment. S. Pitzen, A. Kruchten, The Col. of St. Scholastica

B352 804.38 Proteomic Signature of Pdac Cells with Mutant P53. M. Manfredi, G. Butera, A. Buzzi, J. Brandi, D. Cecconi, E. Marengo, M. Donadelli, Univ. of Pianeonta Orientale, Italy and Univ. of Verona, Italy


B354 804.4 Targeting N-Myristoltransferase Inhibits Prostate Cancer Progression. O.A. Alsa'idan, S. Kim, Q. Li, A. Bielawska, H. Cai, Univ. of Georgia and Med. Univ. of South Carolina

B355 804.41 Investigate Kentucky Hemp-Induced Modulation of Interleukin-1 β Secretion in Ovarian Cancer Cells. C. Turner, C. Kenley, T. Jent, N. Vu, N. Hughes, W.K. Sumanasekera, Sullivan Univ. Col. of Pharmacy
805 Neurobiology and Neuronal Signaling

805.1 Calciotriol Increases Lepmin Expression in Neuronal Cells — Implications for Alzheimer’s Disease. G. Marwarha, O. Ghiribi, Univ. of North Dakota Sch. of Med. and Health Sciences


805.3 Immunoregulatory Role of Melatonin in Helicobacter Pylori-Induced Gastric Diseases. L. Jianhua, Z. Hui, Z. Mi, S. Jun, L. Li, L. Dancen, L. Meifang, Z. Feng, L. Hui, Z. Ruixiang, Fujian Med. Univ, People’s Republic of China

805.4 Copper Binding Regulates Cellular Prion Protein Function. X.T. A. Nguyen, H.T. Tran, D. Cojoc, G. Legname, Scuola Internazionale Superiore di Studi Avanzati (SISSA), Italy, Inst. of Materials and Nat’l. Res. Council, Italy

806 Immunity


B407 806.2 Mechanotransduction via Ha Lfa-1 Promotes Kindlin-3/track1/orai1 Engagement to Mediate Calcium in Pmn. V.A. Morikis, S. Simon, U.C. Davis


B409 806.4 Inhibition of Allergen-Mediated Mast Cell Activation by Rosemary Extract (Rosmarinus Officinalis L.). M. Yousef, N.J. Hicks, T. Boyd, E. Tsiani, A.J. MacNeil, Brock Univ., Canada

B410 806.5 Effect of Different Forms of Graphene on Activation of the Complement System as a Result of Contact with Human Serum Under in Vitro Conditions. D. Szukiewicz, I. Dudek, M. Skoda, Z. Włochyńska, Dept. of General & Experimental Pathology with CEPT Lab. and Med. Univ. of Warsaw, Poland

B411 806.6 Human Milk Exosomes Dampen Induced Inflammatory Response in Human Intestinal Epithelial Cells. J.D. Kraft, E. Ferretti, E. Tremblay, J-F. Beaulieu, I. Altosaar, Univ. of Ottawa, Canada; The Ottawa Hosp/Children’s Hosp, of Eastern Ontario, Canada and Université de Sherbrooke, Canada

B412 806.7 Modulatory Role of Vitamin D in Stem Cell Factor-Mediated Mast Cell TNF Expression. A.R. R. Maguire, C.J. F. Watson, A.J. MacNeil, Brock Univ, Canada

B413 806.8 Src Family Kinase Tyrosine Phosphorylates Toll-Like Receptor 4 to Dissociate Myd88 and Mal/irap Suppressing Lps Induced Inflammatory Responses. S.H. Rhee, E. Im, J. Mitchell, S. J. Kim, Oakland Univ. and Pusan Nat’l. Univ., Republic of Korea

807 Targeted Therapies and New Targets for Drug Discovery


B415 807.2 Rasg12d Causes More Proliferation Than Rasg12v in Drosophila Pancreatic Cancer Models. F. Bernard, M. Sonoshita, R. Cagan, Univ. of Puerto Rico, Puerto Rico and Icahn Sch. of Med. at Mount Sinai

B416 807.3 Identification and Functional Validation of a Biomarker for the Diagnosis of Malignant Relapse During Visceral Leishmaniasis. P. Tiwary, D. Kumar, S. Sundar, Banaras Hindu Univ, India

B417 807.4 Antimycobacterial and Macrophage Apoptosis Inducing Effects of Psoriotropia Capensis and Psychotria Capensis Species. A. Aro, P. Fonteh, L.J. McGaw, Univ. of Pretoria, South Africa and Univ. of Witwatersrand, South Africa

B418 807.5 Carnosic Acid Activates AMPK, Inhibits Akt and Inhibits H1299 Human Lung Cancer Cell Survival. D. Nyrforovskiy, J. Moore, E. Tsiani, Brock Univ, Canada
Antibiotic Resistance

B424 809.1 ChaiTea Promotes Ampicillin Susceptibility in MRSA. S. Hinsdale, J. Pace, E. Anderson, S. Favoreto, Cuesto Col.


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Tuesday

808 Parasite-Host Interactions

B432 808.1 Overcoming Challenges in the Diagnosis of Schistosoma Mansoni Infections Using POC Tests, Recombinant Protein and Monoclonal Antibody Technologies. R.P. G.E. Queiroz, D. Har, P.M. Coelho, Oswaldo Cruz Foundation—FOCRUZ, Brazil and Univ. of Georgia

B433 808.2 Stat6 Promoter Polymorphism Is Essential for Malaria Infection and Suppression of Parasitemia Among Infected Children. B. Seamans, G. Liou, O. Ojurongbe, B. Thomas, Rochester Inst. of Technology and Lasoko Akintola Univ. of Technology, Nigeria

B434 808.3 Interethnic Diversity and Association of Stat6 Genetic Variants with Schistosomiasis in West Africa. G. Liou, B. Seamans, S. Adedokun, O. Ojurongbe, B. Thomas, Rochester Inst. of Technology and Lasoko Akintola Univ. of Technology, Nigeria


B436 808.5 Effects of Plasmodium Falciparum on Placental Expression of Inflammatory and Coagulation Factors. T. Dalapati, Univ. of Georgia


B438 808.7 Identifying Genes Involved in Trogocytosis (Cell-Nibbling) in Entamoeba Histolytica. S.E. Freeeney, K.S. Ralston, UC, Davis


B440 808.9 Investigating the Regulation of Intercellular Trafficking in Plants with Varying Levels of Thlglucoside Glucosyltransferase Mutants. J.C. Fernandez, T. Hewesi, T. Burch-Smith, Univ. of Tennessee and Knaivale

B441 808.1 How Camp Homeostasis Is Controlled in Leishmania by Receptor Adenylate Cyclase and Acidocalcisomal Pyrophosphatases Aiding Its Survival in Phagolysosomal Conditions?. A. Biswas, A. Bhat-tacharyya, A. Vij, P.K. Das, Univ. of Kalyani, India, Centre de Recherche Infectieux, Centre de Recherche du CHU de Quebec, Univ. of Laval, Canada and CSR-Indian Inst. of Chemical Biology, India


B455 809.14  A Susceptibility Screen of Phytochemicals Against Staphylococcus Aureus. V. P. Mak, R. M. Heuertz, Saint Louis University.

810  Antibacterial Targets and Drug Discovery


B457 810.2  Solvent Extraction and Antibacterial Analysis of Chinese Traditional Herbs. M. San Angelo, R. Iovitsch, H. Valenzuela, Whitter Col.


B459 810.4  AVitamin B12 Receptor Serves a Role in Membrane Stability of Caulobacter Crescentus. D. Barraza, S. Strebe, I. Menikparage, A. Melendez, P. E. Mera, New Mexico State Univ.


B461 810.6  A Novel Functionalization of Azetidines. B. Biogen.

B462 810.7  Antimutator Activity of the Nudix Hydrolases from e. Coli. T.W. Hynes, S. F. O’Handley, Rochester Inst. of Technology.

B463 810.8  Rv1495 Toxin as a Model for Inhibitors of Mycobacterium Tuberculosis DNA Topoisomerase I. P.K. Garcia Moreno, Y-C. Tse-Dinh, Florida InterNat. Univ.

B464 810.9  Bacterial and Viral Source Tracking in the Sparkill Creek Watersheds. K. L. Acevedo, Dominican Col. of Blauvelt.


B469 810.14  Correlating Enzymes to Antimicrobial Resistance in the Protein Data Bank. P. M. Salcedo, S. Burley, Rutgers Univ.


B471 810.16  Use of the Phytochemical Neem as a Component of Combination Treatment Against Pseudomonas Aeruginosa Biofilm. B. P. Bertrand, R. M. Heuertz, Saint Louis Univ.

B472 810.17  Isolation and Characterization of Antimicrobial Compound Isolated from Lichen Parmelia Vagans. V. Bondarenko, Touro Univ, Nevada.

B473 811.1  Biosynthesis of Acyl-CoA Sustains Prostate Cancer Progression. H. Cai, Y. Ma, Univ. of Georgia.


B475 811.3  1-Formyl-7-Hydroxy-6,6-Dihydro-5H-Pyrroloazine (9-Chol-Dhp) — A Biologically Proximate Pyrrolic Metabolite of Carcinogenic Pyrroloazine Alkaloids. Q. Xia, X. He, G. Lin, P. Fu, Natl. Ctr. for Toxicological Res., U.S. Food and Drug Administration and The Chinese Univ. of Hong Kong, Hong Kong.


B478 811.6  Targeting Glycolytic Metabolism in Cancer. S. Telang, J. Trent, J. Chen, A. Mojesky, Univ. of Louisville.


B481 811.9  Unconventional Pathways of Nitrogen Metabolism in Lung Cancer. J. Kim, The Univ. of Texas Southwestern Med. Ctr.

B482 811.1  Biological and Health Aspects of Edible Wild Omani Plants in the Primary Prevention of Oxidative Stress-Mediated Colon Cancer. M. I. Waly, M. I. Waly, Omani Ministry of Health and Community Development.

B483 811.11  The Gene Expression Profile and Tetrastatin Protein Co29 on the Human Colorectal Cancer Laterality. L. A. Braga, J. V. Assis, V. S. Moraes, J. D. Silva, R. F. Grenfell, Oswaldo Cruz Foundation, Brazil and Universidade Federal de Minas Gerais, Brazil.
812 Metabolism and Nutrition

B484 811.12 Genetic and Protein Expression of Cxcr4 and Cd26 and Its Relation to Cell Indifferentiation and Responsiveness to Treatment of Colon and Rectum Neoplasms. J.V. Assis, L.A. Coutinho, V.S. Moraes, I.D. Silva, R.F. Grenfell, Oswaldo Cruz Foundation, Brazil and Universidade Federal de Minas Gerais, Brazil


B487 811.15 Insights into Glycogen Metabolism Inhibition-Induced Death of Hepatocellular Carcinoma. S. Barot, E.M. Abo-Ali, C. Palaguchi, V.V. Dukhande, St. John’s Univ.

B488 811.16 Investigation of Phosphoserine Aminotransferase I and Its Role in Breast Cancer Progression. B. Clem, S. Metcalf, T. Krueer, C. Klinge, Univ. of Louisville


B490 811.18 Subcellular Localization of the Enzymes in Serine Biosynthesis. B. Nance, M. Kyoung, S. An, Univ. of Maryland and Baltimore County


B493 812.1 Saturated Fat-Enriched Diet Attenuates Brain-Derived Neurotrophic Factor Expression. G. Marwarha, O. Ghribi, Univ. of North Dakota Sch. of Med. and Health Sciences

B494 812.2 Effects of a 6-Month Multi-Strain Probiotics Supplementation in Endotoxemic, Inflammatory and Cardiometabolic Status of T2dm Patients: A Randomized, Double-Blind, Placebo-Controlled Trial. S. Sabico, N. Alidaghi, M. Alokall, Warwick Univ, United Kingdom and King Saud Univ, Saudi Arabia

B495 812.3 Mango Ginger Ameliorates Endothelial Dysfunction by Regulating NADPH Oxidase and Sirtuin Pathways in Rats Fed High Fat/Sucrose Diet. V. Juturu, K. Sahin, C. Orhan, M. Tuzcu, N. Sahin, OmnivaActive Health Technologies Inc. and First Univ, Turkey

B496 812.4 Effect of Dietary Different Energy Sources on the Growth Performance, Amino Acid Profile, Blood Profile, Intestinal Morphology and Digestive Enzyme in Weaned Piglets. . Inst. of Subtropical Agriculture, Chinese Academy of Sciences, People’s Republic of China, Hunan Normal Univ, China, People’s Republic of China and Univ of California

B497 812.5 Effects of Zyflamend Treatment on Adipogenesis. V. Frankel, S. Chahed, D. Alanai, D. Puckett, B.H. Voi, D.R. Donohoe, J. Whelan, A. Bettaiob, Univ of Tennessee and Knoxville

B498 812.6 Acetaminophen-induced Hepatotoxicity in Wistar Rats Treated with Annona Muricata Aqueous Stem Extract. I.J. Okpara, C.I. Nosiri, M. Chisom, Nigera Social Insurance Trust Fund, Nigeria and Abia State Univ, Nigeria


B500 812.8 Expression Profile of Adiponecin and Adiponectin Receptors in High Fat Diet Feeding Chicken. Y. Lin, S. Ding, Thunghai Univ, Taiwan and Nat’l Taiwan Univ, Taiwan

B501 812.9 Lower Progesterone Receptors on Mast Cells Do Not Effect BloodVessel Replication in Lipedema. V. Rosas, S. Al-Ghadban, K. Herbst, The Univ of Texas at El Paso and Univ of Arizona

B502 812.10 Heavy Metals Concentrations in Shell Fishes Found in Niger Delta Nigeria. D.C. Belonwu, M.O. Wegwu, R.E. Idiabana, Univ. of Port Harcourt, Nigeria


B504 812.12 The Effect of Short-Term and Long-Term High Fat Diet on Pancreas Mitochondrial Function and Redox Balance Between Obesity-Prone and Obesity-Resistant Rats. X. Tang, Y. Sun, Y. Li, S. Ma, K. Zhang, J. Sun, H. Xiao, Jiangnan Univ, People’s Republic of China and Univ of Massachussetts

B505 812.13 HFE Mutation Impairs Mango Metabolism in Mice. Q. Ye, H. Alsulimani, J. Kim, Northeastern Univ.


B507 812.15 Profiling the Oxylin and Endocannabinoid Serum Metabolome in an 8-Week Almond Snacking Intervention. J. Dhillon, K. Borkowski, J. Newman, R.M. Ortiz, Univ of California, Merced, UC, Davis

B508 812.16 Gelidium Elegans ExtractAmeliorates Type 2 Diabetes Mellitus Through the Regulation of Glucose Uptake. J. Choi, E-J. Koh, Y-J. Seo, J-H. Song, S. Choi, S-Y. Choi, K. Lee, B-Y. Lee, CHA Univ, Republic of Korea


B515 812.23 Anti-Inflammatory Activity of Spirulina Maxima Extract in LPS-Treated THP-1 and RAW264.7 Cell. K. Lee, S. Choi, S. Choi, E-J. Koh, T. Lim, Y-J. Seo, J-H. Song, B-Y. Lee, CHA Univ, Republic of Korea

B516 812.24 Temporal Alterations in Intraerythrocytic Hemoglobin in Mice. M.N. Almasharry, S. Brooks, H. Ackerman, Nat’l Inst. of Allergy and Infectious Diseases and Nat’l Insts. of Health

B517 812.25 Lactate Stimulation Activates the Ampk and the Mtorc1 Pathways Differentially According to Skeletal Muscle Type in Mouse. H.R. Cerda Kohler, C. Henriquez Olguín, P. Llanos, T.E. Jensen, E. Jaimovich, Universidad de Chile, Chile and Univ. of Copenhagen, Denmark

814 Lipid Storage and Trafficking


B526 812.34 Dairy Milk, Regardless of Fat Content, Protects Against Postprandial Hyperglycaemia-Mediated Oxidative Stress That Impairs Nitric Oxide Bioavailability in Prediabetic Adults. J.D. McDonald, P. Dey, B.D. Olmstead, F.A. Williams, J.S. Volek, R.S. Bruno, The Ohio State Univ.

B527 812.35 PPARα Agonists from Koempferia Parviflora Improve Glucose and Fat Metabolism in Mice. M. Ochiai, T. Nozaki, Kitasato Univ, Japan and BHn Co. Ltd, Japan.


B532 812.4 Redox Regulation of FgF21 in an Obese “Stress-Less” Mouse Model. A. Roberts, D. Amos, N. Santanam, Marshall Univ.

B533 812.41 The Effects of Omega-3 Supplementation on the Lipid Profile and Adipose Indices in Hispanics with Type 2 Diabetes Mellitus. T. Jehi, C. Mota, L. Beeson, A. Firek, Z. Cordero-Maclntyre, M. De Leon, Loma Linda Univ.


B538 812.46 Selenium and Sex: Competition Between Brain and Testes for Selenium Results in Male-Specific Consequences in Mice and Men. M.J. Berry, M. Pitts, P. Kremer, A. Hashimoto, L. Seale, D.A. D’Agostino, The Ohio State Univ.


B540 812.32 The Effects of Fatty Acids on Brain Microglia Immune Responses. J.R. Lowry, A. Klexer, Univ. of British Columbia Okanagan Campus, Canada.

B541 812.3 The Role of Sphingosine Kinase 2 in Chronic Alcohol-Induced Liver Injury and Disease. E.K. Kwong, X. Li, R. Liu, X. Wang, P.B. Hylemon, H. Zhou, Virginia Commonwealth Univ.

B542 812.4 Sex Bias in Cytokines Transported by High-Density Lipoproteins in Patients with Coronary Artery Disease. K.T. Creasy, E. Stock, C.R. Pullinger, M.J. Malloy, J. Kane, Univ. of California and San Francisco.


B546 812.8 Meal-Induced Pro-Inflammatory Responses in Guatemalan Adults Are Associated with Body Mass Index and Are More Pronounced in Women. S. He, N-A. Le, A.D. Stein, Nutrition and Health Sciences Program, Laney Graduate Sch., Emory Univ., Atlanta Res. and Education Foundation, Atlanta VA Med. Ctr., Rollins Sch. of Public Health and Emory Univ.

813 Lipids, Inflammation and Eicosanoids


B540 813.2 The Effects of Fatty Acids on Brain Microglia Immune Responses. J.R. Lowry, A. Klexer, Univ. of British Columbia Okanagan Campus, Canada.

814 Lipid Storage and Trafficking

B547 814.1 Effect of Fenton and Photo-Fenton Pretreatments on Solubilization of Lignocellulosic Biomass. S.F. De la Rosa, Univ. of Nebraska-Lincoln.


814.5 Arb Treatment Ameliorates Triacylglycerol Accumulation During Insulin-Resistant Conditions in the Liver of Oleif Rats. J.A. Godoy-Lugo, D. Lee, M.A. Thorwald, D. Nakano, A. Nishiyama, H. Hui, R.M. Ortiz, Univ. of California, Merced, Kagawa Univ. Med. Sch., Japan and Univ. of Cincinnati

814.6 Perilipin 5 Protein-Protein Interactions. E.K. Hughes, J.T. Tansey, Otterbein Univ.

814.7 Targeting Molecular Chaperone Hsp90 to Treat Niemann-Pick Type C1 Disease. N.H. Pipalla, F.R. Maxfield, Weill Cornell Med. and Cornell Univ.

814.8 Characterization of a Short Form of Perilipin 5. R.C. Dalton, J.T. Tansey, Otterbein Univ.

814.9 Elucidation of the N-Terminal Structure and Characteristics of Perilipin 5. D.T. Wei, J.T. Tansey, Otterbein Univ.

814.10 Sac1 Degrades Its Lipid Substrate PtdIns4P in the ER to Maintain a Steep Electrochemical Gradient on Donor Membranes. G. Hammond, J. Zewe, S. Sangappa, R. Wills, B. Goulden, Univ. of Pittsburgh

814.11 Unconventional Secretion of Adipocyte Fatty Acid Binding Protein (Fabp4) by Adipocytes. A. Josephrajain, A.Y. Hertzel, D. Masher, D.-H. Kim, S.-I. Imai, D.A. Bernlohr, Univ. of Minnesota and Washington Univ. Sch. of Med. in St. Louis

Membrane Proteins and Lipid Interactions


815.2 The Roles of the Juxtamembrane Cysteine and Glutamine Residues in Mucin 1 (Muc1) Dimerization. E. Li, R. Herrera, K. Cant, C. Freeman, Saint Joseph’s Univ.

815.3 Regulating a G Protein-Coupled Receptor by Topological Inversion Through Regulated Alternative Translocation. B. Denard, The Univ. of Texas Southwestern Med. Ctr.


815.5 Parathyroid Hormone Shows Novel Calcium Sensing Ability in Binding to Parathyroid Hormone 1 Receptor. K.J. Culhane, E.C.Y. Yan, Yale Univ.


815.9 Membrane Localization of Hspa1a, a Stress Inducible 70-Kda Heat Shock Protein, Is Mediated by the Lipid Phosphatidylserine. A.D. Bilog, N. Nikolaidis, California State Univ. and Fullerton


815.12 Hspa1a, a 70-Kda Heat Shock Protein, Contains Several Distinct Lipid-Binding Sites. A.J. Daniels, L. Smulders, N. Nikolaidis, California State Univ. and Fullerton

815.13 Phospholipid Molecular Species Profile and Functionality of Nicotinic Acetylcholine Receptor Detergent Complex from Torpedo Californica Solubilized with Lipid-Like Detergents. O. Quesada, J. Colón, C. González, R. Maldonado, I.D. Rosado, J.A. Acevedo, J.A. Lasalde-Dominicci, Univ. of Puerto Rico, Puerto Rico

815.14 Assisted Insertion of Pseudomonas Aeruginosa Type Three Secretion Translocator Popd in Membranes by Translocator Popb. Y. Tang, A.P. Heuck, Univ. of Massachusetts Amherst

815.15 Probing the Function of Apolipoprotein A-I Using Chimera Proteins. N. Patel, P.M.M. Weers, California State Univ. and Long Beach
### ASBMB Late-Breaking 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

**Author at boards:**  
# ending in 0, 3 or 6: 12:15 – 1:00 PM  
# ending in 1, 4, 7 or 9: 12:45 – 1:30 PM  
# ending in 2, 5, or 8: 1:30 – 2:15 PM

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| 198-220      | Education and Professional Development - General (BMB) |
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**Genome Dynamics:**
**DNA Replication, Repair and Recombination**

**LB1**
Expanding the Horizon of Recombination Repair in Mycobacteria: Identification and Characterization of Novel Proteins.
A. Singh, Indian Inst. of Science, India

**LB2**
Construction of Plasmids to Make a Specialized s.Cerevisiae Strain to Investigate SAW1 Protein Recruitment in Single-Strand Annealing Repair.
Y. Rakibova, A. Alon, P. Fischhaber, California State Univ. and Northridge

**LB3**
Novel Substrates for DNA Cytidine Deaminase APOBEC3B with Possible Implications for Alkylation Agent Chemotherapy.

**LB4**
Mitochondrial DNA Damage and Impaired Iron Homeostasis in Muscle Aging.
A. Picca, R. Mankowski, R. Calvani, E. Marzetti, C. Leeuwenburgh, Catholic Univ. of the Sacred Heart, Teaching Hosp. “Agostino Gemelli”, Italy. Inst. on Aging, Division of Biology of Aging and Univ. of Florida

**LB5**
Mechanistic Comparison of Human RNA Ligases I and IIII.
P. O’Brien, Univ. of Michigan

**LB6**
Tumor Suppressor Protein PALB2 Has Strand Exchange Activity Independent of Recombinase RAD51.
J. Deveryshetty, L. Kanikkannan, S. Korolev, St. Louis Univ.

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**Chromatin Structure, Remodeling and Gene Expression**

**LB7**
Saturated-Fat-Enriched Diet Decreases SIRT1 Expression in the Mouse Hippocampus—The Silent Effects of Saturated Fat in the Brain.
G. Marwarha, O. Ghribi, Univ. of North Dakota Sch. of Medicine and Health Sciences

**LB8**
Rn20 Regulates Adipocyte Differentiation Through Modulating PPARγ.
Y. Jeon, J. Lee, J. Kim, Seoul Nat’l. Univ., Republic of Korea

**LB9**
Identification of a Novel Enhancer/Chromatin Opening Element Associated with High-Level γ-Globin Gene Expression.

**LB10**
Relationship Between Nucleic Acid Structures and Sequences on the Expression of Terminal Differentiation (i.e., Denucleation) Alternative Cell Death Pathway.

**LB11**
Genetic Correction of Structural Variations in Patient-Derived iPSCs Using Crispr/Cas9.
C-Y. Park, D-W. Kim, Yonsei Univ. Coll. of Medicine, Republic of Korea

**LB12**
Hyperinsulinemia-Induced Changes in Chromatin Acetylation in Triple Negative Breast Cancer.

**LB13**
P53 Mediated Regulation of Coactivator Associated Arginine Methyltransferase 1 (CARM1) Expression Is Critical for Suppression of Apodigenesis.
A.K. Behera, A. Bhattacharya, M. Vasudevan, T.K. Kundu, Jawaharlal Nehru Ctr. for Advanced Scientific Res., India and Biovind Tech. Private Limited, India

**LB14**
The Role of Yeast RNA Polymerase I Initiation Factor Core Factor Subunit Rnp7 in Promoter Open Complex Formation.
A.J. Jackobel, Y. Han, Y. He, B.A. Knutson, State Univ. of New York Upstate Med. Univ. and Northwestern Univ.

**LB15**
Yeast RNA Polymerase I Core Factor Binds to the Ribosomal RNA Promoter Through the GC Minor Groove.

**LB16**
Reconstitution of RNA Polymerase I Upstream Activating Factor and the Roles of Histones H3 and H4 in Complex Assembly.

**LB17**
Differential Expression of PPARγ and Chop-10 During Adipogenic Differentiation of Human Bone Marrow Derived Mesenchymal Stem Cells.

2804

**RNA: Processing, Transport, and Regulatory Mechanisms**

**LB18**
High Throughput Validation of Orphan Riboswitch Candidates.
G. Mirihana Arachchilage, M.E. Sherlock, N. White, S. S. Panchapakesan, R.R. Breakey, HMW, Yale Univ. and Yale HU

**LB19**
Z-Band and M-Band Titin Splicing and Regulation by RBM20 in Striated Muscles.

**LB20**
Identification of Crispr-Cas9 Mutants in Arabidopsis Glutaredoxin Genes AtGrxS1, AtGrxS6, and AtGrxS34/5/7/8 Gene Cluster.
F. Fernandez, K. Sanchez, M. Escobar, California State Univ. and San Marcos

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**Protein Synthesis, Structure, Modifications and Interactions**

**LB25**
Rhbi-S,H as a Potential Novel Hydrogen Sulfide Donor.
A. Reyes Oliveras, H. Borges Arias, J. Lopez-Garriga, Univ. of Puerto Rico at Mayaguez, Puerto Rico

**LB26**
Translational Control and the Integrated Stress Response Regulate the Fate of UBV-Irradiated Human Keratinocytes.
R.C. Wek, A.E. Collier, D.F. Spandau, Indiana Univ. Sch. of Medicine

**LB27**
Abrin, A Type II Ribosome Inactivating Protein: Differential Cytotoxicity and Development of the Vaccine Against Its Lethality.
V. Tiwari, A.A. Karande, Indian Inst. of Science, India

**LB28**
Mechanism of an Anticancer Peptide Rescuing PS3 from Degradation by CopI.
M. Gao, Y. Huang, Hubei Univ. of Tech., People’s Republic of China

**LB29**
Characterizing the Interactions Between Intrinsically Disordered Transactivation Domains and the KIX Domain.
J. Xiong, Y. Huang, Hubei Univ. of Tech., People’s Republic of China

**LB30**
Hypo-Phosphorylated HNRNPK Promotes Migration of Triple Negative Breast Cancer Cells Through an Aurora-A-Independent Manner.
H-Y. Tsai, C-H. Lin, Nat’l. Yang-Ming Univ., Taiwan

**LB31**
XCDxCDx-PhD.a Distinct Type of PhD-Finger.
S. Basu, D. Boamah, F.A. Poppinge, T. Lin, S. Chakravarty, South Dakota State Univ.

**LB32**
Terminal Sequences in the M Protein of Bovine Parainfluenza Virus Type 3 Is Important for Virus Egress.
H. Ueda, Univ. of Tsukuba, Japan
LB33  Effect of Acetylation on Liquid-Liquid Phase Separation and Amyloid Fibril Formation of Tau. Z. Zhao, M. Gao, Y. Huang, Hubei Univ. of Tech., People's Republic of China

LB34  Acetylation of Lysine Residues Within the MT-Binding Repeats Specifically Modulates the Structure Ensemble of Tau. Z. Yao, M. Gao, Y. Huang, Hubei Univ. of Tech., People's Republic of China


LB36  Computational Studies on HdeA and Its pH-Dependent Activation. S. Pacheco, A. Ravinder, California State Univ. and Northridge


LB39  Molecular Dynamics Study of the Effect of Multi-Target Compounds Binding onto BACE1. M. Zahran, J. Guevara, A. Martinez, New York City Col. of Tech. and City of New York

LB40  A Review-Structure-Function Studies of Abrin: A Ribosome Inactivation Toxin. S. Singh, DAV Univ., India

LB41  Crystal Structure of an Assembly Intermediate of Respiratory Complex I. P. Sharma, E. Malakhash, G. Cecchini, T. Iverson, Vanderbilt Univ., Univ. of California, San Francisco and Sch. of Medicine

LB42  Pinning Down Psi' Inducibility. T.M. Brechiel, J. Villali, J. Davis, F. Pei, S.S. Sindri, T.R. Serio, Univ. of Arizona, Brown Univ., Univ. of California, Merced, Univ. of Massachusetts and Amherst


LB44  Structure of Flexible Proteins Using Scattering and Simulation. L. Petrigna, Oak Ridge Natl. Laboratory

LB45  H2S-Induced Structural Changes of Insulin Protein in Early Lag Phase: Key to Detaining Amyloid Formation. D.A. Colon-Rios, A. Alardonos-Torres, M.F. Rosario-Alomar, J. Lopez-Garriga, Univ. of Puerto Rico at Mayaguez, Puerto Rico and Univ. at Albany

LB46  Electromyostimulation with Blood Flow Restriction Enhances Activation of mTOR and MAPK Signalling Pathways in Rat Gastrocnemius Muscles. T. Natsume, T. Yoshihara, H. Naito, Juntendo Univ., Japan

LB47  The Evolution of Heterocomplexation and Multifunctionality in the S100 Protein Complex Calprotectin. J. Harman, A. Loes, R. Shi, M. Heaphy, M. Harms, Univ. of Oregon

LB48  Ganoderma Lucidum Extract Decreases Inflammatory Breast Cancer Progression via Translational Control. D. M.M. Martinez-Montemayor, D. R.J. Schneider, D. C. Zhang, D.J. Andrade, D.I. Suárez-Arrayo, Universidad Central del Caribe Sch. of Medicine, New York Univ. Sch. of Medicine and The Univ. of Chicago

LB49  The C-Terminus of CsgE Is Involved in Preventing Protein Aggregation. I. Aranda, A. Binmahfooz, K. Kaur, H. Rabi, L. Yeh, S. Jayasinghe, California State Univ.


LB53  Spa47 Oligomerization Plays a Key Role in ATPase Activation and Function in the Shigella Type III Secretion System. J.L. Burgess, R.A. Burgess, N. Dickenson, Utah State Univ.

LB54  MXIn Differentially Regulates Monomeric and Oligomeric Species of the Shigella Type III Secretion System ATPase Spa47. H. Case, N. Dickenson, Utah State Univ.

LB55  Mechanistic Insight into Species-Specific Redox Partner Interactions in the Vitamin D Carbon-24 Hydroxylase CYP24A1. A. Kumar, D. F. Estrada, Univ. at Buffalo


LB58  Thermodynamics of the Interactions of FG-Nucleoporins and Transport Factors. S. Sparks, R. Hayama, M.P. Rout, D. Cowburn, Albert Einstein Col. and The Rockefeller Univ.


LB60  Investigating Peptide Assembly in a Membrane Environment. M. Gessel, M. Kober, Z. Maxwell, S. Swain, Univ. of Puget Sound


LB62  Structural Dynamics of Blue Light Sensitive Bacterial Photoreceptor BsaA. I. Chitrakar, J. French, Stony Brook Univ.

LB63  In Silico Molecular Docking of Fisetin with the Amylolidogenic Peptides Human Amylin and Aj442. J.A. Villanueva, T. Bambigboje, S.K. Hari, A. Boluwaduro, S. Gautham, A. Ibrahim, InterNat'l. American Univ. Col. of Medicine, Saint Lucia

LB64  Hydration Mediated G-Protein-Coupled Receptor Activation. N. Weeraseyn, S.D. Fried, S.M. Perera, U. Chawla, M.F. Brown, Univ. of Arizona

LB65  Aggregated CsgA Does Not Form In-Register Parallel Structures. M. Bazham, C. Guevara, O. Meza-Barajas, S. Jayasinghe, Godfrey, California State Univ.

2808 Enzyme Chemistry and Catalysis


LB68  Mimicking the Activation of the ADP-Glucose Pyrophosphorylase from Agrobacterium Tumefaciens by Site Directed Mutagenesis. M. Alghamdi, R. Hussein, H. Patel, E. Dobrzynski, A. Iglesias, M. Ballicora, Loyols Univ. of Chicago and Universidad Nacional del Litoral, Argentina

LB69  Structural Insights into Mitochondrial ENDOG in Response to Oxidative Stress. H.S. Yuan, J.L.J. Lin, W-C. Chu, Academia Sinica, Taiwan and Nat’l. Yang-Ming Univ., Taiwan

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S.A. Rice, A. D’Alessandro, Z. Barati, S. Gehrke, J.A. Reisz,  
K. Drew, Univ. of Alaska at Fairbanks, Univ. of Colorado at Denver and Inst. of Arctic Biology

LB173  Dietary 18:3 and Long Chain N-3 PUFA-Protected Rats from Fructose-Induced Oxidative and Endoplasmic Reticulum Stress in Visceral Adipose Tissue.  

LB174  Effect of Dietary Alpha-Linolenic Acid and Long-Chain N-3 Polyunsaturated Fatty Acids on Fructose-Induced Hypertriglyceridemia, Hepatic Oxidative Stress and Inflammation.  

**2820 Lipids and Membranes**

LB175  Triglycerides Analysis in Adipose Tissue from Insulin Sensitive and Insulin Resistance Obese Patients.  
H.A. Alsaluhi, Harvey, Latif, Elrayes, Anti-Doping Lab Qatar, Qatar

LB176  Proteomic Profiling of Exosomes Leads to the Identification of Novel Biomarkers for Prostate Cancer Progression.  

LB177  Membrane Curvature and Pore Formation Induced by Antimicrobial Peptides.  
H. K. Lee, Dankook Univ, Republic of Korea

LB178  Lipid Membrane Interaction of Amyloidogenic Peptides.  
S. Dey, A. Gupta, D. Bhowmik, A. Das, A. Rawat, S. Maiti, Tata Inst. of Fundamental Res, India

LB179  Analysis of Experimental Feed Impacts on Fatty Acid Profiles of Captive and Wild Arctic Ground Squirrels.  
M.L. Mikes, S.A. Rice, D. Bibus, K. Drew, Univ. of Alaska and Lipid Technologies

LB180  Reproducibility of Phosphoinositide Lipid Extraction and Presentation in Bioanalytical Assays.  
A.M. Branch, P.O. Neilsen, Echelon Biosciences

LB181  Physicochemical Analysis of Outer Membrane Vesicles Isolated from Escherichia Col Harboring the PKS Genes.  
Y. Morales-Lozada, S. Torres-Montañez, R. Muñoz-Santigo, D. C. Díaz-Cartagena, R. Gómez-Moreno, A. Baerga-Ortiz, Univ. of Puerto Rico, Rio Piedras Campus, Puerto Rico, Univ. of Puerto Rico, Cayey Campus, Puerto Rico, Univ. of Puerto Rico and Med. Science Campus, Puerto Rico

LB182  Phosphoinositide Signaling Meets Heme Biochemistry.  
D. Khan, J. Wofford, G. Guelter, J. Sacchettini, P. Lindahl, V. Bankaitis, Texas A&M Univ.

LB183  Endocannabinoid and Cannabinoid Metabolism by CYP Epoxygenases.  
A. Das, Univ. of Illinois at Urbana-Champaign

LB184  The HUS-Box Is Required for Allosteric Regulation of the Sec7 Arf-GEF.  
S. Halaby, C. Fromme, Cornell Univ.

LB185  Imaging and Quantifying Mitochondrial Morphology: A Focus on the 3D Freeware Mitograph.  
M.C. Harwig, M.P. Viana, J.M. Egner, J. Harwig, M.E. Widlansky, S.M. Rafelski, R.B. Hill, Med. Col. of Wisconsin, Univ. of California, Irvine, Visallo and LLC

LB186  The Hydrophobic Domain of ENV9 Is a Lipid Droplet Localization Signal in Saccharomyces Cerevisiae.  
A. Ricci, S. Valencia, I. Siddiquah, S. Manandhar, E. Gharaianian, California State Univ. and Long Beach

LB187  The Role of Platelet Synaptins in Endocytosis.  
L. Tichacek, S.W. Whiteheart, Univ. of Kentucky

LB188  C-Terminal Domain Is Responsible for a Kunitz-Type Inhibitor Uptake by Tumor Cells.  

LB189  Internalization and Intracellular Trafficking of an Antitumor Molecule.  

LB190  SYT73 Is a Novel Membrane-Associated Actin-Binding Protein That Anchors the ER to the Actin Cytoskeleton in Arabidopsis.  
P. Cao, L. Renza, G. Stefano, F. Brandizzi, Michigan State Univ.

LB191  Valproate Prevents a Cytosolic V-ATPase Subunit Insertion on Insulin Granule Membrane and Promotes Insulin Release in Min6 Cells.  

LB192  Chemical X Promotes the Osteogenesis and Inhibits the Adipogenesis Through Inhibition of Lipid Metabolic Enzyme.  
H-J. Jang, P-G. Suh, Ulsan Nat’l. Inst. of Science and Tech, Republic of Korea

LB193  Fasiciplo Hepatic Glutathione S-Transferase (FhGST) Conformational Studies and Its Effect on the Suppression of Toll-Like Receptors Stimulation.  
B.N. Valdes Fernandez, V. Aguayo, C. Ruiz Jimenez, M. Ramos, A. Espino, Univ. of Puerto Rico, Rio Piedras Campus, Puerto Rico, Univ. of Puerto Rico, Med. Science Campus, Puerto Rico and Univ. of Puerto Rico, Med. Science Campus, Puerto Rico

K. Y. Chien, W. G. Wu, B. H. Bui, C. C. Lin, Chang Gung Univ., Taiwan and Natl. Tsing Hua Univ., Taiwan

S. Vuthaluru, R. Kumar, A. Sharma, P. Suhan, S. Mathur, R. Parshad, All India Inst. of Med. Sciences, India and All India Inst. of Med. Sciences, India

LB196  Subcellular Distribution of the Dopamine Transporter Phosphorylated on Threonine 3.  
T.J. Gilchrist, Z.S. Gaarder, R.A. Vaughan, J.D. Foster, Univ. of North Dakota Sch. of Medicine and Health Sciences

LB197  Influence of Mesenchymal Stem Cells on Qualitative and Quantitative Characteristics of Energy Transformation in Muscle Tissue of Lower Extremity in Ischemia.  
I. Shypilova, R. Gami, All Saints Univ., Saint Vincent and the Grenadines

**2824 Glycans and Glycobiology**

M. Park, The Nueva Sch.

LB199  The Use of Pharmacogenetics in Targeting SGLT2 and Its Variants.  
A. Fassler, Sch. District of Marshfield

LB200  Reenergized Adoptive Cell Transfer Immunotherapy.  

LB201  Scientific Community Outreach: Promoting Science to Students at the K-12 Level and Stem Students in ASBMB UPR-RP.  
E.D. Navarro, M.G. Perez-Oquendo, J. Ramirez-Lugo, Universidad de Puerto Rico and Rio Piedras Campus, Puerto Rico


LB205 Constructing a 3-D Molecular Model to Highlight the Conversion of the Normal Protein PrP into the Mutated PrP in a Prion Disease. E.F. Schmitt Lavin, A. Barraza, H.G. Bui, R. Speath, Southeastern Univ.


LB209 Understanding the Structure and Function of Cone Snail Insulin as a Substitute for Human Insulin. J. Lane, M. Firminger, E. Fraser, M. Geiger, S. Morris, M. Ryan, Multnomah High Sch.


LB220 Using the Curriculum to Introduce Transferable Skill Sets to Undergraduate Students. J. Richardson, Austin Coll.
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