

# Call for Abstracts and Program Information

Abstract Deadline: Thursday, November 8, 2012

[www.experimentalbiology.org](http://www.experimentalbiology.org)



# EB2013

Experimental Biology BOSTON

## Annual Meeting of:

American Association of Anatomists (AAA)

CELEBRATING  
125 YEARS!

The American Physiological Society (APS)

American Society for Biochemistry and  
Molecular Biology (ASBMB)

American Society for  
Investigative Pathology (ASIP)

CELEBRATING  
100 YEARS!

American Society for Nutrition (ASN)

American Society for Pharmacology and  
Experimental Therapeutics (ASPET)

## April 20-24, 2013

Boston Convention & Exhibition Center

## EXPERIMENTAL BIOLOGY 2013 ORGANIZATIONS



American Society for Nutrition  
*Excellence in Nutrition Research and Practice*



### The Guest Societies participating in EB 2013 include:

#### **AAA - American Association of Anatomists**

Canadian Association for Anatomy, Neurobiology, and Cell Biology (CAANCB)

#### **APS - American Physiological Society**

American Federation for Medical Research (AFMR)  
Association of Latin American Physiological Societies (ALACF)  
Biomedical Engineering Society (BMES)  
The Microcirculatory Society (MCS)  
The Physiological Society – UK (TPS)  
Society of Experimental Biology and Medicine (SEBM)

#### **ASBMB - American Society for Biochemistry and Molecular Biology**

Biochemical Society  
Division of Biological Chemistry – American Chemical Society  
Panamerican Association for Biochemistry and Molecular Biology (PABMB)

#### **ASIP - American Society for Investigative Pathology**

American College of Veterinary Pathologists  
American Society for Matrix Biology  
International Society for Analytical and Molecular Morphology  
International Society for Biological and Environmental Repositories  
Society for Cardiovascular Pathology  
Società Italiana di Patologia e Medicina Traslazionale/Italian Society of Pathology and Translational Medicine  
The Histochemical Society

#### **ASN - American Society for Nutrition**

Academy of Nutrition and Dietetics (AND)  
American Society for Animal Science (ASAS)  
Association of Nutrition Departments and Programs (ANDP)  
ILSI North America  
Korean Nutrition Society (KNS)  
Plant Phenolic and Human Health Research Interest Group (PhenHRIG)  
The Nutrition Society

#### **ASPET - American Society for Pharmacology and Experimental Therapeutics**

Behavioral Pharmacology Society  
British Pharmacological Society  
Canadian Society for Pharmacology and Therapeutics

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The Experimental Biology Management Office is located at 9650 Rockville Pike, Bethesda, MD 20814-3998

Tel: 301-634-7010; Fax: 301-634-7014; Email: [eb@faseb.org](mailto:eb@faseb.org)

[www.experimentalbiology.org](http://www.experimentalbiology.org)

Experimental Biology is an annual meeting comprised of more than 14,000 scientists representing six organizing societies and 27 guest societies. Primary focus areas include anatomy, physiology, pathology, biochemistry and molecular biology, investigative pathology, nutrition and pharmacology. EB 2013 is open to all organizing and guest society members and nonmembers with an interest in the latest research impacting life sciences. Attendees represent scientists from academic institutions, government agencies, non-profit organizations and industry.

This multidisciplinary, scientific meeting features plenary and award lectures, workshops, oral and poster presentations, on-site career services and exhibits spotlighting equipment, supplies and publications required for research labs and experimental study.

## Experimental Biology 2013 offers:

- Access to 6 collective society meetings in one location with one registration fee
- More than 50 concurrent scientific sessions open to all attendees featuring the latest in life sciences
- Opportunity to meet representatives from nearly 300 companies on the exhibit floor
- Over 5000 poster presentations in 4 days of poster sessions
- More than 90 award programs and travel funding opportunities, plus poster competitions (awards vary by society)
- On average, sixty-five countries represented annually creating a diverse audience

## Contact us at:

**Experimental Biology**  
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Bethesda, MD 20814-3998

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[eb@faseb.org](mailto:eb@faseb.org)

[www.experimentalbiology.org](http://www.experimentalbiology.org)

## Mark your Calendar

### Experimental Biology 2013 – Translating Science Today for Tomorrow's Health

#### April 20-24

Boston Convention & Exhibition Center (BCEC)  
415 Summer Street  
Boston, MA 02210

#### Scientific Sessions:

Saturday, April 20 – Wednesday, April 24

#### Poster Sessions:

Sunday, April 21 – Wednesday, April 24

#### Exhibits:

Sunday, April 21 – Tuesday, April 23

## CAREER DEVELOPMENT SESSIONS

Visit [www.experimentalbiology.org](http://www.experimentalbiology.org) for further information.

### ANATOMY

Managing Workplace Conflict:  
Part 1 – Understanding Conflict: Assessing Your Own Tendencies  
Part 2 – Developing Core Skills for Managing Conflict

### PHYSIOLOGY

Publishing 101: How to Get Your Work Published in APS Journals and Avoid Minefields along the Way  
Communicating Science to Non-Scientists: Keys to Funding and Visibility (Sponsored by: Careers in Physiology Committee)  
The Changing Face of Tenure (Sponsored by: Women in Physiology Committee)  
NIH Funding Agencies

### BIOCHEMISTRY

Computational Tools for Assigning Enzymatic Functions Workshop  
Fostering Partnerships between Colleges, Universities and K-12 Schools Workshop  
From the Lab to the Kitchen Table – Communicating Science to a Lay Audience  
Graduate and Postdoctoral Professional Development Program  
Jobs in Industry for Minority Scientists  
Navigating Mid-Career Transitions  
Professional Development Workshop for Students, Postdocs and Junior Faculty  
Promoting Concept Driven Teaching Strategies in BMB through Concept Assessments  
Proteomics of Post-translational Modifications Workshop  
Science Cafés: The New Social Network  
Training for a World in Transition  
Transitioning beyond the Bench  
Transitioning from Student to Professional  
Undergraduate Orientation, A Student's Guide to the ASBMB Annual Meeting  
Undergraduate Breakfast with ASBMB Award Scientists  
Undergraduate Poster Competition, ASBMB 17th Annual Student Research Poster Competition  
Undergraduate Workshop, Beyond College: Coping with Some Common Challenges  
Welcome and Networking Reception  
*sponsored by the ASBMB Minority Affairs Committee*  
"What Is a Germ?" Challenge  
Women Scientists Panel and Networking Reception

### PATHOLOGY

Career Development Workshop and Breakfast:  
Non-traditional Career Opportunities in Pathology  
13th Annual Career Development Program and Lunch: Dancing with Journals: A Guide to Submission and Review

### NUTRITION

Grand Prize for Young Minority Investigations Competition  
Medical Nutrition Council Clinical Emerging Leader Award Competition  
International Nutrition Council Kellogg International Student Prize Competition  
Nutritional Sciences Council Graduate Student Research Award Competition  
Postdoctoral Research Award Competition endowed by Solae, LLC  
The World Has Changed and So Must Your Communication Style

### PHARMACOLOGY

Advancing Discoveries from the Academic Laboratory to the Market  
Diversity Mentoring Breakfast  
Graduate Student-Postdoctoral Colloquium: Careers Roundtable  
Translating Pharmacology into Career Choices in the Pharmaceutical and Biotechnology Industry

### MARC & PROFESSIONAL DEVELOPMENT PROGRAMS

Networking: A Required Life Skill  
Goal Setting, Prioritizing, Time Management  
Making the Case for Graduate School  
Navigating Graduate Work, Protocol, Milestones, Requirements  
Fundamentals for Managing the Postdoctoral Experience  
Developing/Writing the Doctoral Dissertation  
Leadership Principles for Today's Professionals  
Negotiation Strategies for Scientists  
Global Interview Skills: A Practice Workshop for International Candidates  
Making the Grade: Job Talk/Chalk Talk  
Job Search in Academia & Industry  
Revealing Your Character through Your Resume  
Sometimes It's Who You Know: Winning at Networking  
Making the Connection: The Relationship between the Resume, the Interview and the Job  
Successful Behaviors for Winning an Interview  
The Right Attitude and Behaviors While Job Searching from the Resume to the Job Offer  
Ten Ways to Get Lucky in the Job Search  
Developing Your Core Message/"Elevator Pitch"  
Postdocs: What Should You Be Looking For and How to Find Them  
Professional Development for PhDs  
The Academic Job Search in the Life Sciences: (2 part session) – Pt 1  
The Job Talk  
Utilizing LinkedIn in the PhD Job Search  
CV→Resume  
PhD Negotiation Skills and Strategies: How to Get What You Want and Need

Job Hunting in the Biotech Industry  
 Talking about Money: Compensation Negotiation for Scientist  
 Moving into Industry  
 Achieving Your Goals: Goal Setting Strategies for Scientific &  
 Career Success [Interactive]  
 Career Decisions: How to Select a Career Path That's Best for You  
 [Interactive]  
 Academic Job Search: CV's, Letters, Statements and Start-Ups  
 Talking about Yourself: Interviewing Well  
 Transforming Your CV  
 Beyond the Bench...Preparing for Your Career Transition in the Life  
 Sciences  
 Economics and Your Job Search  
 Ten Tough Industrial Interview Questions; Ten Good Responses  
 Workplace Dynamics I/II  
 Workplace Dynamics: Conflict & Feedback

Workplace Dynamics: Team Skills  
 Lab Management  
 Career Skills Blitz  
 How to Get a Job in Science Education & Outreach  
 Managing Up  
 How to get a Job in Science Policy  
 How to get a Job in Government: Bench  
 How to get a Job in Government: Non-bench  
 How to Continue Your Training at NIH  
 Becoming a Mentor

## NIH SEMINARS

*Write Winning Grant Proposals*® All-Day Seminar and Workshop  
 [advance registration required]  
 NIH Career Development (K) Awards

## EDUCATION-RELATED SESSIONS

Visit [www.experimentalbiology.org](http://www.experimentalbiology.org) for further information.

### ANATOMY

Current Research on Curricular Changes and Their Impact on  
 Student Knowledge  
 Curricular Integration: How Has It Affected Teaching and Learning  
 in Gross Anatomy?  
 Educational Community Outreach: Get Inspired and Get Out  
 There! [Hybrid Symposium]  
 Master Class: Team-Based Learning in Anatomy Curriculum  
 Refresher Course: Histology Teaching – Past, Present and Future  
 Teaching Innovations in Anatomy [Platform]

### PHYSIOLOGY

Bioinformatics and Modeling 101: How to Use Your Office  
 Computer for Discovering/Simulating Physiological Networks of  
 Your Favorite Genes  
 Claude Bernard Distinguished Lectureship of the APS Teaching of  
 Physiology Section  
 Concept Inventories: Assessing Concepts and Competencies to  
 Improve Learning and Teaching  
 How to Be a Science Advocate in Your Own Backyard  
 Laboratory Exercises, Case Studies and Models for Teaching  
 Physiological Concepts  
 NCAR Trainee Featured Topic  
 Refresher Course: Immunology for the Physiologist  
 Rodent Experimentation  
 Biology Education: Incentives and Strategies for Change

### BIOCHEMISTRY

ASBMB Award for Exemplary Contributions to Education Lecture  
 Fostering Partnerships between Colleges, Universities and K-12  
 Schools Workshop  
 Promoting Concept Driven Teaching Strategies in BMB through  
 Concept Assessments  
 Navigating Mid-Career Transitions  
 Training for a World in Transition  
 Transitioning beyond the Bench  
 Transitioning from Student to Professional

### PATHOLOGY

13th Annual Workshop on Graduation Education in Pathology –  
 Careers in Biotechnology  
 Course: Pathobiology for Basic Scientists: Neoplasia: Fundamental  
 Themes in Neoplasia When Good Cells Go Bad  
 Scientific Sleuthing of Human Disease for High School Teachers  
 Lunch and Learn: Responsible Conduct in Research Workshop

### NUTRITION

Clinical Nutrition Update 2013 (CPE credits available)  
 First-Time Attendee and New Member Orientation  
 Meet the Editors  
 Nutritional Surveys and Epidemiological Studies: Exploring and  
 Enhancing Methods, Interpretation, and Communication  
 Social Media and Mobile Technology for Nutrition Education and  
 Research  
 The World Has Changed and So Must Your Communication Style

### PHARMACOLOGY

2013 Teaching Institute: Training Models  
 Do it Right! Writing Case-Based Exam Items, Interpreting Item  
 Analysis and Designing Educational Research Projects to  
 Assess Outcomes – A Workshop  
 Pharmacology Education Division Symposium: The Future of PhD  
 Education in Biomedicine: U.S. and European Perspectives  
 Translating Pharmacology into Career Choices in the  
 Pharmaceutical and Biotechnology Industry

### PUBLIC POLICY

Visit [www.experimentalbiology.org](http://www.experimentalbiology.org) for further information.



# SOCIETY AWARDS AND TRAVEL FUNDING OPPORTUNITIES

Details and award application forms are available on the websites noted below.

Deadlines

## ANATOMY: Visit [www.anatomy.org](http://www.anatomy.org)

Graduate Student Poster Presentation Award	11/08/12
Langman Graduate Student Platform Presentation Award	11/08/12
Postdoctoral Fellow Poster Presentation Award	11/08/12
Postdoctoral Fellow Platform Presentation Award	11/08/12
Education Research Platform Presentation Award	11/08/12
AAA/ASE Student/Postdoctoral Education Research Poster Award	11/08/12
Undergraduate Student Poster Presentation Award	11/08/12
Student/Postdoctoral Travel Award	11/08/12
Young Faculty Travel Award	11/08/12

## PHYSIOLOGY: Visit [www.the-aps.org/mm/awards](http://www.the-aps.org/mm/awards)

APS Arthur C. Guyton Educator of the Year Award supported by Elsevier	01/08/13
APS August Krogh Distinguished Lecturer of the Comparative and Evolutionary Physiology Section	01/31/13
APS Cardiovascular Section 2013 Berne Distinguished Lectureship	02/01/13
APS Cardiovascular Section 2013 Carl J. Wiggers Award	02/01/13
APS Cardiovascular Section Clinical Science Young Investigator Award Sponsored by Portland Press	11/08/12
APS Cardiovascular Section New Investigator Award	11/08/12
APS Cardiovascular Section Research Recognition Awards	11/08/12
APS Carl W. Gottschalk Distinguished Lectureship of the APS Renal Section	03/31/13
APS Caroline tum Suden/Frances A. Hellebrandt Professional Opportunity Award	11/08/12
APS Cell & Molecular Physiology Section New Investigator Award	12/01/12
APS Cell & Molecular Physiology Section Research Recognition Award	12/01/12
APS Cell & Molecular Physiology Section Robert Gunn Student Award	12/01/12
APS Central Nervous System New Investigator Award	11/26/12
APS Central Nervous System Research Recognition Award	11/26/12
APS Central Nervous System Van Harreveld Award	11/26/12
APS Claude Bernard Distinguished Lectureship of the Teaching of Physiology Section	05/15/13
APS Comparative & Evolutionary Physiology New Investigator Award	02/03/12
APS Comparative & Evolutionary Physiology Research Recognition Award	02/03/12
APS Comparative & Evolutionary Physiology Scholander Award sponsored by GlaxoSmithKline	02/03/12
APS Comparative & Evolutionary Physiology Travel Award sponsored by Novo Nordisk Foundation	02/03/12
APS Dale J. Benos Early Career Professional Service Award	01/23/13
APS David S. Bruce Awards for Excellence in Undergraduate Research	01/09/13
APS Endocrinology & Metabolism Section New Investigator Award	11/08/12
APS Endocrinology & Metabolism Section Research Recognition Award	11/08/12
APS Environmental & Exercise Physiology Section 2013 Edward F. Adolph Distinguished Lectureship	03/01/13
APS Environmental & Exercise Physiology Section Gatorade Beginning Investigator Award	11/08/12
APS Environmental & Exercise Physiology Section Gatorade Predoctoral Investigator Award	11/08/12
APS Environmental & Exercise Physiology Section Honor Award	03/01/13
APS Environmental & Exercise Physiology Section Military Award for Beginning Investigators	11/08/12
APS Environmental & Exercise Physiology Section National Space Biomedical Research Institute's Gravitational Physiology Beginning Investigator Award	11/08/12
APS Environmental & Exercise Physiology Section National Space Biomedical Research Institute's Predoctoral Gravitational Physiology Award	11/08/12
APS Environmental & Exercise Physiology Section New Investigator Award	11/08/12
APS Environmental & Exercise Physiology Section Predoctoral Military Physiology Award	11/08/12
APS Environmental & Exercise Physiology Section Predoctoral Recognition Award	11/08/12
APS Environmental & Exercise Physiology Section Recognition Award for Beginning Investigators	11/08/12
APS Environmental & Exercise Physiology Section Rigel Pharmaceuticals Postdoctoral Investigator Award	11/08/12
APS Environmental & Exercise Physiology Section Rigel Pharmaceuticals Predoctoral Investigator Award	11/08/12
APS Excellence in Professional Student (MD or DO) Research Travel Award	11/15/12
APS Fleur L. Strand Professional Opportunity Award	11/08/12
APS Gastrointestinal & Liver Physiology Section New Investigator Award	12/10/12
APS Gastrointestinal & Liver Physiology Section Predoctoral and Postdoctoral Poster Awards	12/10/12

## SOCIETY AWARDS AND TRAVEL FUNDING OPPORTUNITIES

Details and award application forms are available on the websites noted below.

### Deadlines

APS Gastrointestinal & Liver Physiology Section Research Recognition Award	12/10/12
APS Gastrointestinal & Liver Physiology Section Takeda Distinguished Research Award	12/10/12
APS Gastrointestinal & Liver Physiology Section Takeda Travel Awards	12/10/12
APS Horace W. Davenport Distinguished Lectureship of the APS Gastrointestinal & Liver Physiology Section	12/10/12
APS Juan Carlos Romero and Water & Electrolyte Homeostasis Section Postdoctoral Research Recognition Award	11/08/12
APS Mead Johnson Research Award in Endocrinology & Metabolism	11/08/12
APS Michael J. Brody Young Investigator Award of the Neural Control & Autonomic Regulation Section	11/08/12
APS Neural Control & Autonomic Regulation Section New Investigator Award	11/08/12
APS Neural Control & Autonomic Regulation Section Research Recognition Award	11/08/12
APS Nike, Inc. Environmental and Exercise Physiology Postdoctoral Research Award	11/08/12
APS Nike, Inc. Environmental and Exercise Physiology Predoctoral Research Award	11/08/12
APS Physiologists in Industry Committee Postdoctoral Novel Disease Model Award	12/14/12
APS Physiologists in Industry Committee Predoctoral Novel Disease Model Award	12/14/12
APS Renal Section Amgen Postdoctoral Excellence in Research Award	11/08/12
APS Renal Section New Investigator Award	11/08/12
APS Renal Section Predoctoral Excellence in Renal Research Awards	11/08/12
APS Renal Section Research Recognition Award	11/08/12
APS Renal Section Young Investigator Award	03/31/13
APS Respiration Section New Investigator Award	11/15/12
APS Respiration Section Research Recognition Award	11/15/12
APS Robert W. Berliner Award for Excellence in Renal Physiology sponsored by Abbott Laboratories	11/08/12
APS Steven M. Horvath Professional Opportunity Award	11/08/12
APS Teaching of Physiology Section New Investigator Award	11/08/12
APS Teaching of Physiology Section Research Recognition Award	11/08/12
APS Virendra B. Mahesh Award of Excellence in Endocrinology	11/08/12
APS Water & Electrolyte Homeostasis Section New Investigator Award in Regulatory and Integrative Physiology	11/22/12
APS Water & Electrolyte Homeostasis Section Predoctoral Research Recognition Award	11/08/12
APS/NIDDK Minority Travel Fellowship Awards	11/15/12
SEBM Young Investigator Award	12/17/12

### BIOCHEMISTRY: Visit [www.asbmb.org/meeting2013](http://www.asbmb.org/meeting2013)

For awards requiring society membership, applicant must be a current member of ASBMB at the time of application submission and have paid their membership dues for the billing cycle which includes the 2013 Annual Meeting. New ASBMB membership applications must be received by November 1, 2012 to allow for complete processing and approval prior to the November 28th travel award application deadline. Visit [www.asbmb.org/meeting2013](http://www.asbmb.org/meeting2013) for all award and application criteria.

ASBMB Annual Meeting Childcare Grant	11/28/12
ASBMB Graduate Minority Travel Award	11/28/12
ASBMB Graduate/Postdoctoral Travel Award	11/28/12
ASBMB Undergraduate Affiliate Network Faculty Travel Award	11/28/12
ASBMB Undergraduate Affiliate Network Student Travel Award	02/08/13
ASBMB Undergraduate Student Competitive Travel Award	11/28/12
ASBMB Undergraduate Affiliate Network Outstanding Chapter Award	03/01/13

### PATHOLOGY: Visit [www.asip.org/meetings/2013](http://www.asip.org/meetings/2013)

ASIP Experimental Pathologist-in-Training Award	11/15/12
ASIP Experimental Pathologist-in-Graduate Training Award	11/15/12
ASIP Trainee Travel Awards	11/15/12
ASIP Minority Trainee Travel Awards	11/15/12

### NUTRITION: Visit [www.nutrition.org/about-asn/awards/](http://www.nutrition.org/about-asn/awards/)

ASN Centrum Center for Nutrition Science Award	09/15/12
ASN Conrad Elvehjem Award for Public Service in Nutrition	09/15/12
ASN David Kritchevsky Career Achievement Award	09/15/12
ASN E.L.R. Stokstad Award, endowed by the Stokstad Family	09/15/12
ASN E.V. McCollum Award	09/15/12



## SOCIETY AWARDS AND TRAVEL FUNDING OPPORTUNITIES

Details and award application forms are available on the websites noted below.

Deadlines

ASN Gilbert A. Leveille Lectureship and Award . . . . .	09/15/12
ASN General Mills Institute of Health and Nutrition Innovation Award, endowed by the General Mills Bell Institute . . . . .	09/15/12
ASN Mary Swartz Rose Senior Investigator Award . . . . .	09/15/12
ASN McCormick Science Institute Research Award . . . . .	09/15/12
ASN Milton L. Sunde Award . . . . .	09/15/12
ASN Norman Kretchmer Memorial Award in Nutrition and Development . . . . .	09/15/12
ASN Osborne and Mendel Award . . . . .	09/15/12
ASN Robert H. Herman Award . . . . .	09/15/12
ASN Excellence in Nutrition Education Award . . . . .	09/15/12
ASN Dannon Institute Mentorship Award . . . . .	09/15/12
ASN Roland L. Weinsier Award for Excellence in Medical/Dental Education . . . . .	09/15/12
ASN Bio-Serv Award in Experimental Animal Nutrition . . . . .	09/15/12
ASN Mary Swartz Rose Young Investigator Award . . . . .	09/15/12
ASN Mead Johnson Award for Research . . . . .	09/15/12
ASN Peter J. Reeds Young Investigator Award . . . . .	09/15/12
ASN Samuel J. Fomon Young Physician Award, endowed by Nestlé Nutrition Institute . . . . .	09/15/12
ASN Postdoctoral Research Award Competition, endowed by Solae, LLC . . . . .	11/08/12
ASN Predoctoral Fellowship for Students in Nutrition Research . . . . .	12/01/12
ASN Vernon R. Young Award . . . . .	09/15/12
ASN Nutrition Science Media Award . . . . .	09/15/12
ASN Graduate Student Research Award Competition, supported by the Nutritional Sciences Council . . . . .	11/08/12
ASN Clinical Emerging Leader Award Competition, supported by the Medical Nutrition Council . . . . .	11/08/12
ASN International Nutrition Council Kellogg International Student Prize . . . . .	01/15/13
ASN MARC Travel Award . . . . .	02/22/13
ASN Grand Prize for Young Minority Investigators . . . . .	02/22/13
ASN W.O. Atwater Lectureship Award . . . . .	11/03/12
ASN Volunteer of the Year Award . . . . .	01/13/13
ASN Sustaining Member Committee Award of Distinction . . . . .	01/13/13
ASN Korean Nutrition Society Award . . . . .	01/13/13

### PHARMACOLOGY: Visit [www.aspet.org/awards/](http://www.aspet.org/awards/)

John J. Abel Award . . . . .	09/15/12
Julius Axelrod Award . . . . .	09/15/12
Pharmacia-ASPET Award in Experimental Therapeutics . . . . .	09/15/12
Robert R. Ruffolo Career Achievement Award . . . . .	09/15/12
Torald Sollmann Award in Pharmacology . . . . .	09/15/12
Drug Metabolism Early Career Achievement Award . . . . .	09/15/12
Benedict R. Lucchesi Distinguished Lectureship in Cardiac Pharmacology . . . . .	09/15/12
ASPET Division for Drug Discovery and Development Young Investigator Award . . . . .	11/14/12
ASPET Graduate Student Best Abstract Awards . . . . .	11/14/12
ASPET Graduate Student Travel Awards . . . . .	12/12/12
ASPET Minority Graduate Student Travel Awards . . . . .	12/12/12
ASPET Minority Young Scientist Travel Awards . . . . .	12/12/12
ASPET Pharmacology Educator's Travel Award . . . . .	01/04/13
ASPET Postdoctoral Scientist Awards . . . . .	11/14/12
ASPET Summer Undergraduate Research Fellow Travel Awards . . . . .	12/12/12
ASPET Young Scientist Travel Awards . . . . .	12/12/12

### FASEB-MARC PROGRAM: Visit [www.faseb.org/marc](http://www.faseb.org/marc) for forms and information

Minority Travel Awards . . . . .	03/08/13
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## FASEB Career Resources/MARC Program

A service of FASEB Office of MARC & Professional Development Programs, arranged by Experimental Biology 2013

### The EB 2013/FASEB Career Center will feature:

- Virtual Career Fair (before, during and after the meeting)
- Computer-assisted registration, 'search-and-referral' services, interview scheduling and message services
- On-site interview facilities
- 'Position Available' posting area
- Career development seminars
- Cover letter and resume critique workshops
- Message center for job-seekers and employers
- Job-Seeker database (year-round job-seeker resume referrals)

*Note:* Access to the Career Center is FREE to all registered Experimental Biology 2013 meeting attendees.

### MARC PROGRAM

The FASEB MARC Program will be sponsoring EB 2013 Travel Awards to help support the participation of full-time faculty/mentors, postdoctoral fellows, and students from minority institutions (MIs) and historically black colleges and universities (HBCUs). The travel awards are funded up to \$1,850 each for travel-related expenses and meeting registration. Travel awards are provided as reimbursements after the meeting. The travel awards are supported by a federal training grant from the NIGMS/NIH; therefore, only U.S. citizens and permanent residents of the U.S. are eligible for the travel awards. Faculty/mentors, students and postdoctoral fellows from underrepresented groups at majority institutions are also eligible to apply for the travel awards. For travel award information, contact [marcssm@faseb.org](mailto:marcssm@faseb.org)

**Note:** Travel award application deadline—March 8, 2013.

### NIH GRANTS SEMINARS & WORKSHOPS

The FASEB Office of MARC & Professional Development Programs will offer NIH grant seminars as part of the Career Center at the Experimental Biology 2013 Annual Meeting. Dr. Henry Khachaturian of NIGMS, NIH will give presentations on the "NIH K Awards". Dr. Peg Atkisson of Grant Writers' Seminars & Workshops, LLC will present the all-day "Write Winning Grant Proposals"® seminar. EB 2013 registration is required to participate in the seminars.

*Note:* A separate advance registration process will be required to participate in the "Write Winning Grant Proposals"® seminar. All applicants/registrants must be pre-approved to attend this FREE

seminar. **Participation in this seminar is limited to advanced postdoctoral fellows and non-tenured junior faculty members.**

### "WRITE WINNING GRANT PROPOSALS"® (all-day seminar/workshop)

This widely acclaimed seminar comprehensively addresses both practical and conceptual aspects that are important to the proposal-writing process. It is designed for faculty members and advanced postdoctoral fellows who have had some exposure to writing grant applications, either through training/ mentoring or personal experience. The presentation is tailored to meet the needs of the audience, i.e., to emphasize the funding agencies (federal, private, and/or industrial sources) that are of greatest interest to the attendees. Emphasis is given to such things as idea development, identification of the most appropriate granting agency, how to write for reviewers, and tips and strategies that are of proven value in presenting an applicant's case to reviewers.

This seminar program presented at EB 2013 will focus on NIH and emphasize how to cope with the changes in how grant proposals to NIH are written and reviewed. Regardless of the agency, participants are taught to write with a linear progression of logic, which leads reviewers through their applications. It is stressed that applicants are writing for two different audiences – the assigned reviewers, who have read the application in its entirety, and non-assigned reviewers who may have read little, or nothing, of the proposal before the meeting of the review panel. Strategies designed to merit a fundable priority score are emphasized. **[Advanced registration and pre-approval to participate in the seminar are required.]**

### NIH K Awards

This presentation will focus on the NIH's new K99/00 Pathways to Independence Award (for postdoctoral scientists) and the K08 Mentored Clinical Scientist Development Award (for individuals with a health professional doctoral degree committed to a career in laboratory or field-based research.) The interactive discussion will give attendees an opportunity to ask questions of and obtain insight from an NIH representative.

**IMPORTANT:** Handouts and resource materials will be provided on-site.

**For further information, contact:**

FASEB Office of MARC and Professional  
Development Programs  
9650 Rockville Pike, Bethesda, MD 20814-3998  
Email: [marc@faseb.org](mailto:marc@faseb.org)

**Career Center**

<http://careers.faseb.org>  
Email: [careers@faseb.org](mailto:careers@faseb.org) or [clientserv@jobtarget.com](mailto:clientserv@jobtarget.com)  
Phone: 860-437-5700

**FASEB MARC Program Travel Awards**

Email: [marcssm@faseb.org](mailto:marcssm@faseb.org)  
Phone: 301-634-7109

**“Write Winning Grant Proposals”®**

**Registration Information**

Email: [marcgws@faseb.org](mailto:marcgws@faseb.org)  
Phone: 301-634-7930





The American Association of Anatomists will be celebrating its 125th Anniversary in 2013.

[www.anatomy.org](http://www.anatomy.org)

## KEYNOTE SPEAKER

**Evo-Devo and an Expanding Evolutionary Synthesis**  
**Monday, April 22, 4:30 PM**  
 Sean Carroll  
 Univ. of Wisconsin

## FOCUS PLENARY SPEAKERS

**Evolutionary/Developmental Biology – Sunday, April 21, 8:00 AM**  
*Co-sponsored by the AAA Fellows Legacy Fund*  
 Cliff Tabin (Harvard Medical School)  
 The Evolution and Development of Vertebrate Limb Morphology  
 Neil Shubin (Univ. of Chicago)  
 Fossils, Genes, and the Origin of Organs  
 Nipam Patel (Univ. of California, Berkeley)  
 The Evolution of Arthropod Appendages

**Cell Biology – Sunday, April 21, 10:30 AM**  
 W. James Nelson (Stanford Univ.)  
 Cadherin-Based Cell Adhesion and Epithelia Organization: An Evolutionary Perspective  
 Sandra Schmid (UT Southwestern Medical Center)  
 Molecular Mechanisms Governing Clathrin-Mediated Endocytosis

**Education/Professional Development – Monday, April 22, 8:00 AM**  
 Frederic Hafferty (Mayo Clinic)  
 Anatomy as a Garden of Educational Delights: Medical Education, Professional Formation and the Hidden Curriculum  
 David Hirsh (Harvard Medical School)  
 Longitudinal Integrated Clinical Training as a Model for Basic Science Education

**Paleontology and Functional Anatomy – Monday, April 22, 10:30 AM**  
 Lawrence Witmer (Ohio Univ.)  
 The Visible Dinosaur: Fleshing out Dinosaur Head Anatomy and Function with Advanced 3D Imaging  
 Carol Ward (Univ. of Missouri)  
 The Evolution of Human Anatomy and Locomotion  
 Matt Ravosa (Univ. of Notre Dame)  
 Integrative Experimental Approaches to Adaptive Interpretations of the Fossil Record

**Neuroscience – Tuesday, April 23, 8:00 AM**  
 Jeff Lichtman (Harvard Univ.)  
 Imaging the Connectome  
 Javier DeFelipe (Cajal Institute)  
 From the Connectome to the Synaptome

**Imaging Modalities – Tuesday, April 23, 10:30 AM**  
 Scott Fraser (California Institute of Technology)  
 Imaging the Cellular Dynamics and Signals that Pattern Embryos  
 Nadine Peyri  ras (CNRS-NED Institut de Neurobiologie)  
 Recording and Statistical Analysis of Early Zebrafish Developmental Patterns Using *In Vivo* Multiphoton Microscopy  
 Charles Little (Kansas Univ. Medical Center)  
 Integrating Cell and Tissue Motion Patterns during Early Embryogenesis: How Much “Cell Migration” Really Occurs?

## LECTURES

R.R. Bensley Award Lecture in Cell Biology  
 C.J. Herrick Award Lecture in Neuroanatomy  
 H.W. Mossman Award Lecture in Developmental Biology  
 Morphological Sciences Award Lecture

*These lectures will be given in AAA's Young Investigator Award Symposium; speakers to be announced.*

## PROFESSIONAL DEVELOPMENT TRACK

### Managing Workplace Conflict:

Phillip Glenn (Emerson College)  
**Part 1 – Understanding Conflict: Assessing Your Own Tendencies**  
**Part 2 – Developing Core Skills for Managing Conflict**  
*This is a two-part workshop. There is no charge, but advanced registration is required.*



## EDUCATION & TEACHING TRACK

### Current Research on Curricular Changes and Their Impact on Student Knowledge

*Co-sponsored by Anatomical Sciences Education*

*Chair: Richard Drake (Cleveland Clinic Lerner College of Medicine)*

### Curricular Integration: How Has It Affected Teaching and Learning in Gross Anatomy?

*Chair: Virginia Lyons (Geisel School of Medicine at Dartmouth)*

### Educational Community Outreach: Get Inspired and Get Out There! [Hybrid Symposium] \*

*Chair: Barb Puder (Samuel Merritt Univ.)*

### Master Class: Team-Based Learning in Anatomy Curriculum

*Chair: Mary Bee (Oakland Univ. William Beaumont School of Medicine/UDM)*

### Refresher Course: Histology Teaching – Past, Present and Future

*Chairs: Robert Ogilvie (Medical Univ. of South Carolina) & Robert McCuskey (Univ. of Arizona College of Medicine)*

### Teaching Innovations in Anatomy \*

*Chairs: Polly Husmann (West Virginia School of Osteopathic Medicine) & Mark Hankin (Univ. of Toledo)*

## SCIENTIFIC SYMPOSIA

### Autophagy, Metabolic Syndrome, and Cardioprotection

*Chair: Roberta Gottlieb (San Diego State Univ.)*

### Development and Reprogramming of Vascular Smooth Muscle

*Chair: Charles Little (Kansas Univ. Medical Center)*

### Brain Interfaces and Their Therapeutic Applications

*Chair: Jonathan Wolpaw (Wadsworth Center, NYS Department of Health)*

### Cell Biological Basis of Complex Morphogenesis [Hybrid Symposium] \*

*Chair: Andrew Dudley (Univ. of Nebraska Medical Center)*

### Comparative Perspectives on the Human Face: Biomedical Implications of Evolutionary Anatomical Research

*Co-sponsored by The Anatomical Record*

*Chair: Anne Burrows (Duquesne Univ.)*

### Developmental Backgrounds Underlying the Morphological Evolution of Vertebrates

*Co-sponsored by Developmental Dynamics*

*Chair: Shigeru Kuratani (Center for Developmental Biology, RIKEN)*

### Evolution of Host-Pathogen Interactions: Understanding How Microbial Pathogens Hijack Host Cells

*Chair: Julian Guttman (Simon Fraser Univ.)*

### Expanding Translational Research and Impacting Patient Care through the Use of Cadaveric Material

*Chair: H. Wayne Lambert (West Virginia Univ. School of Medicine)*

### Frontiers in Cell Migration: Vessels, Neurogenesis and Cancer

*Chair: Paul Kulesa (Stowers Institute for Medical Research)*

### Imaging Live Tissues

*Chair: Michiko Watanabe (Case Western Reserve Univ. School of Medicine)*

### Micro-imaging in Biological Anthropology: Fine Focus on Primate Ontogeny and Evolution

*Chair: Tim D. Smith (Slippery Rock Univ.)*

### Neurobiology of Aging [Hybrid Symposium] \*

*Sponsored by the Canadian Association for Anatomy, Neurobiology & Cell Biology*

*Chair: Michael Kawaja (Queen's Univ.)*

### Neurovascular Development

*Chair: Joseph McCarty (MD Anderson Cancer Center)*

### Novel 3D Imaging with Micro Computed Tomography

*Chair: Rick Sumner (Rush Univ. Medical Center)*

### The Use of Induced Pluripotent Stem Cells in Disease Modeling

*Co-sponsored by AAA's Advisory Committee for Young Anatomists*

*Chair: Lezanne Ooi (Univ. of Wollongong)*

### Responses to Novel Environmental Stimuli: Induction and Epigenetic Inheritance [Hybrid Symposium] \*

*Chair: Yoav Soen (Weizmann Institute of Science)*

### The Skinny on Fat: Adipose Tissue and Stem Cells

*Chair: Julie Fradette (Université Laval/ LOEX)*

## SCIENTIFIC PLATFORM SESSIONS

### Cardiovascular Biology \*

*Chair: Katja Schenke-Layland (Fraunhofer Institute for Interfacial Engineering and Biotechnology (IGB))*

### Development and Disease – It's All about Anatomy \*

*Chair: Paul Trainor (Stowers Institute for Medical Research)*

### Form, Function, and Evolution \*

*Chair: Casey Holliday (Univ. of Missouri)*

### Tissue Injury, Stem Cells, and Regenerative Medicine \*

*Chair: Martine Dunnwald (Univ. of Iowa)*

\*AAA will be accepting abstracts for oral presentation within this session. Please see AAA topic categories, page 38-39.



## 2013 Annual Meeting of The American Physiological Society

[www.apsebmeeting.org](http://www.apsebmeeting.org)

### Physiology InFocus: From Animals to Human Models of Disease

Organized by: *Sue Barman*, Michigan State Univ.

**Sunday, April 21, 2013 3:15 PM**

**Animal Models of the Irritable Bowel Syndrome: Basic and Translational Implications**

James J. Galligan

**Monday, April 22, 2013, 3:15 PM**

**Lessons from New Animal Models of Cystic Fibrosis**

Paul B. McCray

**Tuesday, April 23, 2013, 3:15 PM**

**Eating Disorders**

Mary Boggiano

**Wednesday, April 24, 2013, 4:45 PM**

**From Animals to Human Models of Disease  
Nobel Lecture in Physiology or Medicine Lecture**

Linda Buck

### APS Named Lectures and Workshops

**Saturday, April 20, 2013, 5:30 PM**

**Physiology in Perspective – The Walter B. Cannon Memorial Award Lecture**

Michael J. Joyner

**Sunday, April 21, 2013, 10:30 AM**

**Claude Bernard Distinguished Lectureship of the APS Teaching of Physiology Section**

Eric Mazur

Education Track

**Sunday, April 21, 2013, 2:00 PM**

**Hugh Davson Distinguished Lectureship of the APS Cell & Molecular Physiology Section**

Amira Klip

**Sunday, April 21, 2013, 3:15 PM**

**Ernest H. Starling Distinguished Lectureship of the APS Water & Electrolyte Homeostasis Section**

Donald E. Kohan

**Monday, April 22, 2013, 8:00 AM**

**Carl Ludwig Distinguished Lectureship of the APS Neural Control & Autonomic Regulation Section**

Roger A.L. Dampney

Blood Pressure Regulation Track

Central Control of Homeostasis Track

**Monday, April 22, 2013, 10:30 AM**

**Solomon A. Berson Distinguished Lectureship of the APS Endocrinology & Metabolism Section**

Ellis R. Levin

Blood Pressure Regulation Track

**Monday, April 22, 2013, 2:00 PM**

**Edward F. Adolph Distinguished Lectureship of the APS Environmental and Exercise Physiology Section**

Douglas R. Seals

**Monday, April 22, 2013, 3:15 PM**

**Joseph Erlanger Distinguished Lectureship of the APS Central Nervous System Section**

Charles W. Bourque

Blood Pressure Regulation Track

Central Control of Homeostasis Track

**Monday, April 22, 2013, 3:15 PM**

**Carl W. Gottschalk Distinguished Lectureship of the APS Renal Section**

Jeff Sands

**Tuesday, April 23, 2013, 10:30 AM**

**Julius H. Comroe, Jr. Distinguished Lectureship of the APS Respiration Section**

Aron Fisher

**Tuesday, April 23, 2013, 2:00 PM**

**Robert M. Berne Distinguished Lectureship of the APS Cardiovascular Section**

David J. Lefer



**Tuesday, April 23, 2013, 3:15 PM**

**August Krogh Distinguished Lectureship of the APS Comparative and Evolutionary Physiology Section**

Stan Lindstedt

*Physiology Section*

**Tuesday, April 23, 2013, 3:15 PM**

**Horace W. Davenport Distinguished Lectureship of the APS Gastrointestinal & Liver Physiology Section**

Ole Holger Petersen

## Saturday, April 20, 2013

**8:00 AM**

**Refresher Course: Immunology for the Physiologist**

Michael J. Ryan and Kim Henige

*Sponsored by: Education Committee*

Education Track

**9:00 AM**

**Microcirculatory Society President's Symposium: Cellular and Noncellular Modes of Communication Across the Blood Vessel Wall**

Michael Hill

**1:00 PM**

**How to be a Science Advocate in Your Own Backyard**

R. Brooks Roby and Gina Yosten

*Sponsored by: Science Policy Committee*

Education Track

Career Development Track

**Rodent Experimentation Workshop**

Sean Stocker

Education Track

**2:00 PM**

**Microcirculatory Society President's Symposium II/Young Investigator Novel Trends**

**3:00 PM**

**APS Communications Committee Symposium**

Education Track

**3:15 PM**

**Trainee Award Finalists Session and Data Diuresis**

*Sponsored by: Water and Electrolyte Homeostasis Section*

**Bioinformatics and Modeling 101: How to Use Your Office Computer for Discovering/Simulating Physiological Networks of Your Favorite Genes**

Bina Joe

Education Track

**5:30 PM**

**Physiology in Perspective – The Walter B. Cannon Memorial Award Lecture**

Michael J. Joyner

**7:00 PM**

**Opening Reception**

## Sunday, April 21, 2013

**8:00 AM**

**Emerging Concept: Central Mechanisms Involving Brain Renin-Angiotensin System and Inflammation in Hypertension and Cardiovascular Disease**

Mohan K. Raizada and Yumei Feng

*Sponsored by: Neural Control and Autonomic Regulation Section*

Blood Pressure Regulation Track

Inflammation and Immune Response Track

**Emerging Concepts in AMPK Function**

Judy Creighton and Jaroslaw Zmijewski

**Laboratory Exercises, Case Studies and Models for Teaching Physiological Concepts**

Nancy Lorr

*Sponsored by: Teaching of Physiology Section*

**Lymph Collectors as Active Players: Immunity, Nutrients, Fluid Flow**

Anatoliy A. Gashev and Laura Santambrogio

*Sponsored by: Cardiovascular Section*

Inflammation and Immune Response Track

Translational Physiology Track

**New Experimental Approaches to Human Brain Function in Health and Disease**

Michael J. Friedlander

*Sponsored by: Society for Experimental Biology and Medicine*

**Nrf2 Signal Pathway in Human Diseases as Novel Therapeutics**

Eugene W. Shek and Ira J. Smith

*Sponsored by: Physiologists in Industry Group*

**Physiological Genomic Approaches in Hypertension Research**

David L. Mattson

*Sponsored by: Physiological Genomics Group*

Blood Pressure Regulation Track

## Platelet-Immune Cell Interactions in Cardiovascular Diseases

Rolando Rumbaut and Elena Y. Senchenkova  
*Sponsored by: Cardiovascular Section*  
 Inflammation and Immune Response Track  
 Translational Physiology Track

## Targeting Hypoxic Pathways for Therapeutic Benefit

Cormac T. Taylor  
*Sponsored by: Hypoxia Group*  
 Hypoxia and Oxidative Stress Track

## Translational Research in Kidney Disease, Hypertension, and Electrolyte Disorders

Paul A. Welling  
*Sponsored by: Water and Electrolyte Homeostasis Section and Renal Section*

**10:30 AM**

## Bioengineering of Regenerative Medicine

Song Li  
*Sponsored by: Biomedical Engineering Society*

## Claude Bernard Distinguished Lectureship of the APS Teaching of Physiology Section

Eric Mazur

## Fishing with Flies, Worms and Bacteria: Emerging Models for Mammalian Membrane Transport and Trafficking

David T. Thwaites  
*Sponsored by: The Physiological Society*

## Genetics and Pharmacogenomics of Cardiovascular and Renal Diseases

Bina Joe and Allen W. Cowley, Jr.  
*Sponsored by: Physiological Genomics Group*  
 Translational Physiology Track

## Inflammation and Cardiorespiratory Control

Frank L. Powell  
*Sponsored by: Respiration Section*  
 Inflammation and Immune Response Track

## Molecular Imaging for Physiological Understanding

Albert J. Sinusas and Wawrzyniec Dobrucki  
*Sponsored by: Cardiovascular Section*  
 Inflammation and Immune Response Track  
 Translational Physiology Track

## Regulation of Ion Transport in the Aldosterone-Sensitive Distal Nephron

Alexander Staruschenko and Donald E. Kohan  
*Sponsored by: Renal Section*  
 Transporters and Ion Channels Track

## SLC26 Transporters in Epithelial Secretion

Shmuel Muallem and Viktoria Venglovecz  
*Sponsored by: Cell and Molecular Physiology Section*  
 Transporters and Ion Channels Track

## Sympathetic Activity in Blood Pressure Regulation: Sodium and Hormonal Mechanisms

Gregory Fink  
*Sponsored by: Central Nervous System Section*  
 Blood Pressure Regulation Track  
 Central Control of Homeostasis Track  
 Translational Physiology Track

## The Impact of Pathogens on the Vasculature

Karen Stokes and Felicity Gavins  
*Sponsored by: Cardiovascular Section*  
 Inflammation and Immune Response Track  
 Translational Physiology Track

**2:00 PM**

## Hugh Davson Distinguished Lectureship of the APS Cell & Molecular Physiology Section

Amira Klip

**3:15 PM**

## Biology Education: Incentives and Strategies for Change

Stasinos Stavrianeas and Vikki McCleary  
 Education Track

## Ernest H. Starling Distinguished Lectureship of the APS Water & Electrolyte Homeostasis Section

Donald E. Kohan

## Microcirculatory Society Landis Award Lecture

Michael Hill

## Mitochondrial Dynamics and Turnover with Exercise

David A. Hood  
*Sponsored by: Environmental and Exercise Physiology Section*

## Mitochondrial Phospholipids, Aldehydes, and Protein Carbonyls: An Evaluation of the Good, Sometimes Good, and Ugly Consequences of Dietary PUFAs.

Ethan J. Anderson and William C. Stanley  
*Sponsored by: Endocrinology and Metabolism Section*  
 Metabolic Diseases Track

## Monaminergic Control of Breathing during Development

Kevin J. Cummings and Matthew R. Hodges  
*Sponsored by: Respiration Section*  
 Physiology of Development Track

**Neuronal Membrane/Lipid Rafts: Organizers of Membrane Signaling, Neuritic Growth and Guidance**

Brian P. Head and Dermot Cooper

*Sponsored by: Central Nervous System Section*

Central Control of Homeostasis Track

**Physiology and Pathology of Chloride Transporters in CNS**

F. Javier Alvarez-Leefmans and Eric Delpire

*Sponsored by: Cell and Molecular Physiology Section*

**Regulation of Renal Tubule Function**

Gerhard Giebisch and Michael Caplan

*Sponsored by: Renal Section*

Transporters and Ion Channels Track

**Vascular Cognitive Impairment: Emerging Concepts and Pathophysiology**

Anna Csiszar and Junie Paula Warrington

*Sponsored by: Cardiovascular Section*

Hypoxia and Oxidative Stress Track

Translational Physiology Track

**4:15 PM**

**WEH New Investigator Award Lecture**

*Sponsored by: Water and Electrolyte Homeostasis Section*

**5:45 PM**

**The Henry Pickering Bowditch Memorial Award Lecture**

Jonathan D. Tune

**Monday, April 22, 2013**

**8:00 AM**

**Carl Ludwig Distinguished Lectureship of the APS Neural Control & Autonomic Regulation Section**

Roger A.L. Dampney

Blood Pressure Regulation Track

Central Control of Homeostasis Track

**Concept Inventories: Assessing Concepts and Competencies to Improve Learning and Teaching**

Jenny McFarland

*Sponsored by: Teaching of Physiology Section*

**Hypertension: Mechanisms and Consequences**

Dan Kapusta

*Sponsored by: Water and Electrolyte*

*Homeostasis Section*

**Ion Channels in Health and Disease**

Kirk Hamilton and Claudia Bertucio

*Sponsored by: Cell and Molecular Physiology Section*

Transporters and Ion Channels Track

**Natriuretic Peptides in Plants and as Biologic Markers and Treatment of Congestive Heart Failure and Cancer**

David L. Vesely

*Sponsored by: American Federation for*

*Medical Research*

**Origins of Cells that Contribute to Pulmonary Epithelial and Vascular Remodeling**

Susan Majka and Diego Alvarez

*Sponsored by: Respiration Section*

**Publishing 101: How to Get Your Work Published in APS Journals and Avoid Minefields Along the Way**

Hershel Raff and Rita Scheman

*Sponsored by: Publications Committee*

**Signaling Mechanisms in Cardiac, Lymphatic and Smooth Muscle Contraction**

Sanjukta Chakraborty and Joshua P. Scallan

*Sponsored by: Cardiovascular Section*

Hypoxia and Oxidative Stress Track

Translational Physiology Track

**Trainee Highlights in Physiological Genomics Featured Topic**

Harold G. Klemcke and Carol P. Moreno Quinn

*Sponsored by: Physiological Genomics Group*

Translational Physiology Track

**10:30 AM**

**Brainstem Autonomic Pathway in Health and Disease**

Tanja Babic

*Sponsored by: Central Nervous System Section*

Blood Pressure Regulation Track

Central Control of Homeostasis Track

Metabolic Diseases Track

**Cell Stress in Lung Disease**

Michael Koval and Surafel Mulugeta

*Sponsored by: Respiration Section*

**Microcirculatory Society Young Investigator Symposium: Signal Transduction – Ion Channels to Signaling Molecules**

**CEPS Abstract-Driven Trainee Session**

Heidy Contreras and Scott Kirkton

*Sponsored by: Comparative and Evolutionary*

*Physiology Section*

**Mechanosensory Mechanisms in the Kidney**

Oleh Pochynyuk and Alexander Staruschenko

*Sponsored by: Renal Section*

Transporters and Ion Channels Track

**Novel Roles of Hormones in Blood Pressure Regulation**

Jennifer Sullivan and Jennifer Sasser

*Sponsored by: Water and Electrolyte*

*Homeostasis Section*

## **Solomon A. Berson Distinguished Lectureship of the APS Endocrinology & Metabolism Section**

Ellis R. Levin  
Blood Pressure Regulation Track

## **Therapeutic Cranial Cooling and Selective Brain Cooling in Humans**

Matthew White and Craig Crandall  
*Sponsored by: Environmental and Exercise Physiology Section*

## **Tight Junctions in Epithelial Homeostasis: Beyond Paracellular Barrier**

Le Shen  
*Sponsored by: Gastrointestinal and Liver Physiology Section*

## **Wiggers Award Featured Topic: Novel Pathways Regulating Microvascular Tone and Function**

David D. Gutterman  
*Sponsored by: Cardiovascular Section*

**2:00 PM**

## **Edward F. Adolph Distinguished Lectureship of the APS Environmental and Exercise Physiology Section**

Douglas R. Seals

**3:15 PM**

## **Bone Physiology under Environmental Stress**

Tomasz Owerkowicz  
*Sponsored by: Comparative and Evolutionary Physiology Section*

## **Carl W. Gottschalk Distinguished Lectureship of the APS Renal Section**

Jeff Sands

## **Central Nervous System Modulation of Cardiorespiratory Responses to Hypoxia**

Irene C. Solomon  
*Sponsored by: Hypoxia Group*  
Hypoxia and Oxidative Stress Track  
Central Control of Homeostasis Track

## **Gastric Control of Appetite and Energy Metabolism**

Weizhen Zhang and Yvette Tache  
*Sponsored by: Neural Control and Autonomic Regulation Section*  
Metabolic Diseases Track

## **Hypertension: From Flies to Humans**

Pedro A. Jose  
*Sponsored by: Water and Electrolyte Homeostasis Section*

## **Joseph Erlanger Distinguished Lectureship of the APS Central Nervous System Section**

Charles W. Bourque  
Blood Pressure Regulation Track  
Central Control of Homeostasis Track

## **Microbial Regulation of Membrane Transport**

Jennifer Bomberger and Megan M. Greenlee  
*Sponsored by: Cell and Molecular Physiology Section*  
Transporters and Ion Channels Track

## **Molecular Bioengineering**

Chris Chen  
*Sponsored by: Biomedical Engineering Society*

## **Novel Signaling Molecules in Vascular Injury and Inflammation**

Milton Hamblin and Petra Rocic  
*Sponsored by: Cardiovascular Section*  
Inflammation and Immune Response Track  
Translational Physiology Track

## **Programming the Lung: Epigenetic Mechanisms**

Lester Kobzik and Sadis Matalon  
*Sponsored by: Respiration Section*

## **Tuesday, April 23, 2013**

**8:00 AM**

## **Assessing Postganglionic Sympathetic Neuronal Discharge Patterns: Implications for Understanding Aberrant Sympathetic Outflow**

J. Kevin Shoemaker and Mark Knuepfer  
*Sponsored by: Neural Control and Autonomic Regulation Section*  
Blood Pressure Regulation Track  
Central Control of Homeostasis Track

## **Communicating Science to Non-Scientists: Keys to Funding and Visibility**

Sonya D. Coaxum and Lisa R. Leon  
*Sponsored by: Careers in Physiology Committee*  
Career Development Track

## **Hans Ussing Award**

Nuria M. Pastor-Soler  
*Sponsored by: Epithelial Transport Group*  
Transporters and Ion Channels Track

## **Integrative Physiology of Hormonal and Neural Effects Following Gastric Bypass Surgery**

Kirsteen Browning and Andras Hajnal  
*Sponsored by: Central Nervous System Section*  
Central Control of Homeostasis Track  
Metabolic Diseases Track  
Translational Physiology Track

**Matrix Metalloproteinases in the Cardiovascular System**

Richard Schulz and Paras K. Mishra

*Sponsored by: Cardiovascular Section*

Inflammation and Immune Response Track

Translational Physiology Track

**Microvascular Responses and Thermoregulatory Control in Normal and Clinical Populations**

W. Larry Kenney

*Sponsored by: Environmental and Exercise**Physiology Section***Neuroendocrine Regulation of the Mammalian Reproductive Axis**

William Colledge

*Sponsored by: The Physiological Society***Novel Interventions for Treating Obesity and Type 2 Diabetes**

Thomas H. Reynolds and Joseph T. Brozinick

*Sponsored by: Endocrinology and Metabolism Section*

Metabolic Diseases Track

**Oxidative Stress**

My Helms and Stefanie Niederlechner

*Sponsored by: Cell and Molecular Physiology Section*

Hypoxia and Oxidative Stress Track

**10:30 AM****Epigenetics and Exercise**

Mark Hargreaves

*Sponsored by: Environmental and Exercise**Physiology Section***Inflammation as an Orchestrator in Heart Failure**

Raffaele Altara and W. Matthijs Blankesteijn

*Sponsored by: Cardiovascular Section*

Inflammation and Immune Response Track

Translational Physiology Track

**Integrative Cardiovascular and Respiratory Physiology of Non-Model Organisms**

John Eme

*Sponsored by: Comparative and Evolutionary**Physiology Section***Ion Transport in Cell Differentiation, Migration, Polarization and Adhesion**

Roger T. Worrell

*Sponsored by: Cell and Molecular Physiology Section*

Transporters and Ion Channels Track

**Is There a Physiological Role for C-Peptide?**

Christine Maric-Bilkan and Gina Yosten

*Sponsored by: Endocrinology and Metabolism Section*

Metabolic Diseases Track

**Julius H. Comroe, Jr. Distinguished Lectureship of the APS Respiration Section**

Aron Fisher

*Sponsored by: Respiration Section***Neurotransmission and  $Ca^{2+}$ -sensitization in Gastrointestinal Smooth Muscles**

Brian A. Perrino

*Sponsored by: Gastrointestinal and Liver**Physiology Section***Obesity and Inflammation: Contributions to Vascular and Renal Disease**

Carmen De Miguel

*Sponsored by: Water and Electrolyte**Homeostasis Section***The Role of ER Stress in Cardiovascular Disease**

Robin L. Davisson and Dongsheng Cai

*Sponsored by: Neural Control and Autonomic**Regulation Section*

Blood Pressure Regulation Track

Central Control of Homeostasis Track

Hypoxia and Oxidative Stress Track

**Tissue Engineering of Epithelial Organs: Applications to Physiology and Disease**

Tracy C. Grikscheit

**2:00 PM****Robert M. Berne Distinguished Lectureship of the APS Cardiovascular Section**

David J. Lefer

**3:15 PM****August Krogh Distinguished Lectureship of the APS Comparative and Evolutionary Physiology Section**

Stan Lindstedt

**Brain Renin-Angiotensin Signaling in Metabolic Diseases**

Kamal Rahmouni

*Sponsored by: Neural Control and Autonomic**Regulation Section*

Metabolic Diseases Track

**Branched-Chain Amino Acids in Obesity and Insulin-Resistance: Friend or Foe?**

Tracy G. Anthony and Sean Adams

*Sponsored by: Endocrinology and Metabolism Section*

Metabolic Diseases Track

## Cardio-respiratory Function/Integration in Health and Disease

Kendall F. Morris and David M. Baekey

*Sponsored by: Respiration Section*

## G Protein-Coupled Estrogen Receptor 1 (GPER1/GPR30): The Receptor Mediating Acute Estrogen and Aldosterone Effects?

Jeppe Praetorius and Bjorn Olde

*Sponsored by: Renal Section*

## Horace W. Davenport Distinguished Lectureship of the APS Gastrointestinal & Liver Physiology Section

Ole Holger Petersen

## Membrane Dynamics in Regulation of Cell Function

Hemal H. Patel and Adam Kassan

*Sponsored by: Cell and Molecular Physiology Section*

## Satellite Cells in Muscle Hypertrophy

Ole Holger Petersen and John McCarthy

*Sponsored by: Muscle Biology Group*

## Steve Hebert Award

*Sponsored by: Epithelial Transport Group*

Transporters and Ion Channels Track

## Taming The Sleeping Giant: Control of the Peripheral Circulation during Exercise

D. Walter Wray and Leryn Boyle

*Sponsored by: Cardiovascular Section*

Blood Pressure Regulation Track

Translational Physiology Track

Central Control of Homeostasis Track

5:45 PM

APS Business Meeting

## Wednesday, April 24, 2013

8:00 AM

## Assembly and Trafficking to the Intestinal Brush Border

James R. Goldenring

*Sponsored by: Gastrointestinal and Liver Physiology Section*

## Crosstalk between 1-Carbon Metabolism and Pathways Associated with Metabolic Diseases

Li Wang

*Sponsored by: Endocrinology and Metabolism Section*  
Metabolic Diseases

## microRNA and Stem Cell in Muscle Pathophysiology

Paras K. Mishra

*Sponsored by: Muscle Biology Group*

## NCAR Trainee Featured Topic

Eric Lazartigues

*Sponsored by: Neural Control and Autonomic Regulation Section*

Career Development Track

Education Track

## Neurotrophins in the Respiratory System

Y. S. Prakash and Gary C. Sieck

*Sponsored by: Respiration Section*

## New Insights on the Cellular Ca<sup>2+</sup> Mechanisms

Benedito Machado and Rodrigo Iturriaga

*Sponsored by: Association of Latin American Physiological Societies*

## Nutrients and Cardiovascular Health and Disease: Glucose, Fatty Acids and Beyond

John C. Chatham and Susan A. Marsh

*Sponsored by: Cardiovascular Section*

Metabolic Diseases Track

Translational Physiology Track

## The Role of Psychological Stress and Depression in Determining Cardiovascular Disease Risk –The Use of Animal Models and Clinical Application

Paul Marvar and Angela Grippo

*Sponsored by: Cardiovascular Section*

Blood Pressure Regulation Track

Translational Physiology Track

## The Study of Injury and Repair in Multiple Organ Systems: Serendipity in Translational Research

Robert Freishtat and Eng H. Lo

*Sponsored by: American Federation for Medical Research*

10:30 AM

## Are Cellular Mechanisms Necessary to Understand Evolution (and vice-versa)?

John S. Torday and Neil Blackstone

*Sponsored by: Comparative and Evolutionary Physiology Section*

## Extrinsic and Intrinsic Mechanisms Underlying Myocardial Dysfunction and Heart Failure

Farah Sheikh and Valeria Mezzano

*Sponsored by: Cardiovascular Section*

Inflammation and Immune Response Track

Translational Physiology Track

## Oxidative Stress-Induced Endothelial Cell Reprogramming

Richard D. Minshall and Norbert Voelkel

*Sponsored by: Respiration Section*

Hypoxia and Oxidative Stress Track



#### Prometheus Unplugged: Basic Mechanisms of Liver Regeneration

Udayan Apte and George K. Michalopoulos  
Sponsored by: *Gastrointestinal and Liver Physiology Section*

#### Recent Advances in Understanding Mechanisms Regulating Breathing During Exercise

Hubert V. Forster and Jerome Dempsey

#### Regulation of Epithelial Transport Processes via Post-Translational Modifications

Nuria M. Pastor-Soler and Kwang-Jin Kim  
Sponsored by: *Epithelial Transport Group*  
Transporters and Ion Channels Track

#### Sex-Based Differences in Exercise Metabolism

Stuart Phillips and Mark Tarnopolsky  
Sponsored by: *Environmental and Exercise Physiology Section*

#### The Role of Akt/mTor Pathway in Muscle Growth and Rejuvenation

Charles J. Steenbergen  
Sponsored by: *Muscle Biology Group*

#### Translation Research: From Bench to Bedside

Julie Rennison and Annie Whitaker  
Sponsored by: *Trainee Advisory Committee*

#### William Beaumont: America's First Physiologist and Pioneer of Gastrointestinal Research

Jay B. Dean and Kathy L. Ryan  
Sponsored by: *History of Physiology Group and Gastrointestinal and Liver Physiology Section*

#### 2:30 PM

#### Cell-based Therapy for the Heart and Kidney: From Bench to Bedside

Alejandro R. Chade and David P. Basile  
Sponsored by: *Translational Physiology Group*  
Translational Physiology Track

#### Developmental Origins of Cardiovascular Diseases

Urs Scherrer and Linda E. May  
Sponsored by: *Cardiovascular Section*  
Hypoxia and Oxidative Stress Track  
Translational Physiology Track

#### Emerging Concepts in Understanding Mechanisms of Diabetes

William M. Chilian

#### Current Concepts in Brown Adipose Tissue and Human Energy Balance

John W. Castellani  
Sponsored by: *Environmental and Exercise Physiology Section*

#### Hypoxic Chemotransduction: Defining the Oxygen-Sensors

Christopher N. Wyatt  
Sponsored by: *Respiration Section*  
Central Control of Homeostasis Track

#### NIH Funding Agencies

Hannah V. Carey and John C. Chatham  
Sponsored by: *Science Policy Committee*  
Career Development Track

#### Physics of Cancer

Owen McCarty and Michael King  
Sponsored by: *Biomedical Engineering Society*

#### The Aging Myocardium: Structural Remodeling in Health and Disease

Margaux A. Horn and Gary L. Pierce  
Sponsored by: *Cardiovascular Section*  
Hypoxia and Oxidative Stress Track  
Translational Physiology Track

#### The Changing Face of Tenure

Kathleen P. O'Hagen and Anne M. Dorrance  
Sponsored by: *Women in Physiology Committee*  
Career Development Track



**2013 Annual Meeting of the American Society for  
Biochemistry and Molecular Biology**

[www.asbmb.org/meeting2013](http://www.asbmb.org/meeting2013)

## ASBMB 2013 AWARD and PLENARY LECTURES

### Herbert Tabor Research Award (New)

F. Ulrich Hartl, Max Planck Institute for Biochemistry  
and Arthur L. Horwich, HHMI/Yale School of Medicine

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

Daniel E. Goldberg, HHMI/Washington University School of  
Medicine in St. Louis

### ASBMB Award for Exemplary Contributions to Education

James M. Ntambi, University of Wisconsin at Madison

### ASBMB-Merck Award

Vivek Malhotra, Centre for Genomic Regulation

### ASBMB Plenary Lecture

Melanie Cobb, UT Southwestern Medical Center

### ASBMB Young Investigator Award

Shu-ou Shan, California Institute of Technology

### Avanti Award in Lipids

Susan A. Henry, Cornell University

### DeLano Award for Computational Biosciences

Helen M. Berman, Rutgers University

### Earl and Thressa Stadtman Distinguished Scientist Award

Brian K. Kobilka, Stanford University School of Medicine

### Fritz Lipmann Lectureship

Olke C. Uhlenbeck, Northwestern University

### Mildred Cohn Award in Biological Chemistry (New)

Jennifer A. Doudna, HHMI/University of California, Berkeley

### Ruth Kirschstein Diversity in Science Award

Peter Blumberg, National Institutes of Health

### Walter A. Shaw Young Investigator Award in Lipid Research

Tobias Walther, Yale School of Medicine

### William C. Rose Award

Ivan Dikic, Goethe University School of Medicine

## PRELIMINARY PROGRAM

### ASBMB 2013 Annual Meeting Program Planning Committee

#### Co-Chairs:

Carol A. Fierke, University of Michigan (■) and  
Patrick Sung, Yale University (■)

## Genome Replication and Repair

#### Theme Organizers:

Stephen Bell, HHMI/MIT (■) and  
Lei Li, MD Anderson Cancer Center (■)

## SYMPOSIA

### Coordinating Functions at the Replication Fork

Stephen Bell\*, Anja Groth, Johannes Walter, Virginia Zakian

### Mechanism and Control of Replication Initiation

Oscar Aparicio, Stephen Bell, Karim Labib, Virginia Zakian\*

### Activation of DNA Damage Signaling

Daniel Durocher, Lei Li\*, Stephen West, Lee Zou

### Mechanisms of Genomic Stability

Steve Elledge, Lei Li, KJ Patel \*

## Mechanisms of Gene Transcription and Regulation

#### Theme Organizers:

Stephen Buratowski, Harvard Medical School (■) and  
Geeta Narlikar, UCSF (■)

## SYMPOSIA

### Chromatin Remodeling During Transcription

Gregory Bowman, Brad Cairns, Geeta Narlikar\*, Jessica Tyler

(■) ASBMB Annual Meeting Program Planning Committee member (\*) session chair (\*\*) session chair and speaker

**Transcription Mechanisms**

Stephen Buratowski, Michael Carey, Ann Hochschild, Robert Kingston\*

**Co-transcriptional Coupling Mechanisms**

Karen M. Arndt, Stephen Buratowski\*, Steven Hanes, Liang Tong

**Repressive Chromatin**

Wendy Bickmore, Robert Kingston, Geeta Narlikar, Jessica Tyler\*

**RNA Function and Protein Synthesis**

*Theme Organizers:*

Rachel Green, Johns Hopkins University School of Medicine (■) and Daniel Herschlag, Stanford University (■)

**SYMPOSIA****How RNA Molecules Behave and Misbehave?**

Hashim Al-Hashimi, Rhiju Das, Daniel Herschlag\*, Rick Russell

**Making and Using RNA in the Nucleus**

Jeff Collier\*, Kathy Collins, Klemens Hertel, Kristen Lynch

**RNA in the Cytoplasm: Translation and Degradation**

Jeff Collier, Rachel Green, Kristen Lynch\*, Tao Pan

**Frontiers in RNA Biology**

Rachel Green\*, Daniel Herschlag, Luciano Marraffini, Sean Ryder

**Glycan Regulation of Signaling Pathways**

*Theme Organizers:*

Pamela Stanley, Albert Einstein College of Medicine (■) and Lance Wells, University of Georgia (■)

**SYMPOSIA****O-Mannose Glycans and Muscular Dystrophy**

Kevin P. Campbell, Pamela Stanley\*, Sabine Strahl, Lance Wells

**Glycosyltransferases that Control Cell Growth and Differentiation**

Richard Cummings, Michael Demetriou, Pamela Stanley, Lance Wells\*

**Roles for Glycans in Notch Signaling**

Susan E. Cole, Robert Haltiwanger, Linda Hsieh-Wilson \*, John B. Lowe

**Regulation of Gene Expression by O-GlcNAc**

Robert Haltiwanger\*, Linda Hsieh-Wilson, Keith Vosseller, Suzanne Walker

**Protein Modification, Trafficking and Degradation**

*Theme Organizers:*

Daniel Finley, Harvard Medical School (■) and Maurine Linder, Cornell University (■)

**SYMPOSIA****Ubiquitin and Ubiquitin-Like Modifications**

Heran Darwin\*, Daniel Finley, Richard Gardner, Brenda Schulman

**The Multivesicular Body and Endocytosis**

Scott Emr, Sandra Schmid, Brenda Schulman\*, Wes Sundquist

**Mechanisms of Bacterial Pathogenesis**

Neal M. Alto\*, Heran Darwin, Feng Shao

**Regulatory Thiol Modifications**

Maurine Linder\*, Nicholas Tonks, Joost van Dongen

**WORKSHOP****Proteomics of Post-translational Modifications**

Steven P. Gygi\*, Neil Kelleher, Brent Martin, Judit Villen

**Lipids and Membranes**

*Theme Organizers:*

Tobias Baumgart, University of Pennsylvania (■) and Marion B. Sewer, UCSD (■)

(■) ASBMB Annual Meeting Program Planning Committee member (\*) session chair (\*\*) session chair and speaker

## SYMPOSIA

### Lipid Signaling in Health and Disease

Rosalind Coleman\*, Seth Field, Marion B. Sewer, Sarah Spiegel

### Lipid Membrane Curvature in Membrane Function

Tobias Baumgart, Volker Haucke, Jennifer Lippincott-Schwartz\*, Harvey McMahon

### Lipid Trafficking and Sorting

Tobias Baumgart\*, Sima Lev, Jennifer Lippincott-Schwartz, Mark von Zastrow

### Lipids In Nutrient Metabolism and Metabolic Dysfunction

Rosalind Coleman, L. Ashley Cowart, Kristina Schoonjans, Marion B. Sewer \*

## Chemical and Systems Biology

*Theme Organizers:*

Shelley D. Copley, University of Colorado, Boulder (■) and Anna K. Mapp, University of Michigan (■)

## SYMPOSIA

### Function and Evolution of Metabolic Networks

Shelley D. Copley, Ralph DeBerardinis\*, Uwe Sauer, Dennis Vitkup

### Controlling Cellular Communication

Deborah Hung, Laura Kiessling, Anna K. Mapp\*, Christian Melander

### Manipulating Metabolic Networks

Shelley D. Copley\*, Ralph DeBerardinis, Kristala L. J. Prather, Joshua Rabinowitz

### Assembly and Control of Dynamic Protein Complexes

Julie Deborah Forman-Kay, Deborah Hung\*, Anna K. Mapp, Peter E. Wright

## Catalytic Mechanisms

*Theme Organizers:*

Enrique M. De La Cruz, Yale University (■) and Catherine Drennan, MIT (■)

## SYMPOSIA

### Bioenergy

Joan Broderick, Gary W. Brudvig, Catherine Drennan, JoAnne Stubbe\*

### Catalytic and Substrate Promiscuity

Shelley D. Copley\*, Florian Hollfelder, Brian G. Miller, Joseph P. Noel

### Cool Catalysis and Radically New Reaction Mechanisms

Vahe Bandarian, Joan Broderick\*, Danica Fujimori, JoAnne Stubbe

## Molecular Motor Proteins – Force and Work as Products

Enrique M. De La Cruz\*, Susan P. Gilbert, E. Michael Ostap

## Mechanisms of Signal Transduction

*Theme Organizers:*

Kun-Liang Guan, UCSD (■) and Carol Lange, University of Minnesota Masonic Cancer Center (■)

## SYMPOSIA

### Mechanisms of Cell Growth and Autophagy Regulation

Kun-Liang Guan, J. Silvio Gutkind\*, Naboru Mizushima, Qing Zhong

### Protein Phosphorylation Networks

Natalie Ahn, Roger J. Davis, Jack E. Dixon, Carol Lange\*

### G-proteins in Cellular Regulation

Joan H. Brown, Jerold Chun, Kun-Liang Guan\*, J. Silvio Gutkind

### Mechanisms of Signaling Specificity in Cell Fate: Growth, Proliferation or Death?

John Blenis, Melanie Cobb\*, Carol Lange, Deborah Ann Lannigan

## Triple Negative Breast Cancer

*sponsored by the ASBMB Minority Affairs Committee*

*Theme Organizers:*

KiTani Parker-Johnson, Xavier University of Louisiana (■) and Gloria Thomas, Xavier University of Louisiana (■)

## SYMPOSIA

### Back to the Basics: The Biology of Breast Cancer

Stefan Ambs, KiTani Parker-Johnson, Gloria Thomas\*, Patricia Thompson

### Breast Cancers that Elude Successful Treatments: Triple Negative Breast Cancer

Chindo Hicks\*, Brian Lehmann, Matthew Meyerson, Eddie Reed

### Genomics: Successes and Challenges in Identifying Novel Targets in Minority Populations

Chindo Hicks, Fatiima Jackson, Rick Kittles, Eddie Reed\*

## ASBMB Minority Affairs Committee sponsored issues-based symposium

### Jobs in Industry

Nestor Concha\*, Garry D. Dotson, Sharon Haynie, Lana Saleh

## Computational Tools for Assigning Enzymatic Functions Workshop

*sponsored by the Enzyme Function Initiative, NIGMS*

Patricia C. Babbitt \*, John A. Gerlt\*, Matthew P. Jacobson, Andrej Sali, Brian Shoichet

(■) ASBMB Annual Meeting Program Planning Committee member (\*) session chair (\*) session chair and speaker

## Transitions

sponsored by the ASBMB Education and Professional Development Committee

Theme Organizers:

Peter J. Kennelly, Virginia Polytechnic Institute & State Univ (■) and Dorit Zuk, NIH (■)

## SYMPOSIA

### Transitioning Beyond the Bench

Jeff Cruzan, Joan Ferrini-Mundy\*, Robert Plotkin, Dorit Zuk

### Navigating Mid-Career Transitions

Olivera Finn, Deb Koen, Andrew D. Robertson, Dorit Zuk\*

### Transitioning from Student to Professional

Olivera Finn\*, Peter Kennelly, Leslie Pond, Rodney Ulane

### Training for a World in Transition

Susan Elrod, Joan Ferrini-Mundy, Peter Kennelly\*, Leslie Kuhn

### Promoting Concept Driven Teaching Strategies in BMB through Concept Assessments

Ellis Bell†, Kim Linenberger, Jennifer Momsen, Cheryl Sensibaugh, Karen Sirum

## WORKSHOP

### Beyond College: Coping with Some Common Challenges

A workshop for undergraduates

Nancy Wendlandt, Dorit Zuk†

## ASBMB Science Policy Symposium

sponsored by the ASBMB Public Affairs Advisory Committee

Session details visit [www.asbmb.org/meeting2013](http://www.asbmb.org/meeting2013)

## ASBMB Public Outreach and Science Communication

sponsored by the ASBMB Public Outreach Committee

Organizers:

Hannah Alexander, University of Missouri and Tom Baldwin, UC, Riverside

This interactive program teaches attendees techniques for effectively communicating their science to the lay public, including a behind-the-scenes look at how to host your own science café, followed by an actual café and networking event.

## WORKSHOP/EVENTS

### From the Lab to the Kitchen Table – Communicating Science to a Lay Audience

Hannah Alexander, P.A. d'Arbeloff, Tom Baldwin, Jon Dattelbaum, Ann M. Merchant, Daniella M. Scalice, Morgan Thompson

### Science Cafés: The New Social Network

Presented by the team at [Sciencecafes.org](http://Sciencecafes.org)

### “What is a Germ?” Challenge

Can you explain what a germ is to a 5th grader? Step up and enter our, “What is a Germ?” Challenge. Visit [www.asbmb.org](http://www.asbmb.org).

### Science Outreach Posters

The ASBMB Public Outreach Committee is accepting volunteered abstracts for poster presentation detailing successful outreach programs that will inform attendees on how to get involved for themselves! Submit to ASBMB topic categories #2411-2415.

## SPECIAL EVENTS

- ASBMB Graduate and Postdoctoral Travel Award Plenary Lecture and Poster Session \*\*
- ASBMB Graduate and Postdoctoral Professional Development Program \*\*
- ASBMB Opening Lecture and Reception
- ASBMB Welcome and Networking Reception *sponsored by the ASBMB Minority Affairs Committee*
- ASBMB Women Scientists Panel and Networking Reception
- Computational Tools for Assigning Enzymatic Functions Workshop
- Professional Development Workshop for Students, Postdocs and Junior Faculty \*\*
- Proteomics of Post-translational Modifications Workshop
- Science Cafés, The New Social Network
- Science Outreach Posters
- Thematic Fermentation Happy Hour
- Undergraduate Orientation, A Student's Guide to the ASBMB Annual Meeting
- Undergraduate Breakfast with ASBMB Award Scientists \*\*
- Undergraduate Poster Competition, ASBMB 17th Annual Student Research Poster Competition \*\*
- Undergraduate Workshop, Beyond College: Coping with Some Common Challenges
- “What is a Germ?” Challenge
- YES Mixer (Young Experimental Scientists)

(\*\*) Advance registration required



## ASBMB Travel Awards Guidelines

ASBMB travel award applicants must successfully submit an abstract as first author to an ASBMB topic category (#2000-2408) by the November 8 abstract deadline.

The ASBMB travel award system validates applicant's society membership status at login. To be considered a member, you must be a current ASBMB member at the time of application submission and have paid membership dues for the billing cycle which includes the 2013 Annual Meeting (through Dec, 2013). New ASBMB membership applications require a review and

approval process before membership is activated. Submit a new membership application before November 1, 2012 for complete processing prior to the November 28th ASBMB travel award application deadline. Not all travel awards categories require ASBMB membership.

Visit [www.asbmb.org/meeting2013](http://www.asbmb.org/meeting2013) for a complete list of ASBMB travel award application criteria and award requirements.

## 17th ANNUAL ASBMB UNDERGRADUATE STUDENT RESEARCH POSTER COMPETITION

Saturday, April 20, 2013

Cash prizes awarded for best poster presentations.

### HOW DO I SIGN UP?

- 1) Successfully submit an abstract as first author to a qualifying ASBMB topic category (**#2000 – 2397**), by the November 8th deadline. A complete list of ASBMB topic categories is available at [www.asbmb.org/meeting2013](http://www.asbmb.org/meeting2013).
- 2) During abstract submission, undergraduate student must be the first author AND select "Undergraduate" as the first author status/designation.  
  
We strongly recommend the student-first author create the abstract submission login using her/his own email address. The advisor's email address must be provided in the sponsor information field. This allows ASBMB to communicate directly with students and their advisors.
- 3) Successful submission requires payment of the \$65 abstract processing fee.
- 4) A unique submission is required from each competitor. There are **NO** "Co-First Authors."

Eligible first authors will receive a "Sign Up," email invite to join the competition. The invite will be sent to the address provided when logging in to submit your abstract. ASBMB can only identify undergraduate abstracts when the first author status, "UNDERGRADUATE," has been selected. All other status selections (including, None of the Above) are not eligible for the competition.

Plan an early arrival on Saturday to complete your EB 2013 meeting registration. A badge is required for access to the Boston Convention and Exhibition Center (BCEC).

For event information visit [www.asbmb.org/meeting2013](http://www.asbmb.org/meeting2013).

### CALL FOR VOLUNTEER JUDGES

Have fun and meet lots of great people while volunteering a few hours of service to judge posters! ASBMB needs 125 PIs and PUI faculty members to serve as volunteer judges during the Undergraduate Poster Competition. (Sorry, we cannot accept graduate students or postdocs to serve as judges at this time.) You will not be asked to judge posters from your own institution.

For more information and to sign up, visit [www.asbmb.org/meeting2013](http://www.asbmb.org/meeting2013).





## 2013 Annual Meeting of the American Society for Investigative Pathology

<http://www.asip.org/meetings/2013/program.cfm>

### LECTURES

#### ASIP COTRAN EARLY CAREER INVESTIGATOR AWARD LECTURE: ENDOPLASMIC RETICULUM STRESS IN DISEASE PATHOGENESIS

Award Recipient: JONATHAN H. LIN

#### ASIP EXCELLENCE IN SCIENCE AWARD LECTURE: DYNAMIC PROPERTIES OF TIGHT JUNCTION STRUCTURE AND FUNCTION

Award Recipient: CHRISTOPHER R. WEBER

#### ASIP OUTSTANDING INVESTIGATOR AWARD LECTURE: TARGETING THE EPIGENOME FOR IMPROVED TREATMENT OF TRIPLE-NEGATIVE BREAST CANCER

Award Recipient: WILLIAM B. COLEMAN

#### ASIP ROUS-WHIPPLE AWARD LECTURE: HOW ENDOTHELIAL CELLS REGULATE TRANSMIGRATION OF LEUKOCYTES IN THE INFLAMMATORY RESPONSE

Award Recipient: WILLIAM A. MULLER

#### ASMB LECTURE: TBD

Speaker: TBD

Sponsored by ASIP and the American Society for  
Matrix Biology

#### JHC PLENARY LECTURE: TBD

Chair: John R. Couchman

Sponsored by The Histochemical Society

### SYMPOSIA

#### ACVP Symposium: Inside-Out; Extracellular Roles for Heat Shock Proteins

Chairs: Michael Oglesbee and Tim LaBranche

Sponsored by ASIP and the American College of Veterinary  
Pathologists

#### Angiogenesis in Physiology and Pathology

Chair: Patricia A. D'Amore

Co-Chair: Diane Bielenberg

#### A Thousand Ways to Die: Cell Death Stories

Chairs: Andrei I. Ivanov and Kim McCall

Sponsored by ASIP and the Italian Society of Pathology and  
Translational Medicine

#### Biomechanical Forces and the Pathophysiology of the Vascular Wall

Chairs: Guillermo Garcia-Cardena and Bill Luscinskas

#### Emerging Infections

Chairs: Sherif Zaki and Dan Milner

#### Extracellular Vesicles, miRNA and Vascular Cell Communication

Chairs: Xandra Breakefield and Bill Luscinskas

#### HCS Symposium: Proteoglycans – Key Regulators of the Immune Response to Cancer and Infectious Agents

Chairs: Charles W. Frevert and Nancy Sawtell

Sponsored by The Histochemical Society

#### Histological Image Analysis

Chairs: John Tomaszewski and Richard Levenson

#### Innate Immunity in Lung Pathology

Chairs: Hongwei Gao and Nick Lukacs

#### Liver Pathobiology Symposium: Flirtin' with Disaster: Liver Injury, Inflammation and the Fast Lane to HCC

Chairs: Arlin Rogers and Paul Monga

Sponsored by the ASIP Liver Pathobiology Scientific  
Interest Group

#### Molecular and Cellular Basis of Disease: Stem Cells, Neoplasia, Development, Wound Healing (Part 1)

Chairs: Clayton Wiley and Peter Shepherd

#### Molecular and Cellular Basis of Disease: Stem Cells, Wound Healing, Regeneration and Cancer (Part 2)

Chairs: Alberto Gulino and Paul Monga

#### Molecular and Cellular Basis of Disease: Stowell Symposium: Cell, Scaffold and Tissue Engineering: Successes Achieved and Hurdles Yet to Overcome

Chairs: Byron E. Petersen and Alejandro Soto-Gutierrez

Supported by an unrestricted educational grant from the  
Robert E. Stowell Endowment Fund

#### Molecular and Cellular Basis of Disease: Molecular Biology of Inflammation and Non TLR Pattern Recognition Receptors

Chairs: Andrew Neish, Asma Nusrat and Themis Kyriakides

## **Presidential Symposium: HPV: Remaining Challenges in Translational Success Story**

*Chair: Elizabeth Unger*

## **SCVP Symposium: Inflammatory Myocardial Disease/Myocarditis**

*Chairs: Andrew H. Lichtman and L. Maximilian Buja*

*Sponsored by ASIP and the Society for Cardiovascular Pathology*

## **WORKSHOPS/SPECIAL SESSIONS**

### **13th Annual Career Development Program and Lunch: Dancing with Journals: A Guide to Submission and Review**

*Chairs: Diane Bielenberg and George Perry*

*Sponsored by the ASIP Committee for Career Development, Women & Minorities, American Association of Anatomists and the FASEB Maximizing Access to Research Careers (MARC) Program*

### **13th Annual Workshop on Graduation Education in Pathology – Careers in Biotechnology**

*Chairs: Daniel Remick and Jonathan Reichner*

*Sponsored by the ASIP Education Committee*

### **Blood Vessel Club™: microRNAs in the Regulation of Blood Vessel Function**

*Chairs: William Sessa and Themis Kyriakides*

### **Breast Cancer Scientific Interest Group Networking Event and Poster Session**

*Chairs: Ashley G. Rivenbark and William B. Coleman*

*Sponsored by the ASIP Breast Cancer Scientific Interest Group*

### **Breast Cancer Workshop: HER2+ Breast Cancer: Biology, Diagnostics and Therapeutics**

*Chairs: Ashley G. Rivenbark and William B. Coleman*

*Sponsored by the ASIP Breast Cancer Scientific Interest Group*

### **Career Development Workshop and Breakfast: Non-Traditional Career Opportunities in Pathology**

*Chairs: Christi Kolarcik and Gary Pasternack*

### **Workshop: Cell Injury: Cell Death and Survival**

*Chairs: Zhen Yan and Charleen Chu*

*Sponsored by the ASIP Cell Injury Scientific Interest Group*

### **Club Hepatomania (Liver Pathobiology Scientific Interest Group Networking Event and Poster Session)**

*Chairs: Kari Nejak-Bowen and S. Paul Monga*

*Sponsored by the ASIP Liver Pathobiology Scientific Interest Group*

### **Course: Pathobiology for Basic Scientists: Neoplasia: Fundamental Themes in Neoplasia—When Good Cells Go Bad**

*Chairs: William B. Coleman and Gregory J. Tsongalis*

*Sponsored by the ASIP Education Committee*

## **Der Schaden Klub (Cell Injury Scientific Interest Group Networking Event and Poster Session)**

*Chairs: Cecelia C. Yates and Monte S. Willis*

*Sponsored by the ASIP Cell Injury Scientific Interest Group*

## **Highlights: Graduate Student Research in Pathology**

*Chairs: Titus A. Reaves*

*Sponsored by the ASIP Committee for Career Development, Women & Minorities*

## **High School Teachers Session: Scientific Sleuthing of Human Disease for High School Teachers**

*Chair: Kari Nejak-Bowen*

*Sponsored by the ASIP Education Committee*

## **Lunch and Learn: Responsible Conduct in Research Workshop**

*Chairs: Richard N. Mitchell and S. Paul Monga*

*Sponsored by the ASIP Education Committee*

## **Neuropathology Scientific Interest Group Networking Event and Poster Session**

*Chairs: Christi Kolarcik and Clayton Wiley*

*Sponsored by the ASIP Neuropathology Scientific Interest Group*

## **Veterinary Pathology Scientific Interest Group Networking Event and Poster Session**

*Chairs: Mark McArthur, Elizabeth Galbreath and Elizabeth Whitley*

*Sponsored by the ASIP Veterinary Pathology Scientific Interest Group*

## **Vascular and Mucosal Pathobiology (VAMP) Scientific Interest Group Networking Event and Poster Session**

*Chairs: Michael Schnoor, David Sullivan and*

*Francis W. Luscinskas*

*Sponsored by the ASIP Vascular and Mucosal Pathobiology (VAMP) Scientific Interest Group*



## ASIP Events

The American Society for Investigative Pathology will be celebrating its 100th Anniversary during the Experimental Biology 2013 meeting. Attendees interested in the following ASIP organized activities may sign up while registering for the EB2013 meeting. Details of these and other ASIP events will be posted at <http://www.asip.org/meetings/2013/>

### 13th Annual Workshop on Graduate Education in Pathology – Careers in Biotechnology

**Saturday, April 20, 2013**

### ASIP Trainee Welcome Reception

**Saturday, April 20, 2013**

### Career Development Workshop and Breakfast: Non-Traditional Career Opportunities in Pathology

**Sunday, April 21, 2013**

### 13th Annual Career Development Program and Lunch: Dancing with Journals: A Guide to Submission and Review

**Sunday, April 21, 2013**

### ASIP Centennial Celebration Reception

**Monday, April 22, 2013**

### Lunch & Learn: Responsible Conduct in Research

**Tuesday, April 23, 2013**

## ASIP Scientific Interest Group Networking Events and Poster Sessions

- Breast Cancer Scientific Interest Group Networking Event and Poster Session
- Club Hepatomania (Liver Pathobiology Scientific Interest Group Networking Events and Poster Session)
- Der Schadenklub – Cell Injury Scientific Interest Group Networking Reception/Poster Session
- Neuropathology Scientific Interest Group Networking Event and Poster Session
- Veterinary Pathology Scientific Interest Group Networking Event and Poster Session
- Vascular and Mucosal Pathobiology (VAMP) Scientific Interest Group Networking Event and Poster Session

**Please sign up for these events when registering for the meeting by checking the boxes on the registration form.**



American Society for Nutrition  
*Excellence in Nutrition Research and Practice*

## 2013 Scientific Sessions and Annual Meeting of the American Society for Nutrition

<http://www.nutrition.org/meetings/annual>

### Symposia

#### Presidential Symposium: Regulation of Growth and Metabolism through Amino Acid Sensing

Chair: Teresa A. Davis, PhD

#### Caloric Restriction in Humans: Is it Feasible, Effective and Safe?

Chairs: Susan B. Roberts, PhD and John Speakman, PhD

#### Metabolomics, Nutrition and Metabolic Disorders

Chair: Naima Moustaid-Moussa, PhD

#### Nutritional Epigenomics: A Portal to Disease Prevention

Chairs: Sang Woon Choi, MD, PhD and Kevin Schalinske, PhD

#### Managing the Microbiome in Human Gastrointestinal Disease

Chairs: Penny Kris-Etherton, PhD, RD, Gordon Jensen, MD, PhD and Thomas Ziegler, MD

#### Searching for the Evidence that Linoleic Acid Fuels Inflammation

Chairs: Martha Belury, PhD and John W. Finley, PhD

#### Obesity-Related Inflammation and Vitamin D and Calcium Metabolism

Chairs: Christopher J. Cifelli, PhD and Cristina Palacios, PhD

#### Nutritional Immunology: Dietary Interventions in Health and Disease

Chairs: Patricia A. Sheridan, PhD and Saame Raza Shaikh, PhD

#### Brain Imaging and Human Nutrition: Which Measures to Use in Intervention Studies?

Chairs: Stéphane Sizonenko, MD, PhD and John Sijben, PhD

#### Health, Nutrition and Cost Outcomes of Human Milk Feeding for Very Low Birthweight Infants

Chairs: Lars Bode, PhD and Paula Meier, PhD

#### Global Perspectives on Preterm Birth and Fetal Growth Restriction: Maternal and Nutritional Influences

Chairs: Ellen Piwoz, ScD and Robert Black, MD, MPH

#### Are Dietary Bioactives Ready for Review for Recommended Intakes?

Chairs: John Erdman, PhD and Doug Balentine, PhD

#### Moderate and Mild Iodine Deficiency: A Global Health Problem

Chairs: Christine A. Swanson, PhD, MPH and Elizabeth N. Pearce, MD, MSc

#### Building Evidence for Sustainability of Food and Nutrition Intervention Programs in Developing Countries

Chairs: Beatrice Rogers, PhD and Sunny Kim, PhD

#### Exploring Culture in the World of International Nutrition and Nutrition Sciences

Chair: Debbie Humphries, PhD, MPH

#### The Promises and Pitfalls of Research Using Dietary Patterns

Chairs: Katarzyna Kordas, PhD and Lisa M. Troy, PhD

#### Public-Private Partnerships: The Evolving Role of Industry Funding in Nutrition Research

Chairs: Matthew A Pikosky, PhD, RD, FACN and Eric Hentges, PhD

### Education Track Sessions

#### Clinical Nutrition Update: A Nutrition Perspective from the Crossroads of Hospital Outcomes and Medicare Policy

Chairs: Mary Ann Johnson, PhD, Connie W. Bales, PhD, RD and Edward Saltzman, MD

#### Nutritional Surveys and Epidemiological Studies: Exploring and Enhancing Methods, Interpretation, and Communication

Chairs: John A. Milner, PhD and Marge Leahy, PhD

#### The World Has Changed and So Must Your Communication Style

Chairs: Cathy Kapica, PhD and Jeannie Gazzaniga-Moloo, PhD, RD

#### Social Media and Mobile Technology for Nutrition Education and Research

Chair: Sabrina Sales Martinez

The ASN Scientific Program includes the following awards lectures. Additional information to be announced:

E.V. McCollum Lecture

G.A. Leveille Award and Lectureship

W.O. Atwater Memorial Lecture

Kellogg Prize in International Nutrition Research Lecture

## Minisymposia and Poster Sessions

Minisymposia and/or poster sessions will be organized on the following topics:

### Aging & Chronic Disease

Community Nutrition Programs and Policies for Older Adults  
Nutrition Interventions for Risk Factor Modification in Chronic Disease  
Nutritional Assessment and Status in Older Populations  
Nutrition, Sarcopenia and Physical Performance in Older Adults  
Nutrition and Cognition Across the Lifespan  
(co-sponsored with Nutritional Epidemiology RIS)  
Osteoporosis and Bone Metabolism in Aging

### Community and Public Health Nutrition

Community and Public Health Nutrition Interventions  
Diet, Food Security and Health Promotion in Diverse Communities  
Health Disparities and Social Equity  
Food Environment  
Food Systems and Food Policy  
Community and Public Health Program Design:  
Theory to Evaluation

### CARIG

Carotenoids and Health  
Carotenoids and Retinoids: Molecular Mechanisms of Action  
Bioavailability and Metabolism of Carotenoids and Vitamin A  
Carotenoids: Eye and Brain Health  
Biofortification of Staple Crops with Micronutrients

### Diet and Cancer

Diet and Cancer – Molecular Targets  
Diet and Cancer – Animal Studies  
Diet and Cancer – Translational, Clinical and Survivorship

### Dietary Bioactive Components

Bioavailability, Metabolism and Biomarkers of Dietary Bioactive Components  
Mechanisms of Action and Molecular Targets of Dietary Bioactive Components  
Effects of Dietary Bioactive Components on Experimental Models of Chronic Disease Risk  
Antioxidant and Anti-inflammatory Effects of Dietary Bioactive Components  
Cardiovascular Effects of Dietary Bioactive Components  
Dietary Bioactive Components of Medicinal, Functional and Whole Foods (including Probiotics and Fermented Foods)

### Energy and Macronutrient Metabolism

Energy Balance, Macronutrients and Weight Management  
Obesity and the Metabolic Syndrome  
Protein and Amino Acid Metabolism  
Lipid and Fatty Acid Metabolism and Transport  
Dietary Factors Affecting Lipid Metabolism  
Polyunsaturated Fatty Acids and Health  
Metabolic Phenotyping, Metabolomics and Biomarkers  
Carbohydrate Metabolism  
Regulation of Food Intake (co-sponsored with Obesity RIS)  
Protein Intake Throughout the Lifecycle  
Protein Sources and Dietary Implications

### Experimental Animal Nutrition

Companion Animal Nutrition and Physiology  
Animal Research Models for Macronutrient Metabolism  
Animal Research Models for Nutrient Digestion and Absorption  
Animal Research Models for Gut Development and Health  
Animal Research Models Investigating Nutrition and Inflammation  
Animal Research Models in Nutrition and Musculoskeletal Development

### Lactation

Biology of Milk Production and Secretion  
Bioactive Compounds and other Milk Constituents  
Determinants of Lactogenesis, Lactation Duration, and Other Indicators of Lactation Success  
Effects of Lactation/Breastfeeding on the Recipient Infant and/or Lactating Mother

### Nutrition Education

Nutrition Education  
Aligning Nutrition Education Programs and Research to Promote Change  
Preventing Childhood Obesity  
Nutrition Education in Diverse Populations  
Development of Evidence-Based Nutrition Education  
Behavioral Science and Eating Behavior Change  
Nutrition Education during Prenatal and Perinatal Stages of Life

Mini-symposia may be organized by ASN Scientific Councils and Research Interest Sections (RIS), which also program many business meetings, poster competitions, and networking events at the annual meeting. Please visit [www.nutrition.org](http://www.nutrition.org) for further details. Not all topics presented in this call will be scheduled into mini-symposia.



## Nutrient-Gene Interactions

Nutrient-Gene Interactions  
Epigenetics and Autoimmune Disease  
Nutrient Effects on Stem Cell Differentiation and Gene Expression  
Regulation of Intestinal Nutrient Metabolism and Gene Expression  
Nutrient Control of Proteomics and Metabolomics  
Obesity, Inflammation, and Nutrigenomics  
Nutrient-Gene Interaction in Neurodegenerative Diseases: Role of Vitamin D  
Nutrient Regulation of Epigenetics in Maternal Programming

## Nutritional Epidemiology

Dietary Assessment Tools and Applications  
Epidemiological Research Addressing Diet and Health Outcomes  
Research with Dietary Supplements and Bioactive Components  
Advancing Nutritional Epidemiology with Public Use and Commercial Data Sets  
Assessment of Child and Adolescent Nutritional Status, Growth, and Obesity  
Epidemiological and Statistical Approaches for the Study of the Effects of Food on the Microbiome  
Nutrition without Borders: Epidemiologic Methods in Examining Health Disparities and Nutrition Outcomes in Diverse Populations

## Nutritional Immunology

Nutritional Immunology  
Nutrition, Infection and Immunity

## Nutrition Translation

The Use of Consumer Research Insights to Guide Scientific Research  
Nutrition Science Translation for Policy, Practice and Consumers  
Understanding and Communicating Benefits/Risks of Natural-State Foods (e.g., minimally processed, natural, organic)  
Nutrition and Sustainability  
Food Related Behaviors and Implications for Food Policy  
Nutrition Science Applied Through Food Science for Health  
Novel Food Ingredients and their Impact on Health  
Translation of Nutrition Science to Public Health

## Obesity

Weight Management  
Body Composition  
Satiety (Co-sponsored with EMM RIS)  
Carbohydrate Intake and Weight Management  
Obesity and Chronic Disease  
Obesity and Physical Activity  
Energy Expenditure  
Socioeconomics  
Development of Obesity: Dynamics of Physiological and Pathophysiological Parameters

## Vitamins and Minerals

Iron, Copper and Chronic Disease  
Vitamin D and Obesity – From Cellular to Clinical Trials  
Water and Fat Soluble Vitamins and Chronic Disease  
Micronutrient Bioavailability and Antioxidant Function  
Zinc

Selenium  
B Vitamins and One-Carbon Metabolism  
Micronutrient Interventions

## International Nutrition

International Nutrition

## Medical Nutrition

Personalized Nutrition  
Nutrition and the Microbiome  
Interventions for the Treatment and Prevention of Nutrition-Related Diseases  
Nutrition and Inflammation  
Prenatal Nutrient Programming

## Policy

Community Nutrition Programs and Policies for Older Adults  
Food Systems and Food Policy  
Aligning Nutrition Education Programs and Research to Promote Change  
Nutrition Science Translation for Policy, Practice and Consumers  
Food Related Behaviors and Implications for Food Policy

## Education and Teaching

Nutrition Education in Medical and other Professional Schools  
Nutrition Education for Practicing Clinicians  
Innovations in Undergraduate, Graduate and Medical Nutrition Education

## Other

Dietary Supplements and Human Performance  
Sports Nutrition

## Special Events

Membership Reception and University Mixer  
Awards Ceremony  
Graduate Student Breakfast  
Department Heads Breakfast  
Meet the Editors Session  
Fellows, 50-Year Members, and Past Presidents Luncheon  
Council and RIS Business Meetings and Special Functions

## Thank You

ASN thanks its partners that support ASN's scientific symposia, awards, special events and more.

To learn how you can get involved in ASN's Scientific Sessions and Annual Meeting at EB 2013, please contact [meetings@nutrition.org](mailto:meetings@nutrition.org).





**2013 ASPET Annual Meeting at Experimental Biology | April 20 – 24, 2013 | Boston, MA**

[www.aspet.org](http://www.aspet.org)

## 2013 PRELIMINARY SYMPOSIA

**A “Reductionist” Approach to Cardiovascular Disease: Inorganic Nitrate to Nitrite to NO**

*Chairs: Amrita Ahluwalia and David J. Lefer*

**Advancing Discoveries from the Academic Laboratory to the Market**

*Chair: Robert Leadley*

**Acetaminophen-induced Hepatotoxicity: Lessons Learned During the Last Four Decades Investigating Mechanisms of Toxicity**

*Chairs: José E. Manautou and Hartmut Jaeschke*

**Apolipoprotein E: A protein at the Intersection of Vascular and Neurodegenerative Disease Biology**

*Chairs: Cheryl Wellington and Michael Wood*

**Bridging the Efficacy Divide: Novel Molecular Insights Driving Biased Ligand Drug Discovery**

*Chairs: Arthur Christopoulos and Robert J. Lefkowitz*

**Cognitive Enhancers for the Treatment of Neuropsychiatric Disorders**

*Chairs: Kathleen M. Kantak and Roger D. Speelman*

**Correlating Structure-Function and Drug Metabolizing Enzymes**

*Chair: Emily Scott*

**Do it Right! Writing Case-Based Exam Items, Interpreting Item Analysis and Designing Educational Research Projects to Assess Outcomes – A Workshop**

*Chairs: Agata Butler and R. Senthil Kumar*

**Emerging Technologies for Delivering Neurotherapeutics Across the Blood-Brain Barrier**

*Chairs: Nisha Nanaware-Kharade and Eric Peterson*

**Epigenetic Control of Drug Metabolism and Transport**

*Chairs: Aiming Yu and Yoichi Osawa*

**Fatty Acid Activation of G Protein-Coupled Receptors: Basic and Clinical Perspectives**

*Chairs: Graeme Milligan and Celia Briscoe*

**Innate Immunity and Cardiovascular Disease: Unfolding the Therapeutic Potential of Toll-Like Receptors**

*Chairs: R. Clinton Webb and Styliani Gouloupoulou*

**Local Ca<sup>2+</sup> Signals in the Endothelium: Key Regulators of Vascular Function and Dysfunction**

*Chairs: Mark T. Nelson and Robert M. Bryan*

**Negative Symptoms of Schizophrenia: Neuronal Circuit, Translation and Future Directions**

*Chairs: Ruggero Galici and Leslie Jacobsen*

**New Kids on the Block: Organic Cation Transporters and Plasma Membrane Monoamine Transporters in Neurodegenerative, Psychiatric and Addictive Disorders**

*Chair: Lynette C. Daws*

**New Roles for Signaling by G Protein Beta/Gamma Subunits**

*Chair: Alan V. Smrcka*

**Novel Dynamics of cAMP: Towards New Therapeutic Interventions Through Compartmentalized Signaling Networks**

*Chair: Martina Schmidt*

**Novel Functions for Cyclic Nucleotide Phosphodiesterases and their Implications for Pharmacological Intervention**

*Chair: Marco Conti*

**Orthostatic Intolerance: Insights into Pharmacological, Physiologic and Gender Issues**

*Chairs: Julian Stewart and Amy Arnold*

**Peripheral Mechanisms of Opioid Analgesia**

*Chair: Kelly A. Berg*

**Pharmacological Enhancement of Wakefulness**

*Chair: Jeff Witkin*

**Purinergic Transmission in Visceral Function and Sensation**

*Chair: James J. Galligan*

**Role of the Coagulation Cascade in Tissue Injury and Disease**

*Chair: James Luyendyk*

## Meeting Highlights

Division Mixers • Student-Postdoc Mixer  
WIP into Shape Networking Walk  
Opening & Closing Receptions

## Signals Activating Pancreatic Stem Cells and Beta Cell Regeneration

Chair: Thomas M. Wilkie

## Sleep Apnea: A Sleeping Giant in Disease Pathologies

Chairs: Issy Laher and Najib Ayas

## Stem Cells-Pharmacology and Therapeutics

Chairs: Daniel Reed and Jane A. Mitchell

## Systems Biology Answering Pharmacological Questions

Chairs: Rick Neubig and John Lazo

## The 5-HT<sub>2C</sub> Receptor: A New Target for Multiple Therapeutics

Chair: Lora Heisler

## The Pharmacology of Natural Products

Chairs: Craig Hopp and John Glowa

## Therapeutic Approaches for Erectile Dysfunction and Benign Prostatic Hyperplasia: Present & Future

Chair: Selim Cellek

## Transcription Factors as Therapeutic Drug Targets

Chairs: Theresa M. Filtz and Mark Leid

## Translating Pharmacology into Career Choices in the Pharmaceutical and Biotechnology Industry

Chair: Janet Clark

## Voltage-gated Ion Channels as Targets for Analgesic Agents: Recent Progress on the Discovery of Novel Channel Modulators

Chair: Michael F. Jarvis

## DIVISION SESSIONS

### Behavioral Pharmacology Division Symposium: The Opioid-Cannabinoid Connection: A Translational Behavioral Perspective

Chair: Margaret Haney and Ziva Cooper

### Cardiovascular Pharmacology Division Trainee Showcase

### Drug Discovery and Development Division Symposium: TBA

Chair: TBA at [www.aspet.org](http://www.aspet.org)

### Drug Metabolism Division James Gillette Best Paper Award and Platform Session

### Integrative Systems, Translational and Clinical Pharmacology Young Investigator Awards Platform Session

### Molecular Pharmacology Division Postdoctoral Award Finalists

### Neuropharmacology Division Postdoctoral Scientist Award Finalists

### Pharmacology Education Division Symposium: The Future of PhD Education in Biomedicine: U.S. and European Perspectives

Chair: Joey V. Barnett and Nick J. Goulding

## Toxicology Division Symposium: The Mitochondrion as a Toxicological Pharmacological Target

Chair: TBA at [www.aspet.org](http://www.aspet.org)

## LECTURES

### JOHN J. ABEL AWARD LECTURE

Speaker: TBA at [www.aspet.org](http://www.aspet.org)

### JULIUS AXELROD AWARD LECTURE: No Pain, Big Gain: Truncated Muopiod Receptor Slice Variants as Drug Targets

Speaker: Gavril W. Pasternak

### SIR JAMES BLACK LECTURE

Speaker: Robert J. Lefkowitz

### BENEDICT R. LUCCHESI DISTINGUISHED AWARD LECTURE IN CARDIAC PHARMACOLOGY

Speaker: TBA at [www.aspet.org](http://www.aspet.org)

### NORMAN WEINER LECTURE

Speaker: David E. Clapham

### DRUG METABOLISM EARLY CAREER ACHIEVEMENT AWARD LECTURE

Speaker: TBA at [www.aspet.org](http://www.aspet.org)

### CANADIAN SOCIETY FOR PHARMACOLOGY AND THERAPEUTICS AWARDS LECTURES

## SPECIAL SESSIONS

### Julius Axelrod Symposium: Expanding the Repertoire of G-Protein Coupled Receptor Targets

Chair: Gavril W. Pasternak

### 2013 Teaching Institute: TBA

Chair: TBA at [www.aspet.org](http://www.aspet.org)

### Graduate Student-Postdoc Colloquium: Careers Roundtable

Chair: TBA at [www.aspet.org](http://www.aspet.org)

## Student-Postdoc Best Abstract Competition

Sunday April 21, 2013

Cash awards to students and postdocs making the best poster presentations

1. Submit an abstract as first author by November 8, 2012 to EB2013
2. Go online to [www.aspet.org/awards](http://www.aspet.org/awards) and select Graduate Student Best Abstract Award, Postdoctoral Scientist Award, or Drug Discovery and Development Young Investigator Award, as appropriate.
3. Apply online by November 14, 2012 to the Division in which the presented research falls.
4. Finalists will be asked to present their poster at the Graduate Student-Postdoc Best Abstract Competition from 6:30 PM - 8:30 PM on Sunday, April 21.
5. Posters will be judged by judges from the Divisions.

## EB-SPONSORED SESSIONS

Recognizing that techniques and issues related to teaching and the use of computers in research and teaching cross all biomedical disciplines, EB 2013 will combine education posters from all participating societies into two special poster sessions. Although posters will be on display during exhibit hours Sunday through Tuesday, authors are required to be present at their posters during an assigned day and time for demonstration, which will be listed in the Program. Authors must prepare standard-sized posters in addition to their demonstrations.

### Computers in Research & Teaching

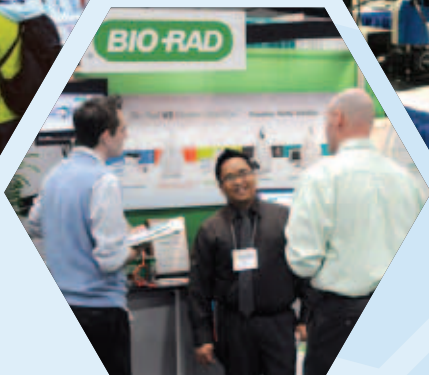
#### Topic Category 8100-EB

Demonstrate collegial (not for sale) software for research and teaching purposes. A special area of the exhibit hall will have poster boards and provisions for both IBM PC compatible and Mac computers with Internet access. Authors are encouraged to bring laptops. For more information, please contact Dr. Jerry Collins at 2113 Timberwood Place, Nashville TN 37215; telephone 615-243-5535 (cell); email: [jerry@bothcollinses.com](mailto:jerry@bothcollinses.com).

### Teaching, Learning and Testing in the Biological and Biomedical Sciences

#### Topic Category 8200-EB

This is for all teaching/education-related posters, regardless of discipline, that do not require a computer. Posters describing any aspect of teaching and learning in the biological and biomedical sciences should be submitted to this category. For presentations that involve a demonstration, authors are encouraged to bring the actual materials that they use for teaching. Tables and electrical outlets will be available at each poster board for demonstrations.



## ABSTRACT INFORMATION & USING THE TOPIC CATEGORIES

### Abstract Deadline:

Thursday, November 8, 2012

Abstract Processing Fee: \$65

Before you submit your abstract, please read the Rules and Guidelines for Abstract Submission at [www.experimentalbiology.org](http://www.experimentalbiology.org)

The topic that you select from the topic category list determines which society receives and programs your abstract. Therefore, it is important that you review the society topic categories on pages 37-55 or at [www.experimentalbiology.org](http://www.experimentalbiology.org) before submitting your abstract. Please follow the guidelines below.

### Help us program your abstract correctly

Each society has its own list of topics. You may choose a topic from any society listing. Please begin by searching for all related topic categories at [www.experimentalbiology.org](http://www.experimentalbiology.org).

### Remember which society is programming your abstract

- Your abstract will be received and programmed by the society that lists your topic choice.
- Each society uses a different programming method – your abstract may go to a program committee or to a session chair.
- Knowing which society is programming your abstract makes follow-up easier.

### Indicate your preference for oral or poster presentation

- While the programming society makes the final decision about whether you will make an oral or poster presentation, it is important to indicate your preference on the submission form.
- For all societies, abstracts not selected for oral presentation will be programmed as posters. *For APS and ASBMB all abstracts selected for oral presentation **must also** be presented as posters.*
- Submitting to a minisymposium or featured topic is not necessarily an automatic request for oral presentation. You may request a poster presentation when submitting to a minisymposium or featured topic.
- AAA hybrid symposia and platform sessions (formerly called minisymposia) are only oral presentations. Abstracts not selected will be programmed as posters.

### For general questions, contact the society responsible for programming your abstract:

#### American Association of Anatomists (AAA)

Phone: 301-634-7910; Fax: 301-634-7965

Email: [exec@anatomy.org](mailto:exec@anatomy.org)

Website: [www.anatomy.org](http://www.anatomy.org)

#### American Society for Biochemistry and Molecular Biology (ASBMB)

Phone: 240-283-6600

Email: [meetings@asbmb.org](mailto:meetings@asbmb.org)

Website: [www.asbmb.org/meeting2013](http://www.asbmb.org/meeting2013)

#### American Society for Nutrition (ASN)

Phone: 301-634-7043; Fax: 301-634-7894

Email: [meetings@nutrition.org](mailto:meetings@nutrition.org)

Website: [www.nutrition.org/meetings/annual](http://www.nutrition.org/meetings/annual)

Twitter: @nutritionorg

#### American Society for Investigative Pathology (ASIP)

Phone: 301-634-7950; Fax: 301-634-7990

Email: [meetings@asip.org](mailto:meetings@asip.org)

Website: [www.asip.org](http://www.asip.org)

#### American Society for Pharmacology and Experimental Therapeutics (ASPET)

Phone: 301-634-7066; Fax: 301-634-7061

Email: [araptakis@aspet.org](mailto:araptakis@aspet.org)

Website: [www.aspet.org](http://www.aspet.org)

#### The American Physiological Society (APS)

Phone: 301-634-7967; Fax: 301-634-7264

Email: [meetings@the-aps.org](mailto:meetings@the-aps.org)

Website: [www.the-aps.org](http://www.the-aps.org)

## ABSTRACT INFORMATION & USING THE TOPIC CATEGORIES

### NOTIFICATION OF PROGRAMMING

The first author and the sponsor will be notified **via email** in mid-February of:

- Title, date, and time of session in which abstract has been programmed
- Format of presentation (oral, poster or both)
- Program number
- Presentation time

This information will not be available prior to that time! It will be emailed prior to the February 22, 2013 early registration deadline. Co-authors will not receive notification.

### Poster Policy

Presenters must mount their posters no later than 8:30 AM on their day of presentation.

The Exhibit Hall opens at 7:00 AM to mount posters.

Presenters are expected to be at their poster boards during the assigned session presentation time, as designated by each society.

Posters must remain on display all day from 8:30 AM – 5:00 PM (except on Wednesday.)

Posters that do not remain on display all day during their assigned day may at the discretion of the programming society, be ineligible for awards.

Recording (photographing, audio taping or videotaping) any presentation/session is PROHIBITED, except by an EB-authorized agent or by First Authors who want to photograph their poster presentation.

### E-Posters

Following the EB 2013 meeting, all poster authors are invited to upload their poster to the EB website.

The e-posters will be accessible to all registered attendees for viewing after the conclusion of the meeting.

Instructions for uploading your poster will be sent with your confirmation in February.

### IMPORTANT PROCEDURAL INFORMATION

- The abstract fee is NOT your registration fee and NOT your society membership fee.
- In addition to submitting your abstract, you must register for the meeting.
- After submitting your abstract, you must submit a separate application if you wish to apply for any of the Society awards and follow the process required by the society.
- The complete Call for Abstracts and general information is available at [www.experimentalbiology.org](http://www.experimentalbiology.org)







## TOPIC CATEGORIES – ANATOMY

Review the list of topics below and decide where your work fits in. You may select either a broad category or a more specific subcategory. AAA platform and hybrid talks will be selected from the submitted abstracts. **You may also submit more than one abstract.** Go to [www.experimentalbiology.org](http://www.experimentalbiology.org) to submit your abstract, register for the meeting, and book your hotel.

## Poster

## 7000-AAA

## Topics

## Anatomy

- 7001-AAA Anatomy: Animal Models
- 7002-AAA Anatomy: Bones Cartilage & Teeth
- 7003-AAA Anatomy: Cardiovascular
- 7004-AAA Anatomy: Form & Variation
- 7005-AAA Anatomy: Functional Anatomy & Biomechanics
- 7006-AAA Anatomy: Gastrointestinal
- 7007-AAA Anatomy: Muscle
- 7008-AAA Anatomy: Neural
- 7009-AAA Anatomy: Tendons & Ligaments
- 7010-AAA Anatomy: Urogenital

## 7011-AAA

## Anatomy Education

- 7012-AAA Anatomy Education: Assessment, Curriculum & Mentoring
- 7013-AAA Anatomy Education: Clinical Based Approaches
- 7014-AAA Anatomy Education: Computer-Assisted Learning
- 7015-AAA Anatomy Education: Teaching Methods & Innovations
- 7016-AAA Anatomy Education: Undergraduate

## 7017-AAA

## Biological Anthropology

## 7018-AAA

## Bones, Cartilage &amp; Teeth

- 7019-AAA Bones, Cartilage & Teeth: Anatomy & Morphology
- 7020-AAA Bones, Cartilage & Teeth: Craniofacial
- 7021-AAA Bones, Cartilage & Teeth: Development
- 7022-AAA Bones, Cartilage & Teeth: Evolution & Anthropology
- 7023-AAA Bones, Cartilage & Teeth: Exercise, Biomechanics; Bioengineering
- 7024-AAA Bones, Cartilage & Teeth: Molecular Mechanisms

## 7025-AAA

## Cardiovascular Biology

- 7026-AAA Cardiovascular Biology: Aging
- 7027-AAA Cardiovascular Biology: Anatomy & Morphology
- 7028-AAA Cardiovascular Biology: Angiogenesis; Lymphangiogenesis; Vasculogenesis

## 7029-AAA

Cardiovascular Biology: Biomechanics; Bioengineering

## 7030-AAA

Cardiovascular Biology: Dysfunction; Disease; Genetic Disorders

## 7031-AAA

Cardiovascular Biology: Heart Development & Growth

## 7032-AAA

Cardiovascular Biology: Imaging

## 7033-AAA

Cardiovascular Biology: Sex & Gender Related Differences

## 7034-AAA

Cardiovascular Biology: Stem Cells, Cell & Molecular Biology

## 7035-AAA

## Cell Biology

## 7036-AAA

Cell Biology: Membranes & Cytoskeleton

## 7037-AAA

Cell Biology: Signaling & Molecular Biology

## 7038-AAA

Cell Biology: Organelles

## 7039-AAA

## Development &amp; Growth

## 7040-AAA

Development & Growth: Birth Defects

## 7041-AAA

Development & Growth: Craniofacial

## 7042-AAA

Development & Growth: Limbs

## 7043-AAA

Development & Growth: Neural Crest & Placodes

## 7044-AAA

Development & Growth: Patterning

## 7045-AAA

Development & Growth: Reproduction

## 7046-AAA

Development & Growth: Gene & Protein Expression

## 7047-AAA

## Extracellular Matrix

## 7048-AAA

## Imaging

## 7049-AAA

Imaging: Anatomy

## 7050-AAA

Imaging: Functional Imaging

## 7051-AAA

Imaging: Technology & Methods

## 7052-AAA

Imaging: Computational Biology

## 7053-AAA

## Muscle

## 7054-AAA

Muscle: Biomechanics & Exercise

## 7055-AAA

Muscle: Development

## 7056-AAA

Muscle: Stem Cells & Regeneration

## 7057-AAA

## Neurobiology

## 7058-AAA

Neurobiology: Behavior; Neuropsychiatric Disorders; Disease; Aging

## 7059-AAA

Neurobiology: Brain

## 7060-AAA

Neurobiology: Development

## 7061-AAA

Neurobiology: Neural Cell Biology

- 7062-AAA Neurobiology: Neuronal & Spinal Cord  
Degeneration, Repair & Regeneration
- 7063-AAA Neurobiology: Neuroprotection & Neuroimmunology

**7064-AAA Regenerative Medicine**

- 7065-AAA Regenerative Medicine: Organ & Tissue  
Regeneration
- 7066-AAA Regenerative Medicine: Stem Cells
- 7067-AAA Regenerative Medicine: Tissue Engineering

**7068-AAA Stem Cells**

- 7069-AAA Stem Cells: Aging & Disease
- 7070-AAA Stem Cells: Muscle
- 7071-AAA Stem Cells: Wound Healing & Tissue Repair

**7072-AAA Bioengineering**

**7073-AAA Wound Healing**

**Hybrid & Platform Topics**

A hybrid symposium includes one invited talk and four 15-minute oral presentations selected from abstracts; a platform session includes six 15-minute oral presentations selected from abstracts. Abstracts not programmed in a hybrid symposium or platform session will be scheduled in an appropriate poster session.

- 7074-AAA Form, Function, & Evolution
- 7075-AAA Development and Disease – It's All about Anatomy
- 7076-AAA Neurobiology of Aging
- 7077-AAA Cell Biological Basis of Complex Morphogenesis
- 7078-AAA Responses to Novel Environmental Stimuli: Induction  
and Epigenetic Inheritance
- 7079-AAA Anatomy Education- Educational Community  
Outreach
- 7080-AAA Teaching Innovations in Anatomy

**EB Teaching Poster Session**

If you would like to submit an abstract to one of EB's Teaching poster sessions (#8100-8200 below), then you will have the opportunity to present your poster twice – once with the EB Teaching posters and a second time with the AAA Education posters. See page 35 for information about the EB Teaching posters.

- 8100-EB Computers in Research & Teaching**
- 8200-EB Teaching, Learning & Testing in the Biological and Biomedical Sciences**





## TOPIC CATEGORIES – PHYSIOLOGY

### Cardiovascular Section

#### FEATURED TOPICS:

(NOTE: if selected for inclusion in a featured topic, abstracts will be presented twice: once as a poster and once in the oral session)

- 1001-APS Developmental origins of cardiovascular disease (Scherrer/May)
- 1002-APS Inflammation as an orchestrator in heart failure (Altara/Blankesteyn)
- 1003-APS Matrix metalloproteinases in the cardiovascular system (Schulz/Mishra)
- 1004-APS Novel signaling molecules in vascular injury and inflammation (Hamblin/Rocic)
- 1005-APS Nutrients and cardiovascular health and disease: glucose, fatty acids and beyond (Chatham/Marsh)
- 1006-APS Signaling mechanisms in cardiac, lymphatic and smooth muscle contraction (Chakraborty/Scallan)
- 1007-APS The aging myocardium: structural remodeling in health and disease (Horn/Pierce)
- 1008-APS Vascular cognitive impairment: emerging concepts and pathophysiology (Csiszar/Warrington)
- 1009-APS Wiggers Award featured topic: novel pathways regulating microvascular tone and function (Gutterman)

#### POSTERS:

- 1010-APS Angiogenesis and vascular growth
- 1011-APS Blood pressure regulation
- 1012-APS Cardiac electrophysiology
- 1013-APS Cardiac function and dynamics
- 1014-APS Cerebral circulation
- 1015-APS Coronary circulation
- 1016-APS Diabetes and insulin resistance
- 1017-APS Endothelial cell biology
- 1018-APS Extracellular matrix and cardiac remodeling
- 1019-APS Free radical signaling, oxidant stress, and injury
- 1020-APS Gene expression and cardiovascular function
- 1021-APS Genetic models of cardiovascular function
- 1022-APS Hypertension
- 1023-APS Microcirculation
- 1024-APS Myocardial ischemia/myocardial metabolism
- 1025-APS Nitric oxide/carbon monoxide/vasoactive molecules
- 1026-APS Peripheral Circulation
- 1027-APS Shock

- 1028-APS Vascular pathobiology
- 1029-APS Vascular smooth muscle

### The Microcirculatory Society

#### POSTERS:

- 1035-APS Angiogenesis/microvascular remodeling/injury & repair
- 1036-APS Atherosclerosis/thrombosis/platelets
- 1037-APS Inflammation/leukocyte-endothelium interactions
- 1038-APS Instrumentation, methodology, and experimental models
- 1039-APS Ischemia-reperfusion/free radical biology
- 1040-APS Lymphatic and venular function
- 1041-APS Microvascular cell signaling pathways
- 1042-APS Microvascular development and aging
- 1043-APS Microvascular flow regulation/oxygen delivery/networks
- 1044-APS Microvascular mechanics/hemodynamics/rheology
- 1045-APS Microvascular pathophysiology-pharmacology, therapeutics and translational aspects
- 1046-APS Pericytes and Stem Cells
- 1047-APS Permeability/fluid & solute exchange/glycocalyx
- 1048-APS Tissue-microvessel interactions/extracellular matrix
- 1049-APS Vasomotor control: endothelium/smooth muscle/nerves

### Biomedical Engineering Society

#### POSTERS:

- 1055-APS Biomaterials
- 1056-APS cell adhesion and migration in cancer
- 1057-APS Cell mechanics
- 1058-APS Mathematical models of organ systems, tissues or cells
- 1059-APS Mechanobiology
- 1060-APS New approaches to biomedical data analysis
- 1061-APS New approaches to biomedical experimentation
- 1062-APS Regenerative medicine
- 1063-APS Tissue engineering

## Cell & Molecular Physiology Section

### FEATURED TOPICS:

(NOTE: if selected for inclusion in a featured topic, abstracts will be presented twice: once as a poster and once in the oral session)

- 1064-APS Ion channels in health and disease (Hamilton)
- 1065-APS Ion transport in cell differentiation, migration, polarization and adhesion (Worrell)
- 1066-APS Oxidative stress (Helms)

### POSTERS:

- 1067-APS Apoptosis and cell death
- 1068-APS ATPase-driven ion pumps
- 1069-APS Cell volume, osmoregulation and water transport
- 1070-APS Cellular signalling: second messengers, extracellular matrix, cell-cell interaction, kinases
- 1071-APS Intracellular pH and acid-base transport
- 1072-APS Membrane domains, macromolecular complexes, trafficking and cell polarity
- 1073-APS Oxidative stress biology
- 1074-APS Stem cells and cell growth, development and differentiation
- 1075-APS Transporters: transmitters, nutrients, metabolites and drugs

## Central Nervous System Section

### FEATURED TOPICS:

(NOTE: if selected for inclusion in a featured topic, abstracts will be presented twice: once as a poster and once in the oral session)

- 1080-APS Brainstem autonomic pathway in health and disease (Babic)
- 1081-APS Sympathetic activity in blood pressure regulation: sodium and hormonal mechanisms (Fink)

### POSTERS:

- 1082-APS Cognition and behavior
- 1083-APS Blood-brain barrier, brain blood flow and metabolism
- 1084-APS Brain development and aging
- 1085-APS Neuroinflammation/neuroprotection/ischemia
- 1086-APS Neuroendocrinology/neuroimmunology
- 1087-APS Neuronal excitability
- 1088-APS Neuroplasticity
- 1089-APS Neurotransmission and signaling molecules
- 1090-APS Central nervous system: other
- 1091-APS Central regulation of food intake and body weight
- 1092-APS Central regulation of body fluid homeostasis
- 1093-APS Neuroglial interactions

## Comparative & Evolutionary Physiology Section

### FEATURED TOPICS:

(NOTE: if selected for inclusion in a featured topic, abstracts will be presented twice: once as a poster and once in the oral session)

- 1100-APS Integrative cardiovascular and respiratory physiology of non-model organisms (Eme)

### POSTERS:

- 1101-APS Comparative cardiovascular and respiratory physiology
- 1102-APS Comparative metabolic physiology, biochemistry and endocrinology
- 1103-APS Comparative muscle physiology, locomotion and behavior
- 1104-APS Comparative osmotic, ionic, and acid-base regulation
- 1105-APS Other comparative and evolutionary physiology
- 1106-APS Scholander Award Competition

## Endocrinology & Metabolism Section

### FEATURED TOPICS:

(NOTE: if selected for inclusion in a featured topic, abstracts will be presented twice: once as a poster and once in the oral session)

- 1115-APS Crosstalk between 1-carbon metabolism and pathways associated with metabolic diseases (Wang)
- 1116-APS Novel interventions for treating obesity and type 2 diabetes (Reynolds/Brozinick)

### POSTERS:

- 1117-APS Cardiovascular endocrinology, including renin-angiotensin-aldosterone
- 1118-APS Exercise, nutrition and muscle protein synthesis
- 1119-APS Gestation, fetal, and neonatal biology, including mammary gland and lactation
- 1120-APS Growth, connective tissue and bone metabolism
- 1121-APS Lipid, lipoprotein and cholesterol metabolism
- 1122-APS Mitochondrial function
- 1123-APS Neuroendocrinology, hypothalamus and pituitary
- 1124-APS Obesity and satiety
- 1125-APS Pancreatic hormones and diabetes
- 1126-APS Protein, amino acid and carbohydrate metabolism
- 1127-APS Reproduction and sex hormones
- 1128-APS Stress and trauma including adrenal gland

## Environmental & Exercise Physiology Section

### FEATURED TOPICS:

(NOTE: if selected for inclusion in a featured topic, abstracts will be presented twice: once as a poster and once in the oral session)

- 1135-APS Current concepts in brown adipose tissue and human energy balance (Castellani)
- 1136-APS Epigenetics and exercise (Hargreaves)
- 1137-APS Microvascular responses and thermoregulatory control in normal and clinical populations (Kenney)

### POSTERS:

- 1138-APS Acute exercise responses
- 1139-APS Altitude and hypoxia
- 1140-APS Cardiac responses to exercise
- 1141-APS Circadian and biological timekeeping
- 1142-APS Exercise training responses
- 1143-APS Exercise, health and disease
- 1144-APS Fluid balance, blood volume regulation and trauma
- 1145-APS Metabolism and energetics of muscle and related tissues
- 1146-APS Muscle atrophy and hypertrophy

- 1147-APS Muscle plasticity and gene regulation/expression
- 1148-APS Neural control of the circulation during exercise
- 1149-APS Neural-endocrine control during exercise
- 1150-APS Reduced gravity and hyperbaric environments
- 1151-APS Respiratory responses to exercise
- 1152-APS Responses of bone and connective tissue to exercise and inactivity
- 1153-APS Signaling with muscle among cells, tissues and organs
- 1154-APS Temperature regulation
- 1155-APS Vascular responses to exercise and environmental stress

## Epithelial Transport Group

### FEATURED TOPICS:

(NOTE: if selected for inclusion in a featured topic, abstracts will be presented twice: once as a poster and once in the oral session)

- 1160-APS Hans Ussing Award featured topic
- 1161-APS Steve Hebert Award featured topic

### POSTERS:

- 1162-APS Epithelial development, polarity, differentiation
- 1163-APS Transporters and modulatory proteins, lipids and hormones
- 1164-APS Water and ion channels and modulatory proteins, lipids, and hormones
- 1165-APS Transcellular and paracellular permeability

## Gastrointestinal & Liver Physiology Section

### FEATURED TOPICS:

(NOTE: if selected for inclusion in a featured topic, abstracts will be presented twice: once as a poster and once in the oral session)

- 1170-APS Neurotransmission and  $\text{Ca}^{2+}$  sensitization in gastrointestinal smooth muscles (Perrino)
- 1171-APS Tight junctions in epithelial homeostasis: beyond paracellular barrier (Shen)

### POSTERS:

- 1172-APS Alcoholic and nonalcoholic fatty liver diseases
- 1173-APS Barrier function and repair
- 1174-APS Gastric physiology and pathophysiology
- 1175-APS Gastrointestinal cancer and metastasis
- 1176-APS Gastrointestinal development
- 1177-APS Gastrointestinal motility
- 1178-APS Gastrointestinal nutrient sensors
- 1179-APS GI and liver stem cells
- 1180-APS GI hormones, peptides and receptors
- 1181-APS Growth factors, proliferation, differentiation and apoptosis
- 1182-APS Hepcidin and iron homeostasis
- 1183-APS Immunology and microbiology of the gut
- 1184-APS Intestinal inflammation and pathophysiology
- 1185-APS Liver physiology and pathophysiology
- 1186-APS Mechanisms of intestinal nutrient, water and electrolyte transport
- 1187-APS Membrane trafficking and secretion in digestive epithelia
- 1188-APS Metal ion transport

- 1189-APS Microbiome of the GI tract
- 1190-APS Nuclear receptors in the liver and GI tract
- 1191-APS Organoids and novel models of GI and liver function
- 1192-APS Pancreatic physiology and pathophysiology

## History of Physiology Group

### POSTERS:

- 1200-APS History of Physiology

## Hypoxia Group

### FEATURED TOPICS:

(NOTE: if selected for inclusion in a featured topic, abstracts will be presented twice: once as a poster and once in the oral session)

- 1201-APS Central Nervous System Modulation of Cardiorespiratory Responses to Hypoxia (Solomon)

### POSTERS:

- 1202-APS Carotid body structure and function
- 1203-APS Hypoxia-induced gene expression
- 1204-APS Hypoxia/transmitters, second messengers, and signal transduction
- 1205-APS Hypoxia and ion channels
- 1206-APS Intermittent hypoxia/oxidative stress
- 1207-APS Responses to acute or chronic hypoxia exposure and altitude

## Muscle Biology Group

### FEATURED TOPICS:

(NOTE: if selected for inclusion in a featured topic, abstracts will be presented twice: once as a poster and once in the oral session)

- 1215-APS microRNA and stem cell in muscle pathophysiology (Mishra)
- 1216-APS The role of Akt/mTor pathway in muscle growth and rejuvenation (Steenbergen)

### POSTERS:

- 1217-APS Aging and muscle function
- 1218-APS Calcium and muscle contractility
- 1219-APS Calcium homeostasis
- 1220-APS Cardiac muscle, physiology
- 1221-APS Contractile and regulatory proteins
- 1222-APS Excitation-contraction coupling mechanisms
- 1223-APS Heat shock proteins and muscle function
- 1224-APS Muscle chemistry and metabolism
- 1225-APS Skeletal muscle, physiology
- 1226-APS Smooth muscle, physiology/pharmacology

## Neural Control & Autonomic Regulation Section

### FEATURED TOPICS:

(NOTE: if selected for inclusion in a featured topic, abstracts will be presented twice: once as a poster and once in the oral session)

- 1235-APS Assessing postganglionic sympathetic neuronal discharge patterns: implications for understanding aberrant sympathetic outflow (Shoemaker/Knuepfer)
- 1236-APS Brain renin-angiotensin signaling in metabolic diseases (Rahmouni)
- 1237-APS NCAR Trainee Featured Topic (Lazartigues)



- 1238-APS The role of ER stress in cardiovascular disease (Davisson/Cai)

#### POSTERS:

- 1239-APS Central autonomic regulation  
 1240-APS Neural control of cardiorespiratory function: the brain  
 1241-APS Neural control of cardiorespiratory function: the heart  
 1242-APS Neural control of cardiorespiratory function: the kidney  
 1243-APS Neural control of cardiorespiratory function: vasculature  
 1244-APS Neural control of cardiovascular function  
 1245-APS Neural control of visceral and metabolic function  
 1246-APS Neural mechanisms in cardiovascular disease

### Physiological Genomics Group

#### FEATURED TOPICS:

(NOTE: if selected for inclusion in a featured topic, abstracts will be presented twice: once as a poster and once in the oral session)

- 1250-APS Physiology, genetics and pharmacogenomics of hypertension, renal diseases, inflammation, diabetes and obesity (Joe/Cowley)

#### POSTERS:

- 1251-APS Epigenetics, systems biology, computational modeling and bioinformatics  
 1252-APS Genetically-engineered mutants, transgenic models  
 1253-APS Genomics, genetics, and gene expression  
 1254-APS Ion transport- genes and function  
 1255-APS MicroRNA, siRNA, non-coding regulatory RNA  
 1256-APS Physiological genomics of exercise, diabetes and obesity  
 1257-APS Physiological genomics of kidney disease  
 1258-APS Renin-angiotensin system  
 1259-APS Transcriptomics, proteomics and metabolomics  
 1260-APS Vascular disease: genes and function

### Renal Section

#### FEATURED TOPICS:

(NOTE: if selected for inclusion in a featured topic, abstracts will be presented twice: once as a poster and once in the oral session)

- 1265-APS Regulation of ion transport in the aldosterone-sensitive distal nephron (Staruschenko/Kohan)  
 1318-APS Translational research in kidney disease, hypertension and electrolyte disorders (Welling)

#### POSTERS:

- 1266-APS Diabetic renal disease  
 1267-APS Hormone and autocrine effects on the kidney  
 1268-APS Oxidative stress and the kidney  
 1269-APS Renal epithelial acid-base mechanisms  
 1270-APS Renal hemodynamics and glomerular filtration rate  
 1271-APS Renal ion transport, trafficking, and regulation  
 1272-APS Renal organic solute transport  
 1273-APS Renal pathology, toxicology, and cystic diseases  
 1274-APS Renal water transport, urea transport, and countercurrent mechanisms

- 1275-APS Sex differences in renal function and disease

### Respiration Section

#### FEATURED TOPICS:

(NOTE: if selected for inclusion in a featured topic, abstracts will be presented twice: once as a poster and once in the oral session)

- 1280-APS Cell stress in lung disease (Koval/Mulugeta)  
 1281-APS Hypoxic chemotransduction: defining the oxygen-sensors (Wyatt)  
 1282-APS Inflammation and cardiorespiratory control (Powell)  
 1283-APS Origins of cells that contribute to pulmonary epithelials and vascular remodeling (Majka/Alvarez)

#### POSTERS:

- 1284-APS Control of breathing: connectivity, neuromodulation and neurotransmission  
 1285-APS Control of breathing: chemoreception  
 1286-APS Control of breathing: development  
 1287-APS Control of breathing: integrated responses  
 1288-APS Control of breathing: respiratory motoneurons and muscles  
 1289-APS Control of breathing: rhythm generation  
 1290-APS Lung physiology: airway epithelial cell biology  
 1291-APS Lung physiology: airway responsiveness and smooth muscle cell biology  
 1292-APS Lung physiology: alveolar epithelial cell biology  
 1293-APS Lung physiology: biomechanics, surfactant and gas exchange  
 1294-APS Lung physiology: development and plasticity  
 1295-APS Lung physiology: endothelial cell biology  
 1296-APS Lung physiology: fluid balance  
 1297-APS Lung physiology: pulmonary hypertension  
 1298-APS Lung physiology: vascular smooth muscle cell biology, vascular regulation, and hypoxia



## Teaching of Physiology Section

### FEATURED TOPICS:

(NOTE: if selected for inclusion in a featured topic, abstracts will be presented twice: once as a poster and once in the oral session)

1305-APS Laboratory exercises, case studies and models for teaching physiological concepts (Lorr)

### POSTERS:

8100-EB Computers in Research & Teaching

8200-EB Teaching, Learning & Testing in the Biological and Biomedical Sciences

## Translational Physiology Group

(NOTE: if selected for inclusion in a featured topic, abstracts will be presented twice: once as a poster and once in the oral session)

1310-APS Translational physiology

## Water & Electrolyte Homeostasis Section

### FEATURED TOPICS:

(NOTE: if selected for inclusion in a featured topic, abstracts will be presented twice: once as a poster and once in the oral session)

1315-APS Hypertension: mechanisms and consequences (Kapusta)

1316-APS Novel roles of hormones in blood pressure regulation (Sullivan/Sasser)

1317-APS Obesity and inflammation: contributions to vascular and renal disease (De Miguel)

1318-APS Translational research in kidney disease, hypertension and electrolyte disorders (Welling)

### POSTERS:

1319-APS Blood pressure and fluid volume regulation in pregnancy and developmental programming

1320-APS Developmental programming and cardio-renal function in adults

1321-APS Cardiovascular and renal mechanisms in diabetes and metabolic syndrome

1322-APS Neurohumoral mechanisms of blood pressure and volume regulation

1323-APS Renin-angiotensin-aldosterone system in regulation of blood pressure and renal function

1324-APS Sex differences in blood pressure and fluid volume homeostasis

1325-APS Water and electrolyte homeostasis: pathophysiology and physiology





## TOPIC CATEGORIES – BIOCHEMISTRY AND MOLECULAR BIOLOGY

ASBMB topic categories are grouped by the program's scientific themes.

Short talks will be selected from the volunteered abstracts.

ASBMB travel award applicants must submit an abstract as first author to an ASBMB topic category (#2000-2408) by the November 8 abstract deadline. Complete submission rules and deadlines available at [www.asbmb.org/meeting2013](http://www.asbmb.org/meeting2013).

ASBMB scientific abstracts will be judged for Thematic Best Poster honors with cash prizes.

### 2000-ASBMB Genome Replication and Repair

- 2001-ASBMB Coordinating Functions at the Replication Fork
- 2002-ASBMB Mechanism and Control of Replication Initiation
- 2003-ASBMB Activation of DNA Damage Signaling
- 2004-ASBMB Mechanisms of Genomic Stability
- 2005-ASBMB Chromatin Modifications and Remodeling in DNA Replication, Recombination, and Repair
- 2006-ASBMB Chromosome Rearrangements
- 2007-ASBMB DNA Enzymes
- 2008-ASBMB DNA Repair Mechanisms
- 2009-ASBMB DNA Replication Mechanisms
- 2010-ASBMB DNA Replication Origins
- 2011-ASBMB Double-Stranded Breaks and DNA Recombination
- 2012-ASBMB Genome Diversity and DNA Recombination
- 2013-ASBMB Genome Stability and DNA Repair
- 2014-ASBMB Inhibitors of DNA Transactions
- 2015-ASBMB Mechanism of DNA Recombination
- 2016-ASBMB Meiotic Chromosome Dynamics
- 2017-ASBMB Mutagenesis
- 2018-ASBMB Nucleic Acid- Small Molecule Interactions
- 2019-ASBMB Nucleosome and Chromatin Assembly
- 2020-ASBMB Replicases and Replisomes
- 2021-ASBMB Replication Fork Dynamics
- 2022-ASBMB Replication Initiation
- 2023-ASBMB Signaling Responses to DNA Damage
- 2024-ASBMB Site-specific Recombination
- 2025-ASBMB Somatic Hypermutation
- 2026-ASBMB Telomeres and Telomerase
- 2027-ASBMB Translesion and Error-Prone DNA Polymerases
- 2028-ASBMB Transposition
- 2029-ASBMB V(D)J Recombination & Class Switch Recombination

### 2030-ASBMB DNA

- 2031-ASBMB DNA Structure
- 2032-ASBMB Probes of DNA Conformation

### 2040-ASBMB Cell Cycle

- 2041-ASBMB Cell Cycle and Growth Control
- 2042-ASBMB Checkpoint Mechanisms
- 2043-ASBMB Cyclins and Cyclin-Dependent Kinases

### 2050-ASBMB Chromosomes

- 2051-ASBMB Centromeres and Kinetochores
- 2052-ASBMB Chromosome Segregation and Aneuploidy
- 2053-ASBMB Cohesion /Chromosome Condensation
- 2054-ASBMB Mitotic Spindle
- 2055-ASBMB Spindle Checkpoint

### 2060-ASBMB Mechanisms of Gene Transcription and Regulation

- 2061-ASBMB Chromatin Remodeling During Transcription
- 2062-ASBMB Transcription Mechanisms
- 2063-ASBMB Co-transcriptional Coupling Mechanisms
- 2064-ASBMB Repressive Chromatin
- 2065-ASBMB Chromatin Changes in Development
- 2066-ASBMB Chromatin Recognition and Assembly
- 2067-ASBMB Chromatin Remodeling During Transcription
- 2068-ASBMB Chromatin Structure in Gene Activation
- 2069-ASBMB Co-transcriptional Processes
- 2070-ASBMB Dynamics of Transcription
- 2071-ASBMB Epigenetics: histone and DNA modifications
- 2072-ASBMB Heterochromatin
- 2073-ASBMB Histone Modifications
- 2074-ASBMB Non-coding RNAs in Gene Regulation and Chromosome Structure
- 2075-ASBMB Transcriptional Assemblies and Mechanisms
- 2076-ASBMB Transcriptional Initiation
- 2077-ASBMB Transcriptional Regulation

### 2080-ASBMB RNA Function and Protein Synthesis

- 2081-ASBMB How RNA Molecules Behave and Misbehave
- 2082-ASBMB Making and Using RNA in the Nucleus
- 2083-ASBMB RNA in the Cytoplasm: Translation and Degradation
- 2084-ASBMB Frontiers in RNA Biology
- 2085-ASBMB Alternative RNA Splicing
- 2086-ASBMB Catalytic RNA

2087-ASBMB Molecular Recognition of RNA  
 2088-ASBMB Non-coding RNAs  
 2089-ASBMB Ribonucleoproteins  
 2090-ASBMB Riboregulation  
 2091-ASBMB Ribosome and Translation  
 2092-ASBMB Riboswitches  
 2093-ASBMB RNA Editing and Modification  
 2094-ASBMB RNA Folding  
 2095-ASBMB RNA Modification: Mechanism and Function  
 2096-ASBMB RNA Processing  
 2097-ASBMB RNA Structure and Dynamics  
 2098-ASBMB RNA Structure, Function, and Regulation  
 2099-ASBMB RNA Transport and Localization  
 2100-ASBMB RNA Turnover  
 2101-ASBMB RNA-Based Gene Regulation  
 2102-ASBMB Small RNAs  
 2103-ASBMB tRNA Synthetases: Structure, Mechanism and Evolution

#### **2110-ASBMB Protein Modification, Trafficking and Degradation**

**2111-ASBMB Ubiquitin and Ubiquitin-Like Modifications**  
**2112-ASBMB The Multivesicular Body and Endocytosis**  
**2113-ASBMB Mechanisms of Bacterial and Viral Pathogenesis**  
**2114-ASBMB Regulatory Thiol Modifications**  
 2115-ASBMB Autophagy  
 2116-ASBMB Chemical Probes of Protein Modifications  
 2117-ASBMB Host-pathogen Interactions and Protein Trafficking  
 2118-ASBMB Molecular Chaperones: Mechanism and Function  
 2119-ASBMB Posttranslational Modifications  
 2120-ASBMB Proteases in Cell Regulation and Disease  
 2121-ASBMB Protein Folding, Misfolding, and Aggregation  
 2122-ASBMB Protein Lipidation  
 2123-ASBMB Protein Targeting, Endocytosis, and the MVB  
 2124-ASBMB Protein Turnover and Quality Control  
 2125-ASBMB Regulation of Cell Function by Redox Modifications  
 2126-ASBMB Ubiquitin-Proteasome Pathway & Ubiquitin-Like Proteins

#### **2130-ASBMB Catalytic Mechanisms**

**2131-ASBMB Bioenergy and Enzymatic Catalysis**  
**2132-ASBMB Catalytic and Substrate Promiscuity**  
**2133-ASBMB Cool Catalysts and Radically-new Reaction Mechanism**  
**2134-ASBMB Molecular Motors - Force and Work as Products**  
 2135-ASBMB Energetics and Design  
 2136-ASBMB Enzyme Mechanism  
 2137-ASBMB Enzymes as Drug Targets  
 2138-ASBMB Macromolecular Folding and Fluctuations  
 2139-ASBMB Molecular Motor Proteins and Pumps  
 2140-ASBMB Multienzyme Complexes  
 2141-ASBMB Protein Interactions in Catalysis  
 2142-ASBMB Regulation and Allostereism  
 2143-ASBMB Role of Dynamics in Enzyme Catalysis  
 2144-ASBMB Structural Enzymology

#### **2150-ASBMB Metabolism**

2151-ASBMB Genetic and Metabolic Approaches to Obesity  
 2152-ASBMB Metabolism and Cancer  
 2153-ASBMB Metabolism and Nutrition  
 2154-ASBMB Metabolism and Neurodegeneration  
 2155-ASBMB Aging and Metabolism  
 2156-ASBMB Metabolism and Diabetes  
 2157-ASBMB Metabolic Networks  
 2158-ASBMB Metabolic Regulation  
 2159-ASBMB Mitochondria in Health and Disease  
 2160-ASBMB Nuclear Receptors in Metabolic Syndromes

#### **2170-ASBMB Obesity**

2171-ASBMB Enzymes, Hormones and Obesity  
 2172-ASBMB Frontiers in Obesity Research  
 2173-ASBMB Obesity and the Metabolic Syndrome  
 2174-ASBMB Treatment, Prevention and Complications of Obesity

#### **2180-ASBMB Chemical and Systems Biology**

**2181-ASBMB Function and Evolution of Metabolic Networks**  
**2182-ASBMB Controlling Cellular Communication**  
**2183-ASBMB Manipulating Metabolic Networks**  
**2184-ASBMB Assembly and Control of Dynamic Protein Complexes**  
 2185-ASBMB Biosynthesis of Complex Molecules  
 2186-ASBMB Chemical Biology of Cell Death  
 2187-ASBMB Chemical Perspectives in Neurobiology

2188-ASBMB Chemical Probes and Their Use in Identifying New Therapeutic Targets  
 2189-ASBMB Chemistry and Cell Biology of Natural Products  
 2190-ASBMB Experimental and Computational Approaches to Systems  
 2191-ASBMB Mathematical Biology  
 2192-ASBMB Membrane Proteins as Drug Targets  
 2193-ASBMB Microarrays  
 2194-ASBMB Mode of Action of Bioactive Natural Products  
 2195-ASBMB New Targets for Drug Discovery: Antibacterials  
 2196-ASBMB New Targets for Drug Discovery: Nuclear Hormone Receptors  
 2197-ASBMB Pharmacogenomics  
 2198-ASBMB Photochemical Sensors  
 2199-ASBMB Polypharmacology and Drug Repurposing  
 2200-ASBMB Protein-Small Molecule Interactions  
 2201-ASBMB Regulatory Networks  
 2202-ASBMB Small Molecule Control of Protein Folding and Assembly  
 2203-ASBMB Subsystems and Simulation  
 2204-ASBMB Target Identification and Pathway Mining

#### **2210-ASBMB Proteomics and Bioinformatics**

2211-ASBMB Computational Approaches in Systems Biology  
 2212-ASBMB Genomics  
 2213-ASBMB Protein Profiling in Normal and Disease States  
 2214-ASBMB Toxicogenomics



**2220-ASBMB Computational Tools for Assigning Enzymatic Functions**

- 2221-ASBMB Functional Proteomic Studies  
 2222-ASBMB Global Analysis of Protein Function  
 2223-ASBMB Proteomics and Bioinformatics

**2230-ASBMB Methods**

- 2231-ASBMB Biophysical Methods  
 2232-ASBMB Electrophoresis  
 2233-ASBMB Fluorescence Microscopy Approaches to Understand Apoptosis  
 2234-ASBMB Mass Spectroscopy  
 2235-ASBMB Nanotechnology  
 2236-ASBMB New Molecular and Cellular Imaging Agents  
 2237-ASBMB Protein Chemistry  
 2238-ASBMB Recombinant DNA Technology  
 2239-ASBMB Small Molecule Tools for Biology

**2240-ASBMB Cell and Organelle Dynamics**

- 2241-ASBMB Cargo Sorting and Vesicle Targeting  
 2242-ASBMB Cell Division  
 2243-ASBMB Cell Migration  
 2244-ASBMB Diseases of Organelle Misfunction  
 2245-ASBMB Golgi Structure and Biogenesis  
 2246-ASBMB Intracellular Dynamics  
 2247-ASBMB Membrane Transport  
 2248-ASBMB Mitochondrial Dynamics  
 2249-ASBMB Mitochondrial Genetic Diseases  
 2250-ASBMB Mitochondrial Toxicity  
 2251-ASBMB Nuclear Dynamics  
 2252-ASBMB Organelle Biogenesis  
 2253-ASBMB Organelle Evolution

**2260-ASBMB Bioenergetics**

- 2261-ASBMB Cytochrome P450  
 2262-ASBMB Flavoproteins  
 2263-ASBMB Oxidative Phosphorylation

**2270-ASBMB Lipids and Membranes****2271-ASBMB Lipid Signaling in Health and Disease****2272-ASBMB Lipid Membrane Curvature In Membrane Function****2273-ASBMB Lipid Trafficking and Sorting****2274-ASBMB Lipids In Nutrient Metabolism and Metabolic Dysfunction**

- 2275-ASBMB Chemical Probes of Lipid Systems  
 2276-ASBMB Lipid Second Messengers  
 2277-ASBMB Lipid Signaling  
 2278-ASBMB Lipid Storage  
 2279-ASBMB Lipid Trafficking  
 2280-ASBMB Lipidomics  
 2281-ASBMB Lipids and Control of Gene Expression  
 2282-ASBMB Membrane Structure and Cell Function  
 2283-ASBMB Non-animal Genetic Models of Lipid Metabolism  
 2284-ASBMB Nuclear Lipid Signalling  
 2285-ASBMB Organelle Lipid Biosynthesis  
 2286-ASBMB Pharmacological Targets in Lipid Metabolism  
 2287-ASBMB Protein-Lipid Interactions

- 2288-ASBMB Regulation of Lipid Metabolism  
 2289-ASBMB Stress and Lipid Metabolism  
 2290-ASBMB Structural Biology and Mechanisms of Membrane Lipid Assembly  
 2291-ASBMB Tissue-Specific Regulation of Lipid Metabolism

**2300-ASBMB Glycan Regulation of Signaling Pathways****2301-ASBMB O-Mannose Glycans and Muscular Dystrophy****2302-ASBMB Glycosyltransferases that Control Cell Growth and Differentiation****2303-ASBMB Roles for Glycans in Notch Signaling****2304-ASBMB Regulation of Gene Expression by O-GlcNAc**

- 2305-ASBMB Functions of O-GlcNAc in Signaling  
 2306-ASBMB Gene Regulation by O-GlcNAc  
 2307-ASBMB Glycan Binding Proteins  
 2308-ASBMB Glycan Structural Determination  
 2309-ASBMB Glycan Synthesis  
 2310-ASBMB Glycans in Development  
 2311-ASBMB Glycans in Disease  
 2312-ASBMB Glycans of Cell Walls  
 2313-ASBMB Glycobiology of the Extracellular Matrix  
 2314-ASBMB Glycosylation and Trafficking  
 2315-ASBMB Glycosylation Engineering  
 2316-ASBMB Inherited Disorders of Glycosylation  
 2317-ASBMB Structures of Glycosylation Enzymes and Glycan Binding Proteins

**2320-ASBMB Structure, Function and Biogenesis of Cell Membranes**

- 2321-ASBMB Lipid Domains and Lipid Rafts  
 2322-ASBMB Membrane Biogenesis  
 2323-ASBMB Membrane Protein Synthesis, Insertion and Assembly  
 2324-ASBMB Protein-Lipid Interactions As Determinants of Function  
 2325-ASBMB Structural Biology and Mechanisms of Membrane Lipid Assembly  
 2326-ASBMB Structure and Function of Transport Proteins and Channels  
 2327-ASBMB Structure, Function, and Biogenesis of Cell Membranes  
 2328-ASBMB Vesicular Trafficking

**2330-ASBMB Mechanisms of Signal Transduction****2331-ASBMB Mechanisms of Cell Growth and Autophagy Regulation****2332-ASBMB Protein Phosphorylation Networks****2333-ASBMB G-proteins in Cellular Regulation****2334-ASBMB Mechanisms of Signaling Specificity in Cell Fate: Growth, Proliferation or Death?**

- 2335-ASBMB ADAMS and Other Proteases  
 2336-ASBMB Aging  
 2337-ASBMB Apoptosis and Cell Stress  
 2338-ASBMB Biochemical Pharmacology  
 2339-ASBMB Caspases  
 2340-ASBMB Cell Proliferation  
 2341-ASBMB Cytokine and Growth Factor Signaling  
 2342-ASBMB Hormone Receptors



- 2343-ASBMB Integration and Organization of Signaling Pathways  
 2344-ASBMB Peptide Hormones  
 2345-ASBMB Signaling Crosstalk  
 2346-ASBMB Signaling in Bacterial Receptor Systems  
 2347-ASBMB Signaling in Disease and Therapy  
 2348-ASBMB Signaling to the Cytoskeleton  
 2349-ASBMB Signaling to the Nucleus  
 2350-ASBMB Toxins  
 2351-ASBMB Transcriptional Regulation and Epigenetic Control

## **2360-ASBMB Protein Phosphorylation and Dephosphorylation**

- 2361-ASBMB Adapter Proteins  
 2362-ASBMB G Proteins and Protein Kinases  
 2363-ASBMB Kinase Cascades  
 2364-ASBMB Map Kinases  
 2365-ASBMB Phosphatases  
 2366-ASBMB Receptor Tyrosine Kinase Signaling to Nucleus  
 2367-ASBMB Serine/Threonine Kinase  
 2368-ASBMB Small GTPases  
 2369-ASBMB Tyrosine Kinases

## **2370-ASBMB Second Messengers**

- 2371-ASBMB Calcium  
 2372-ASBMB GTPases  
 2373-ASBMB Cyclases  
 2374-ASBMB Cyclic AMP  
 2375-ASBMB Cyclic GMP  
 2376-ASBMB Inositol Phosphates and Phosphoinositides  
 2377-ASBMB Nitric Oxide  
 2378-ASBMB Phosphodiesterases  
 2379-ASBMB Other Lipid Second Messengers

## **2380-ASBMB Plant Biochemistry**

- 2381-ASBMB Integration of Carbon and Nitrogen Metabolism  
 2382-ASBMB Novel Lipid Biosynthesis in Plants  
 2383-ASBMB Proteolysis in Plant Growth and Development  
 2384-ASBMB Regulation of Plant Metabolism

## **2390-ASBMB Triple Negative Breast Cancer**

- 2391-ASBMB Breast Cancers that Elude Successful Treatments: Triple Negative Breast Cancer  
 2392-ASBMB Genomics: Successes and Challenges in Identifying Novel Targets in Minority Populations  
 2393-ASBMB Back to the Basics: the Biology of Breast Cancer  
 2394-ASBMB Identification of Novel Targets in Triple Negative Breast Cancer  
 2395-ASBMB The Microenvironment of Triple Negative Breast Cancer  
 2396-ASBMB Tumor Metastasis  
 2397-ASBMB Use of Genomics to Predict Patient Outcomes in Triple Negative Breast Cancer

## **2400-ASBMB Transitions**

- 2401-ASBMB Career Options: Beyond Academia  
 2402-ASBMB Careers in Industry for Minority Scientists  
 2403-ASBMB Complementary Skills: Training in Ethics, Communications, Teamwork, etc.  
 2404-ASBMB Education and Professional Development - All Other  
 2405-ASBMB Making a Successful Mid-career Transition  
 2406-ASBMB Novel Experiential Learning Activities  
 2407-ASBMB STEM Curriculum - Training Students to be Flexible and Adaptable  
 2408-ASBMB Transitions in Training: From 2-year to 4-year College, Preparing for Graduate School, Picking a Post-doc, Interviewing for a Job

## **2410-ASBMB ASBMB Public Outreach Posters**

- 2411-ASBMB Grass-roots Public Outreach  
 2412-ASBMB Public Outreach and Media  
 2413-ASBMB Public Outreach Communication Skills  
 2414-ASBMB Public Outreach in the Classroom  
 2415-ASBMB University-based Public Outreach





## TOPIC CATEGORIES – PATHOLOGY

### 4000-ASIP PATHOBIOLOGY of AGING

- 4001-ASIP Cell senescence
- 4002-ASIP Biolongevity
- 4003-ASIP Novel genetic and molecular markers of biolongevity
- 4004-ASIP Novel targets in mitochondrial diseases

### 4005-ASIP BIOINFORMATICS AND IMAGING

- 4006-ASIP Genome bioinformatics
- 4007-ASIP Computational biology
- 4008-ASIP Bioinformatics for diseases
- 4009-ASIP Imaging Informatics
- 4010-ASIP Advanced Cellular Imaging in Pathology

### 4011-ASIP BIOBANKING/BIOREPOSITORIES

- 4012-ASIP QA and QC in repositories
- 4013-ASIP Biobanking Informatics
- 4014-ASIP Legal and ethical challenges in biobanking
- 4015-ASIP Patient advocacy in biobanking
- 4016-ASIP Biospecimen/Biomarker Science

### 4017-ASIP GENETIC DISEASES AND GENE EXPRESSION

- 4018-ASIP Transcription factors in pathobiology
- 4019-ASIP miRNA expression in health and disease
- 4020-ASIP Gene expression studies
- 4021-ASIP Protein translation in disease
- 4022-ASIP Organismal phenotypes of gene alterations

### 4023-ASIP CELL ADHESION and CELL SIGNALING

- 4024-ASIP Cell surface receptors and signaling pathways
- 4025-ASIP Chemokines and cytokines

### 4026-ASIP EXTRACELLULAR MATRIX IN PATHOBIOLOGY

- 4027-ASIP Extracellular matrix – proteases and remodeling
- 4028-ASIP Extracellular matrix and cell adhesion
- 4029-ASIP Extracellular matrix, integrins and cell signaling pathways

### 4030-ASIP CELL DEATH, TISSUE INJURY AND REPAIR

- 4031-ASIP Apoptosis/Necrosis
- 4032-ASIP Autophagy, mechanisms and the role in diseases
- 4033-ASIP Ubiquitin proteasome system and Ubiquitin-like proteins (SUMO, Nedd, others) in disease
- 4034-ASIP Oxidant, genotoxic, metabolic and other types of stress

- 4035-ASIP ER stress in cell death and survival
- 4036-ASIP Role of MMPS, TIMPS, and ECM repair in wound healing
- 4037-ASIP Cellular responses to shear stress, stretch, and mechanical injury
- 4038-ASIP Mitochondrial responses to cellular injury
- 4039-ASIP Ischemia/reperfusion injury
- 4040-ASIP Heat shock proteins in disease
- 4041-ASIP Environmental pathology and toxicology
- 4042-ASIP Exogenous pathogen-associated molecular patterns (PAMPs), Endogenous danger-associated molecular patterns (DAMPs), and their role in local tissue response

### 4043-ASIP MUCOSAL INFLAMMATION, EPITHELIAL-LEUKOCYTE INTERACTIONS AND EPITHELIAL PATHOBIOLOGY

- 4044-ASIP Mucosal inflammation and inflammatory mediators
- 4045-ASIP Mucosal-microbial interactions
- 4046-ASIP Microbiota and systemic disease
- 4047-ASIP Regulation of the epithelial barrier and intercellular junctions
- 4048-ASIP Epithelial to mesenchymal transition

### 4049-ASIP INFLAMMATION and IMMUNOPATHOLOGY

- 4050-ASIP Allergic diseases
- 4051-ASIP Autoimmune diseases
- 4052-ASIP Microbial pathogenesis
- 4053-ASIP Innate immunity
- 4054-ASIP Innate immunity, TLRs, and pathogen recognition receptors
- 4055-ASIP TLRs, pathogen recognition receptors
- 4056-ASIP Leukocyte-endothelial cell interactions
- 4057-ASIP Inflammation and inflammatory mediators
- 4058-ASIP Endothelial – microbial interactions
- 4059-ASIP Sepsis and endotoxin
- 4060-ASIP Transplantation
- 4061-ASIP Inflammation, infection and chronic fatigue/pain syndromes

### 4062-ASIP CARDIAC PATHOLOGY

- 4063-ASIP Animal models of heart disease
- 4064-ASIP Cardiac hypertrophy/heart failure
- 4065-ASIP Genetic basis of cardiac disease and development
- 4066-ASIP Cardiac metabolism in health and disease

- 4067-ASIP Pathophysiology of cardiac valve diseases
- 4068-ASIP Ischemic heart disease and cardiac ischemia reperfusion injury
- 4069-ASIP Adenosine monophosphate-activated protein kinase (AMPK) signaling in cardiac disease
- 4070-ASIP Mitochondrial function in the heart
- 4071-ASIP Stem/progenitor cells in cardiac pathology

## 4072-ASIP LIVER PATHOLOGY

- 4073-ASIP Animal models of liver disease
- 4074-ASIP Liver injury
- 4075-ASIP Hepatitis, liver fibrosis and cirrhosis
- 4076-ASIP Liver development
- 4077-ASIP Stem cells and cancer
- 4078-ASIP Liver growth and regeneration
- 4079-ASIP Liver tissue engineering and transplantation
- 4080-ASIP Liver metabolism in health and disease
- 4081-ASIP Signaling in liver health and disease

## 4082-ASIP LUNG PATHOLOGY

- 4083-ASIP Animal models of lung disease
- 4084-ASIP Lung – acute lung injury
- 4085-ASIP Lung – cancer
- 4086-ASIP Lung – infections
- 4087-ASIP Lung – inflammatory, immunologic and fibrosing lung diseases (non-infectious)
- 4088-ASIP Lung – normal development and developmental diseases
- 4089-ASIP Lung – obstructive airway diseases
- 4090-ASIP Lung – pulmonary vascular biology and disorders
- 4091-ASIP Pulmonary stem cells, repair, and regeneration
- 4092-ASIP Lung – environmental diseases
- 4093-ASIP Pleural diseases

## 4094-ASIP NEUROPATHOLOGY

- 4095-ASIP Animal models of neuropathology
- 4096-ASIP Alzheimer's disease/Parkinson's disease
- 4097-ASIP Demyelinating diseases
- 4098-ASIP Developmental and other pediatric neuropathology
- 4099-ASIP Disease of peripheral nerve and skeletal muscle
- 4100-ASIP Infectious diseases/Neuroinflammation
- 4101-ASIP Neurodegenerative diseases – frontotemporal and Lewy body disorders
- 4102-ASIP Neurodegenerative diseases – other
- 4103-ASIP Neuronal neurogenesis, regeneration, injury and repair; trauma
- 4104-ASIP Stroke/vascular diseases
- 4105-ASIP Toxic/metabolic diseases
- 4106-ASIP Tumors – glial
- 4107-ASIP Tumors – nonglial
- 4108-ASIP Macrophage/microglia

## 4109-ASIP MISCELLANEOUS NON-NEOPLASTIC TISSUE and ORGAN PATHOBIOLOGY

- 4110-ASIP Molecular pathogenesis of genetic disease
- 4111-ASIP Molecular pathogenesis of infectious disease
- 4112-ASIP Stem Cells: biology, development and applied
- 4113-ASIP Molecular and bio-markers in non-neoplastic diseases
- 4114-ASIP Diabetes
- 4115-ASIP Endocrine/GU/Gynecologic pathology
- 4116-ASIP Hematopathology
- 4117-ASIP Renal pathology
- 4118-ASIP Skeletal and bone pathology
- 4119-ASIP Miscellaneous tissue and organ pathology
- 4120-ASIP Veterinary pathology
- 4121-ASIP Toxicologic pathology

## 4122-ASIP TRANSLATIONAL RESEARCH

- 4123-ASIP Gene therapy
- 4124-ASIP Cell therapy
- 4125-ASIP New technologies for research and diagnosis
- 4126-ASIP Proteomics
- 4127-ASIP SNPs and genotyping

## 4128-ASIP NEOPLASIA

- 4129-ASIP Dietary and environmental factors in cancer
- 4130-ASIP Epigenetics of cancer
- 4131-ASIP Genetics of cancer
- 4132-ASIP Aberrant signaling in cancer
- 4133-ASIP Developmental pathways in cancer
- 4134-ASIP Cancer stem cells
- 4135-ASIP Biomarkers
- 4136-ASIP Lymphomas/Leukemias
- 4137-ASIP Breast cancer
- 4138-ASIP Cancer biology
- 4139-ASIP Colon cancer
- 4140-ASIP Prostate cancer
- 4141-ASIP Animal cancer models
- 4142-ASIP Molecular targeting for cancer therapeutics
- 4143-ASIP Tumor angiogenesis



4144-ASIP Tumor immunology  
4145-ASIP Genomics  
4146-ASIP Epigenomics

**4147-ASIP VASCULAR BIOLOGY AND PATHOLOGY**

4148-ASIP Angiogenesis and vascular development  
4149-ASIP Animal models of vascular diseases  
4150-ASIP Atherosclerosis and restenosis  
4151-ASIP Endothelial function and response to injury  
4152-ASIP Extracellular matrix and proteases in vascular biology  
4153-ASIP Genomics/proteomics in vascular biology and pathology  
4154-ASIP Hemostasis  
4155-ASIP Immune system in vascular disease(s)  
4156-ASIP Lipid mediators and lipoproteins  
4157-ASIP Mechano-sensing and signal transduction in the vessel wall  
4158-ASIP Neurovascular connections/interactions  
4159-ASIP Regulation of endothelial junctions  
4160-ASIP Stem/progenitor cells in vascular biology  
4161-ASIP Thrombosis and platelets

4162-ASIP Vascular calcification  
4163-ASIP Vascular cell biology & dysfunction in disease  
4164-ASIP Vascular disease and genetic disorders  
4165-ASIP Vascular signal transduction  
4166-ASIP Vascular tissue engineering  
4167-ASIP Vasoactive molecules







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## TOPIC CATEGORIES – NUTRITION

### Aging & Chronic Disease

- 5000-ASN Community Nutrition Programs and Policies for Older Adults
- 5001-ASN Nutrition Interventions for Risk Factor Modification in Chronic Disease
- 5002-ASN Nutritional Assessment and Status in Older Populations
- 5003-ASN Nutrition, Sarcopenia and Physical Performance in Older Adults
- 5004-ASN Nutrition and Cognition Across the Lifespan (co-sponsored with Nutritional Epidemiology RIS)
- 5005-ASN Osteoporosis and Bone Metabolism in Aging

### Community and Public Health Nutrition

- 5020-ASN Community and Public Health Nutrition Interventions
- 5021-ASN Diet, Food Security and Health Promotion in Diverse Communities
- 5022-ASN Health Disparities and Social Equity
- 5023-ASN Food Environment
- 5024-ASN Food Systems and Food Policy
- 5025-ASN Community and Public Health Program Design: Theory to Evaluation

### CARIG

- 5030-ASN Carotenoids and Health
- 5031-ASN Carotenoids and Retinoids: Molecular Mechanisms of Action
- 5032-ASN Bioavailability and Metabolism of Carotenoids and Vitamin A
- 5033-ASN Carotenoids: Eye and Brain Health
- 5034-ASN Biofortification of Staple Crops with Micronutrients

### Diet and Cancer

- 5040-ASN Diet and Cancer – Molecular Targets
- 5041-ASN Diet and Cancer – Animal Studies
- 5042-ASN Diet and Cancer – Translational, Clinical and Survivorship

### Dietary Bioactive Components

- 5060-ASN Bioavailability, Metabolism and Biomarkers of Dietary Bioactive Components
- 5061-ASN Mechanisms of Action and Molecular Targets of Dietary Bioactive Components

- 5062-ASN Effects of Dietary Bioactive Components on Experimental Models of Chronic Disease Risk
- 5063-ASN Antioxidant and Anti-inflammatory Effects of Dietary Bioactive Components
- 5064-ASN Cardiovascular Effects of Dietary Bioactive Components
- 5065-ASN Dietary Bioactive Components of Medicinal, Functional and Whole Foods (including Probiotics and Fermented Foods)

### Energy and Macronutrient Metabolism

- 5080-ASN Energy Balance, Macronutrients and Weight Management
- 5081-ASN Obesity and the Metabolic Syndrome
- 5082-ASN Protein and Amino Acid Metabolism
- 5083-ASN Lipid and Fatty Acid Metabolism and Transport
- 5084-ASN Dietary Factors Affecting Lipid Metabolism
- 5085-ASN Polyunsaturated Fatty Acids and Health
- 5086-ASN Metabolic Phenotyping, Metabolomics and Biomarkers
- 5087-ASN Carbohydrate Metabolism
- 5088-ASN Regulation of Food Intake (co-sponsored with Obesity RIS)
- 5090-ASN Protein Intake Throughout the Lifecycle
- 5091-ASN Protein Sources and Dietary Implications

### Experimental Animal Nutrition

- 5100-ASN Companion Animal Nutrition and Physiology
- 5101-ASN Animal Research Models for Macronutrient Metabolism
- 5102-ASN Animal Research Models for Nutrient Digestion and Absorption
- 5103-ASN Animal Research Models for Gut Development and Health
- 5104-ASN Animal Research Models Investigating Nutrition and Inflammation
- 5105-ASN Animal Research Models in Nutrition and Musculoskeletal Development

### Lactation

- 5120-ASN Lactation: Biology of Milk Production and Secretion
- 5121-ASN Lactation: Bioactive Compounds and other Milk Constituents



- 5122-ASN Lactation: Determinants of Lactogenesis, Lactation Duration, and Other Indicators of Lactation Success
- 5123-ASN Lactation: Effects of Lactation/Breastfeeding on the Recipient Infant and/or Lactating Mother

#### Nutrition Education

- 5210-ASN Nutrition Education
- 5211-ASN Aligning Nutrition Education Programs and Research to Promote Change
- 5212-ASN Preventing Childhood Obesity
- 5213-ASN Nutrition Education in Diverse Populations
- 5214-ASN Development of Evidence-Based Nutrition Education
- 5215-ASN Behavioral Science and Eating Behavior Change
- 5216-ASN Nutrition Education during Prenatal and Perinatal Stages of Life

#### Nutrient-Gene Interactions

- 5220-ASN Nutrient-Gene Interactions
- 5221-ASN Epigenetics and Autoimmune Disease
- 5222-ASN Nutrient Effects on Stem Cell differentiation and Gene Expression
- 5223-ASN Regulation of Intestinal Nutrient Metabolism and Gene Expression
- 5224-ASN Nutrient Control of Proteomics and Metabolomics
- 5225-ASN Obesity, Inflammation, and Nutrigenomics
- 5226-ASN Nutrient-Gene Interaction in Neurodegenerative Diseases: Role of Vitamin D
- 5227-ASN Nutrient Regulation of Epigenetics in Maternal Programming

#### Nutritional Epidemiology

- 5230-ASN Dietary Assessment Tools and Applications
- 5231-ASN Epidemiological Research Addressing Diet and Health Outcomes
- 5232-ASN Research with Dietary Supplements and Bioactive Components
- 5233-ASN Advancing Nutritional Epidemiology with Public Use and Commercial Data Sets
- 5234-ASN Assessment of Child and Adolescent Nutritional Status, Growth, and Obesity
- 5235-ASN Epidemiological and Statistical Approaches for the Study of the Effects of Food on the Microbiome
- 5236-ASN Nutrition without Borders: Epidemiologic Methods in Examining Health Disparities and Nutrition Outcomes in Diverse Populations

#### Nutritional Immunology

- 5240-ASN Nutritional Immunology
- 5241-ASN Nutrition, Infection and Immunity

#### Nutrition Translation

- 5250-ASN The Use of Consumer Research Insights to Guide Scientific Research
- 5251-ASN Nutrition Science Translation for Policy, Practice and Consumers

- 5252-ASN Understanding and Communicating Benefits/Risks of Natural-State Foods (e.g., minimally processed, natural, organic)
- 5253-ASN Nutrition and Sustainability
- 5254-ASN Food Related Behaviors and Implications for Food Policy
- 5255-ASN Nutrition Science Applied Through Food Science for Health
- 5256-ASN Novel Food Ingredients and their Impact on Health
- 5257-ASN Translation of Nutrition Science to Public Health

#### Obesity

- 5260-ASN Obesity – Weight Management
- 5261-ASN Obesity – Body Composition
- 5262-ASN Obesity – Satiety (Co-sponsored by EMM RIS)
- 5263-ASN Obesity – Carbohydrate Intake and Weight Management
- 5264-ASN Obesity – Chronic Diseases
- 5265-ASN Obesity – Physical Activity
- 5266-ASN Obesity – Energy Expenditure
- 5267-ASN Obesity – Socioeconomics
- 5268-ASN Development of Obesity: Dynamics of Physiological and Pathophysiological Parameters

#### Vitamins and Minerals

- 5280-ASN Iron, Copper and Chronic Disease
- 5281-ASN Vitamin D and Obesity – From Cellular to Clinical Trials
- 5282-ASN Water and Fat Soluble Vitamins and Chronic Disease
- 5283-ASN Micronutrient Bioavailability and Antioxidant Function
- 5283-ASN Zinc
- 5285-ASN Selenium
- 5286-ASN B Vitamins and One-Carbon Metabolism
- 5287-ASN Micronutrient Interventions

#### International Nutrition

- 5140-ASN International Nutrition

#### Medical Nutrition

- 5200-ASN Personalized Nutrition
- 5201-ASN Nutrition and the Microbiome
- 5202-ASN Interventions for the Treatment and Prevention of Nutrition-Related Diseases
- 5203-ASN Nutrition and Inflammation
- 5204-ASN Prenatal Nutrient Programming

#### Policy

- 5000-ASN Community Nutrition Programs and Policies for Older Adults
- 5024-ASN Food Systems and Food Policy
- 5211-ASN Aligning Nutrition Education Programs and Research to Promote Change
- 5251-ASN Nutrition Science Translation for Policy, Practice and Consumers
- 5254-ASN Food Related Behaviors and Implications for Food Policy

## Other

5300-ASN Dietary Supplements and Human Performance  
5301-ASN Sports Nutrition

## Education and Teaching

5320-ASN Nutrition Education in Medical and Other Professional Schools  
5321-ASN Nutrition Education for Practicing Clinicians  
5322-ASN Innovations in Undergraduate, Graduate and Medical Nutrition Education



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## TOPIC CATEGORIES – PHARMACOLOGY

### Pharmacology Education

- \*8100-EB Computers in Research & Teaching
- \*8200-EB Teaching, Learning, and Testing in the Biological and Biomedical Sciences

### Cardiovascular Pharmacology (CVP)

- 3000-ASPET Cardiac Pharmacology
- 3001-ASPET CVP-General
- 3002-ASPET CVP-Injury/Protection/Remodeling
- 3003-ASPET CVP – Thrombosis
- 3004-ASPET Vascular Pharmacology – General
- 3005-ASPET Vascular Pharmacology – Cerebral/Coronary/Pulmonary
- 3006-ASPET Vascular Pharmacology – Endothelium
- 3007-ASPET Vascular Pharmacology – Ion Channels/Exchangers

### Cellular and Molecular Pharmacology

- 3008-ASPET Biologics/Biosimilars
- 3009-ASPET Chemotherapy (non-cancer)
- 3010-ASPET Gene Expression/Regulation
- 3011-ASPET Genomics/Proteomics
- 3012-ASPET Signal Transduction – General
- 3013-ASPET Signal Transduction – Cell Surface Receptors
- 3014-ASPET Signal Transduction – G Proteins/GPCRs
- 3015-ASPET Signal Transduction – Ion Channels
- 3016-ASPET Signal Transduction – Kinases/Phosphatases
- 3017-ASPET Signal Transduction – Second Messenger Systems
- 3018-ASPET Signal Transduction – Nuclear Receptors
- 3019-ASPET Mechanisms of Cell Injury/Death

### Central Nervous System Pharmacology

- 3020-ASPET Behavioral Pharmacology – General
- 3021-ASPET Drugs of Abuse
- 3022-ASPET Memory/Cognition/Learning
- 3023-ASPET Neuropsychology – General
- 3024-ASPET Neuropsychiatric Disorders
- 3025-ASPET Neurotoxicology – General
- 3026-ASPET Neurotoxicology – Neuroprotective Agents
- 3027-ASPET Neurotransmission
- 3028-ASPET Neurotransmitter Receptors
- 3029-ASPET Blood-Brain Barrier

### Drug Metabolism and Disposition (DMD)

- \*\*3030-ASPET DMD – Biotransformation/Chemistry
- \*\*3031-ASPET DMD – Gene Expression and Regulation
- \*\*3032-ASPET DMD – Pharmacokinetics/Toxicokinetics
- \*\*3033-ASPET DMD – Phase I Enzymes
- \*\*3034-ASPET DMD – Phase II Enzymes
- \*\*3035-ASPET DMD – Reactive Metabolites and Toxicity
- \*\*3036-ASPET DMD – Transporters

### Systems Pharmacology and Toxicology

- 3037-ASPET Anti-inflammatories
- 3038-ASPET Developmental Pharmacology/Toxicology
- 3039-ASPET Diabetes and Metabolic Syndrome
- 3040-ASPET Gastrointestinal Pharmacology/Toxicology
- 3041-ASPET General Pharmacology/Toxicology
- 3042-ASPET Genotoxicity/Mutagenesis
- 3043-ASPET Hormones and Hormone Receptors
- 3044-ASPET Immunopharmacology/Toxicology
- 3045-ASPET Integrative Organ Systems Pharmacology
- 3046-ASPET Mechanisms of Toxicity
- 3047-ASPET Ocular Pharmacology/Toxicology
- 3048-ASPET Pharmacology and Women's Health
- 3049-ASPET Pulmonary Pharmacology/Toxicology
- 3050-ASPET Regenerative Pharmacology/Stem Cells
- 3051-ASPET Regenerative Pharmacology/Tissue Engineering
- 3052-ASPET Renal Pharmacology/Toxicology
- 3053-ASPET Skeletal Muscle Pharmacology/Toxicology
- 3054-ASPET Smooth Muscle Pharmacology/Toxicology
- 3055-ASPET Targets of Toxicant Sensitivity in Aging

### Pharmacogenomics and Translational Pharmacology

- 3056-ASPET Clinical Pharmacology/Toxicology
- 3057-ASPET Computational Biology Applied to Pharmacology
- 3058-ASPET Pharmacogenomics/Proteomics/Metabolomics
- 3059-ASPET Pharmacology of Networks
- 3060-ASPET Translational PK/PD

### Drug Discovery and Development

- 3061-ASPET Drug Formulation and Delivery
- 3062-ASPET High Throughput Screening
- 3063-ASPET Natural Products
- 3064-ASPET New Methodology for Drug Discovery and Screening
- 3065-ASPET Peptide Drug Development

3066-ASPET Polypharmacology  
3067-ASPET Proteins as Drug Targets

## Pharmacology Education

3068-ASPET Knowledge Objectives in Pharmacology  
3069-ASPET Small Group Learning  
3070-ASPET Technology in Pharmacology Teaching  
3071-ASPET Use of Social Media in Pharmacology Education

## Cancer Pharmacology

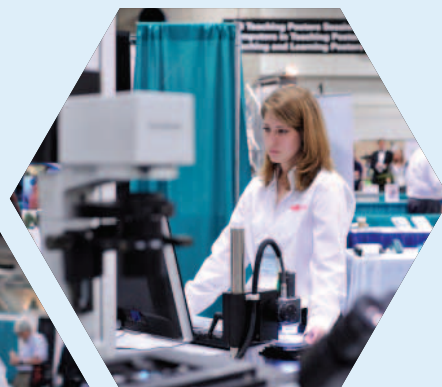
3072-ASPET Cancer Chemotherapy  
3073-ASPET Cancer Pharmacokinetics  
3074-ASPET Cancer Prevention  
3075-ASPET Cancer Stem Cells

## Pharmacology – Other

3076-ASPET Pharmacology – All Other

\* For topic categories 8100 and 8200 see page 35.

\*\* Abstracts submitted to this category may be eligible for presentation at the Drug Metabolism Platform Session as well as inclusion in a poster session.





## GENERAL INFORMATION

## Important Dates

<b>November 8, 2012</b>	Abstract Submission Deadline
<b>February 22, 2013</b>	Early Registration Deadline
<b>March 22, 2013</b>	Hotel Reservations Deadline
<b>March 22, 2013</b>	Cancellation Deadline

## REGISTRATION

Register by February 22, 2013 to receive the discounted registration fee. Complete instructions are on the website at [www.experimentalbiology.org](http://www.experimentalbiology.org).

The registration fee includes entrance to scientific sessions, exhibits, and a copy of the Program. **NOTE: The Program will NOT be mailed this year. You may pick up your program on-site.** The abstracts will only be published online as part of the FASEB Journal. Paper copies will not be available. Registration fees do not include abstract submission fees or membership dues.

## You can register as follows:

- **Online at** [www.experimentalbiology.org](http://www.experimentalbiology.org)
- **Mail the form and payment to:**  
EB 2013 Registration Office  
9650 Rockville Pike  
Bethesda, MD 20814  
The form is online at [www.experimentalbiology.org](http://www.experimentalbiology.org) as an interactive PDF.
- **Fax the form to** 301-634-7008  
(credit card payments only).

Mailed and faxed registration forms will only be accepted until February 22. Several societies have planned special activities that require a fee **in addition** to the Experimental Biology 2013 registration fee. Details on the activities and how to register for these activities are included on pages 58-59.

**\*Graduate Student Registration (including all Society student members):** You must have a department head or research advisor certify your student eligibility. If registering online, enter the name

EB Registration Fees	On or Before February 22	After February 22
Sponsoring/Participating Society Members	\$360	\$470
Nonmembers	\$525	\$635
Retired Society Members	\$130	\$150
*Graduate Student Members	\$80	\$90
*Graduate Student Nonmembers	\$100	\$110
**Undergraduate Students High School Students and Teachers	On-site registration only – Free	

and email address of your department head. If registering at the meeting, bring your student ID card or a letter signed by your department head. "Student" will be indicated on your badge. **Postdoctoral fellows, hospital residents, interns, and laboratory technicians do not qualify as students and must pay the full member or nonmember fee.**

**\*\*Undergraduate Students, High School Students and High School Teachers:**

Registration will not be accepted in advance. To receive complimentary registration on-site, bring your student or teacher ID card or a letter signed by your department head, research advisor, principal or teacher.

**Press Registration:** Complimentary registration is available for qualified press to cover EB 2013. Pre-registration for members of the media and freelance writers is required. A letter of assignment is necessary. Please visit <http://experimentalbiology.org/content/PressInformation.aspx> to view our full press credentials policy. Send your completed request to [media@faseb.org](mailto:media@faseb.org).

**ALL REGISTRANTS – PLEASE NOTE: NO MATERIALS WILL BE MAILED IN ADVANCE**

No badges or meeting programs will be mailed prior to the meeting. There will be on-site kiosks set up to print your badge upon your arrival at the meeting. Programs will not be mailed in advance and can be picked up at the meeting along with other materials.

**On-site Registration:** On-site registration will be available at the Boston Convention and Exhibition Center beginning Friday, April 19, continuing through Wednesday, April 24.

**Cancellation and Refunds:** The receipt and a letter requesting a refund of the registration fee must be received by March 22, 2013. A \$50 non-refundable processing fee will be deducted from the refund. **After March 22, 2013 no refunds will be issued.** Mail to: EB 2013 Registration Office, 9650 Rockville Pike, Bethesda, MD 20814-3998.

## HOTEL INFORMATION

**Deadline for hotel reservations: March 22, 2013**

A list of participating hotels with locations, discounted rates, amenities and instructions for making a reservation are online at [www.experimentalbiology.org](http://www.experimentalbiology.org). Be sure to read the information on the importance of staying at an EB official hotel.

The Greater Boston Convention & Visitors Bureau and Experient Inc. is the only official housing providers for the Experimental Biology meeting.



## SOCIETY TICKETED EVENTS

The following special Society activities have been planned and require a fee in addition to the Experimental Biology 2013 registration fee. If you plan to attend any of these activities, please note where and how to register.



### 21st Annual AAA Awards Banquet & Reception – Tuesday, April 23

The American Association of Anatomists cordially requests the

pleasure of your company at the 21st Annual AAA Awards Banquet on Tuesday, April 23, 2013. The Banquet—from 7:00 PM to 10:00 PM at the Renaissance Boston Waterfront Hotel—will feature a cocktail reception, dinner, & presentation of AAA awards. **Tickets are \$66 and will be available for purchase online** via the AAA Website ([www.anatomy.org](http://www.anatomy.org)). Tickets will not be sold on-site at the meeting.



### ASN Fellows, 50-Year Members, and Past Presidents Luncheon

Join ASN in celebrating the accomplishments and achievements of our past and present Fellows, 50-Year members, and former society presidents over lunch at the annual meeting **Monday, April 22**. This luncheon will include a presentation honoring the newly inducted class of 2013 ASN Fellows. All members are invited to attend; guests are permitted. All newly inducted Fellows will receive complimentary registration. Tickets can be purchased from [www.nutrition.org](http://www.nutrition.org). For additional information, email [meetings@nutrition.org](mailto:meetings@nutrition.org).



### ASBMB Graduate/Postdoctoral Professional Development Program –

**Saturday, April 20, 9:00 AM - 3:30 PM**

Features a career forum, workshops and networking luncheon: \$25 ASBMB members; \$35 all other EB registrants. Recipients of the ASBMB 2013 Graduate Minority and Graduate/Postdoctoral Travel Awards receive event registration as part of the award and do not have to register separately for this event. Sign up while registering for the EB2013 meeting. Event registration will close when fully subscribed. There will be no on-site event registration. Visit [www.asbmb.org/meeting2013](http://www.asbmb.org/meeting2013) for details and program information.



The American Physiological Society will be holding several social events in conjunction with the EB meeting. **APS registrants are encouraged to participate in these social events.** EB attendees expressing interest in physiology are also invited to attend.

The **Opening Ceremony and Walter B. Cannon Lecture** on Saturday, April 20 at 5:30 PM is free of charge.

**APS Opening Reception** on Saturday, April 20, 7:00 PM - 9:00 PM, room 205, Boston Convention Center is free for APS members and those expressing interest in physiology on their registration form, tickets will be required for entry.

**APS Closing Party** on Wednesday, April 24, 6:30 PM to 10:00 PM, room TBD, tickets are \$15.00 in advance/\$25.00 on site.

Please sign up for these events when registering for the meeting by checking the boxes on the registration form. The charge for each event will be \$15.00 in advance/\$25.00 on site.



### 13th Annual Career Development Program and Lunch: Dancing with Journals: A Guide to Submission and Review Sunday, April 21, 2013 at 11:45 AM

ASIP Trainee Members and AAA Student Members will receive a complimentary ticket.

Tickets are \$20 for Regular and Emeritus Members

### ASIP Centennial Celebration Reception

**Monday, April 22, 2013 at 6:00 PM**

Tickets are \$25.00 each

### Lunch & Learn: Responsible Conduct in Research

**Tuesday, April 23, 2013 at 11:45 AM**

\$20.00 ASIP Member Ticket Cost

\$30.00 Non-Member Ticket Cost

## SPECIAL TICKETED ACTIVITY

If you plan to attend this activity, please note special registration:

**FASEB Career Resources Center/MARC Program: “Write Winning Grant Proposals”® All-day Seminar & Workshop: Saturday, April 20 [advance registration required]**

This workshop will be held 8:00 AM – 5:00 PM in the BCEC

Details will be posted on the EB website, [www.experimentalbiology.org](http://www.experimentalbiology.org). Registration is required for the course which is free for EB 2013 registered attendees. Tickets are required for entry and will be issued with the meeting registration materials. Space for this event is limited, so early registration is encouraged.

This widely acclaimed seminar comprehensively addresses both practical and conceptual aspects that are important to the proposal-writing process. It is designed for faculty members and advanced postdoctoral fellows who have had some exposure to writing grant applications, either through training/ mentoring or personal experience. The presentation is tailored to meet the needs of the audience, i.e., to emphasize the funding agencies (federal, private, and/or industrial sources) that are of greatest

interest to the attendees. Emphasis is given to such things as idea development, identification of the most appropriate granting agency, how to write for reviewers, and tips and strategies that are of proven value in presenting an applicant’s case to reviewers.

This seminar program presented at EB 2013 will focus on NIH and emphasize how to cope with the changes in how grant proposals to NIH are written and reviewed. Regardless of the agency, participants are taught to write with a linear progression of logic, which leads reviewers through their applications. It is stressed that applicants are writing for two different audiences – the assigned reviewers, who have read the application in its entirety, and non-assigned reviewers who may have read little, or nothing, of the proposal before the meeting of the review panel. Strategies designed to merit a fundable priority score are emphasized. [Advanced registration and pre-approval to participate in the seminar are required.]



## CHILD CARE



**Child care services  
will be provided on site!**

We encourage families to travel to Boston and enjoy the many family oriented activities in the area. Back by popular demand the sponsoring societies of the Experimental Biology will provide formal child care at the meeting. We will provide more information shortly. It is strongly discouraged to bring your children to the session rooms. We urge you to make reservations in advance of the meeting

## SATELLITE REGISTRATION DESK

**Satellite registration will be available at Co-Headquarter Hotels, Renaissance Boston Waterfront and Westin Boston Waterfront.**





Come visit Boston, MA and experience the city's Waterfront that is booming with new restaurants and harbor walks. Museums have expanded and hotels have renovated! But not to worry, our mix of colonial charm and urban sophistication still shines through making Boston a dynamic site for meetings of all kinds.

# Welcome To Boston

## Restaurants, Dining, and Cool Beans!!!

Boston fare ranges from authentic international to cutting-edge, fusion-style cuisine. The authentic clam chowder and Boston Cream Pie are as good as you've heard and the city's outdoor cafes and waterfront views make for ideal dining experiences. From burgers to bistros, search our database by cuisine, neighborhood and price to find the restaurant of your choice.

Cambridge is often referred to as "Boston's Left Bank" with an atmosphere and attitude all its own. It's the spirited, slightly mischievous side of Boston, just a bridge away across the Charles River. Packed with youthful vitality and international flair, it is a city where Old World meets New Age in a mesmerizing blend of history and education.

## Air Travel/Ground Transportation:

Boston's Logan Airport is located a convenient two miles from the city center with several public airport transportation options from downtown and suburban locations. There are approximately 40 airlines that served Boston and more than 28 million passengers last year.

Travel like a local and take the "T" – Boston's public transportation system. Operated by the Massachusetts Bay Transportation Authority, the "T" will take you (almost) everywhere in the Greater Boston area and beyond. Dock hop and dine by using water transportation to explore the many restaurants and places of interest along the Fort Point Channel and South Boston Waterfront.



## IMPORTANT PROCEDURAL INFORMATION

- The abstract fee is **NOT** your registration fee and **NOT** your society membership fee.
- In addition to submitting your abstract, you must register for the meeting.
- After submitting your abstract, you must submit a separate application if you wish to apply for any of the Society awards and follow the process required by the society.
- The complete Call for Abstracts and general information is available [www.experimentalbiology.org](http://www.experimentalbiology.org)

### Don't Forget:

- Submit your abstract by 11/8/12
- Register for the meeting before 2/22/13 to save big!
- Make hotel reservations by 3/22/13
- Make airline reservations!

### November 8, 2012

- Deadline to submit abstract and \$65 non-refundable abstract processing fee
- Deadline to withdraw or make changes to a submitted abstract

### February 22, 2013

- Deadline for early registration. You may register online after this date, however your registration will be at the higher fee.

### March 22, 2013

- Deadline for hotel reservations. Rates and availability cannot be guaranteed after this date.

### March 22, 2013

- Deadline to request a refund of advance registration. No refunds will be issued after this deadline has passed.

### April 20 – 24, 2013

- Attend Experimental Biology meeting in Boston, MA!

**We Hope to See You in  
Boston!**

**FOLLOW US ON TWITTER  
USING #EB2013!**



**LIKE US ON FACEBOOK  
FOR THE LATEST MEETING  
UPDATES FROM EB AND THE  
SOCIETIES!**



**EB2013**  
Experimental Biology **BOSTON**



## EXHIBITION AND SPONSORSHIP OPPORTUNITIES AT EB 2013

### Apply for Space Today!

Don't miss the opportunity to connect with leaders and decision makers looking for products and services like yours! Reserve your booth space by January 8, 2013 and your company information will be printed in the official meeting program. Application can be found at [www.experimentalbiology.org](http://www.experimentalbiology.org) under Exhibitors.

### Advertising

Display your company name, logo, booth number and message in the meeting program. The program is posted in full on the website in advance of the meeting. Advertising rates, specifications and order forms can be found on the website.

### Booth Upgrade

Increase your exposure and ROI by upgrading your booth in our virtual floor plan. Other options include adding your URL, company logo, product promotion and company video. Please contact [Jkearney@faseb.org](mailto:Jkearney@faseb.org) for additional information.

### Product Workshops

Highlighting your company's products and services in a private theater setting. Product workshops will be held on the exhibit floor and in session rooms for one hour increments and include complimentary A/V equipment. Requests are accepted on a first-come, first-served basis. Complete the online application located on our website. Deadline for consideration is January 8, 2013. A description of the presentation will be included in the meeting program.

### Attendee Mailing Lists

Reach new prospects and stay connected by purchasing the advance or post show attendee mailing lists. Names are sorted by zip code and can be segmented by domestic, Canadian or International addresses. Complete the online order form located on our website.

### Company Box Ad

Maximize your visibility by displaying your company's logo next to your company information in the meeting program. Further details and pricing can be found on our website.

### Sponsorship Opportunities

Sponsorship and marketing opportunities are a great way to get the brand recognition and visibility that you want. Further details can be found online.

**Get your company (or organization) in front of over 14,000 scientists from organizing and guest societies of Experimental Biology.**

**Reserve your space on the floor today! For details, prices, and more visit: [www.experimentalbiology.org/eb/pages/Exhibitors.aspx](http://www.experimentalbiology.org/eb/pages/Exhibitors.aspx).**



**FASEB Office of Scientific Meetings and Conferences**

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## Important Dates

**November 8, 2012** Abstract Submission Deadline

**February 22, 2013** Early Registration Deadline

**March 22, 2013** Hotel Reservations Deadline



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[www.experimentalbiology.org](http://www.experimentalbiology.org)