Annual Meeting at Experimental Biology 2015

MARCH 28 – APRIL 1

BOSTON

ONSITE PROGRAM

Network • Engage • Grow
Welcome to Boston & the American Association of Anatomists Annual Meeting at EB 2015

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Track Theme

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<td>Cell Biology</td>
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<td>Cardiovascular Biology</td>
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<td>Developmental Biology</td>
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<td>Education &amp; Teaching</td>
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<td>Evolution/Anthropology</td>
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<td>Neurobiology</td>
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<td>Professional Development</td>
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<td>RE</td>
<td>Regeneration/Tissue Engineering</td>
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Thank you to our Guest Societies:
Anatomical Society &
International Society of Vertebrate Morphology
### Saturday, March 28

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<tr>
<th>Time</th>
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<tr>
<td>8:00 am – 10:00 am</td>
<td>Room 104C</td>
<td><strong>How to Mentor: Basic Science, Clinical Science, and Educational Scholarship Skills for Graduate Students and Postdocs</strong>&lt;br&gt;<strong>CHAIRS:</strong> Linda May (East Carolina Univ.) &amp; Jonathan Wisco (Brigham Young Univ.)&lt;br&gt;Sarika Thakur (David Geffen School of Medicine at UCLA)&lt;br&gt;What Every Young Investigator Needs to Know about Establishing a Basic or Clinical Science Research Program and Where to Get Help&lt;br&gt;Marios Loukas (St. George’s University School of Medicine)&lt;br&gt;Writing Papers Can be a Scary Thing: How to Mentor Students to Navigate the Monsters and See that Manuscript to Publication&lt;br&gt;Belinda Huang (National Postdoctoral Association)&lt;br&gt;What is My Role as a Post-Graduate Student with Regard to Mentorship and Mentoring?</td>
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<tr>
<td>10:00 am – 10:30 am</td>
<td>Room 105</td>
<td><strong>Career Networking Break</strong>&lt;br&gt;Advanced registration required</td>
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<tr>
<td>10:30 am – 12:30 pm</td>
<td>Room 104C</td>
<td><strong>Leaning In Without Falling Over: Supporting the Success of Women in Science</strong>&lt;br&gt;<strong>CHAIRS:</strong> Lorinda Smith (Univ. of Utah) &amp; Valene O’Loughlin (Indiana Univ.)&lt;br&gt;Debra Rolison (U.S. Naval Research Laboratory)&lt;br&gt;Creating Change in Scientific Institutions through Subversion, Revolution (Title IX) &amp; Climate Change&lt;br&gt;Lisa Lee (University of Colorado School of Medicine)&lt;br&gt;“Just The Facts, Ma’am”: The Gender Gap in Academia, from the Classroom to the Bank&lt;br&gt;Jessica Brinkworth (University of Montreal)&lt;br&gt;Surviving the Sexodus Project: How STEM Women Approach Career Challenges&lt;br&gt;Valerie O’Loughlin (Indiana University School of Medicine)&lt;br&gt;I Say Assertive, You Say Bossy; I Say Leader, You Say B***: Gender bias in Academia</td>
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<tr>
<td>12:30 pm – 1:30 pm</td>
<td>Room 101</td>
<td><strong>Career Networking Lunch</strong>&lt;br&gt;<strong>TOPIC:</strong> Establishing a Professional Network&lt;br&gt;<strong>MODERATOR:</strong> Emmy Gordon (Rutgers Univ.)&lt;br&gt;Advanced registration required</td>
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<tr>
<td>2:00 pm – 4:00 pm</td>
<td>Room 102AB</td>
<td><strong>“Back to Basics” Anatomy for Everyday Practice: Integrating Anatomy Education into the Clinical Years</strong>&lt;br&gt;<strong>CHAIR:</strong> Nirusha Lachman (Mayo Clinic)&lt;br&gt;Anne Agur (University of Toronto)&lt;br&gt;Expanding Program Specific Anatomy Education during Residency: New Opportunities and Challenges&lt;br&gt;Geoffrey Cundiff (University of British Columbia)&lt;br&gt;Integrating Anatomical Education into a Residency Curriculum of a Surgical Specialty&lt;br&gt;Adam K. Jacob (Mayo Clinic)&lt;br&gt;Back to Basics: Applied Anatomy in Regional Anesthesia&lt;br&gt;Daniel B. Jones (Harvard Medical School)&lt;br&gt;Teaching Anatomy in the Simulation Center</td>
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<td>2:00 pm – 4:00 pm</td>
<td>Room 104AB</td>
<td><strong>Anatomy of Aging</strong>&lt;br&gt;<strong>CHAIR:</strong> H. Wayne Lambert (West Virginia Univ.)&lt;br&gt;Louise McCullough (The University of Connecticut Health Center)&lt;br&gt;The Aging Brain&lt;br&gt;Johanna Hannan (East Carolina University)&lt;br&gt;The Ups and Downs of Aging in the Male Genitourinary Tract&lt;br&gt;Zoltan Ungvari (University of Oklahoma Health Sciences Center)&lt;br&gt;You Are as Old as Your Arteries - and Microvessels&lt;br&gt;Arthur Dalley (Vanderbilt University School of Medicine)&lt;br&gt;Osteophytes for Neophytes-Geriatric MSK Anatomy for Health Care Students</td>
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<tr>
<td>2:00 pm – 4:00 pm</td>
<td>Room 102AB</td>
<td><strong>Vascular and Connective Tissue Imaging In Situ: Returning Bone to the Skeleton</strong>&lt;br&gt;<strong>CHAIR:</strong> Maria Serrat (Marshall Univ. School of Medicine)&lt;br&gt;Cornelia Farnum (Cornell University College of Veterinary Medicine)&lt;br&gt;Imaging the Dynamics of Bone Elongation: Integrating Macro- and Micro-scale Processes at the Organ Level in Situ&lt;br&gt;Rebecca Williams (Cornell University)&lt;br&gt;New Strategies for Cellular-Scale Imaging of Bone and Cartilage&lt;br&gt;Rhonda Prisby (University of Delaware College of Health Sciences)&lt;br&gt;Conversion of Bone Marrow Blood Vessels into Bone Leads to Microvascular Dead Space: A Potential Etiology for Bone and Bone Marrow Disease with Advancing Age</td>
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Sessions and events are held at the Boston Convention & Exhibition Center, unless otherwise noted.
Saturday, MARCH 28

Matthew Allen (Indiana University School of Medicine)
Mechanisms Need Not be Molecular – Tissue-level Mechanisms for Drug-induced Changes to Bone Mechanical Properties

Maria Serrat (Marshall Univ. School of Medicine)
Imaging IGF-I Uptake in Growth Plate Cartilage Using In Vivo Multiphoton Microscopy

2:00 pm – 4:00 pm Room 105
Creation of Tissue-like Structures In Vitro Using Advanced Technologies

Co-sponsored by the Anatomical Society

CHAIR: Stefan Przyborski (Durham Univ.)

Stefan Przyborski (Durham Univ.)
Platform Technologies for Routine Generation of Advanced Organotypic Three Dimensional Cell Culture Models

Molly Shoichet (University Toronto)
Three Dimensional Hydrogel Scaffolds and Applications in the CNS

John Haycock (University of Sheffield)
Development of 3D In Vitro Models of Nerve and Skin for Disease, Disorder and Testing Studies

Dan Huh (University of Pennsylvania)
Microengineered Physiological Biomimicry: Human Organs-on-Chips

4:30 pm – 5:45 pm Room 104AB
KEYNOTE PRESENTATION

Sean Carroll
(Howard Hughes Medical Institute and Univ. of Wisconsin)
Evo-Devo and an Expanding Evolutionary Synthesis

Westin Boston Waterfront, 6:00 pm – 7:30 pm Grand Ballroom CD
Welcome Reception
Sponsored by WILEY

Vist the ANATOMY LOUNGE in Room 103 for networking, coffee, free wi-fi and afternoon snacks!
Open Saturday–Tuesday, 7:30 AM–6:30 PM
Snacks will be provided during the the 4:30 pm session break (Sun – Tue)

COMMITEE FAIR

Stop by the Anatomy Lounge to meet with your committee representatives during the following hours:

SUNDAY – TUESDAY
10:00 am – 10:30 am
12:00 pm – 1:00 pm
4:30 pm – 5:00 pm

SUNDAY
Educational Affairs Committee
Professional Development Committee

MONDAY
Membership Committee
Program Committee

TUESDAY
Advisory Committee for Young Anatomists (ACYA)
Public Affairs Committee
Sunday, MARCH 29

7:30 am – 8:30 am Room 101
First-Time Attendee Breakfast
Advanced registration required

10:30 am – 12:00 pm Room 104C
Structures and Functions of Primary Cilia

CHAIR: Takanari Inoue (Johns Hopkins Univ.)
Thibaut Egueither (University of Massachusetts Medical School)
IFT25 and IFT27 Couple the BBSome to the IFT Particle for Maintenance of the Ciliary Signaling Compartment
Jeremy Reiter (University of California, San Francisco)
Restricted Access: The Transition Zone Controls Ciliary Composition and Signaling
Lisa Satlin (Icahn School of Medicine at Mount Sinai)
New Insights into the Complex Physiologic Role of the Cilium in Secretory Epithelia

10:00 am – 12:00 pm Room 52A
Anatomy Education Roundtable – Developing Effective Cognitive Strategies for Future Long-Term Recall of Medical Knowledge

CHAIR: James Walker (Purdue Univ./ IU School of Medicine – Lafayette)
John Pelley (Texas Tech Univ. HSC School of Medicine)
Developing Effective Cognitive Strategies for Future Long-Term Recall of Medical Knowledge: What are the Questions We Need To Answer?

10:30 am – 12:00 pm Room 104B
Symposium – Vascular Organization and Patterning
Blanche Capel (Duke Univ. School of Medicine)
Fetal Macrophages Mediate Vascularization and Cord Formation during Testis Organogenesis
Mary Dickinson (Baylor College of Medicine)
Imaging Cardiovascular Development: Insights into Congenital Disease
Mark Kahn (Univ. of Pennsylvania School of Medicine)
Role of Flow in Lymphatic Vessel Remodeling and Patterning
Mark Majesky (Univ. of Washington)
Development of Coronary Vessels

10:30 am – 12:00 pm Room 104AB
PLENARY – Cardiovascular Biology
Anne Eichmann (Yale School of Medicine)
Molecular Parallels between Neural and Vascular Development
Ken Walsh (Boston Univ. School of Medicine)
Adipose Tissue – Vasculature Interactions

12:00 pm – 12:30 pm Room 104C
Members Meeting (formerly called the Business Meeting)
All AAA Members are invited to attend

12:00 pm – 1:00 pm Room 101
Career Networking Lunch

TOPIC: Surviving as a Young Faculty
MODERATOR: Lisa Lee
Advanced registration required
**Sunday, MARCH 29**

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<th>Time</th>
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<th>Session Title</th>
<th>Chair(s)</th>
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<tbody>
<tr>
<td>2:30 pm – 4:00 pm</td>
<td>Room 102AB</td>
<td>Educational Neuroscience: Towards the Science of Learning</td>
<td>CHAIR: Ann Zumwalt (Boston Univ. School of Medicine)</td>
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<td>Peter Bergethon (Pfizer Corporation)</td>
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<td>Timothy D. Wilson (Western University)</td>
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<td>Cerebral Blood Flow and Spatial Ability</td>
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<td>Ann Zumwalt (Boston University School of Medicine)</td>
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<td>In Pursuit of an Objective Assessment of Learning Using Gaze Tracking and EEG</td>
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**CARDIOVASCULAR BIOLOGY MINI-MEETING CB**

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<tr>
<td>2:30 pm – 4:30 pm</td>
<td>Room 104AB</td>
<td>Symposium – Endothelial-to-Mesenchymal Transition</td>
<td>Raghu Kalluri (MD Anderson Cancer Center)</td>
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<td>The Biology of Endothelial to Mesenchymal Transition and its Role in Cancer</td>
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<td>Martin Schwartz (Yale University School of Medicine)</td>
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<td>Fibronectin Links Endo-MT with Inflammation</td>
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<td>Michael Simons (Yale University School of Medicine)</td>
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<td>Endothelial-to-mesenchymal Transition in Cardiovascular Pathology</td>
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<td>Damian Medici (Brown Univ.)</td>
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<td>Endothelial-mesenchymal Transition as a Novel Mechanism for Tissue Regeneration</td>
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<tr>
<td>2:30 pm – 4:30 pm</td>
<td>Room 104C</td>
<td>Cilia in Development</td>
<td>CHAIR: Jeffrey Amack (SUNY Upstate Medical Univ.)</td>
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<td>Maureen Barr (Rutgers University)</td>
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<td>Cilia and Extracellular Vesicles are Signaling Organelles</td>
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<td>Iain Drummond (Harvard Medical School)</td>
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<td>Motile and Sensory Cilia Function in Zebrafish</td>
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<td>Bradley Yoder (University of Alabama at Birmingham)</td>
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<td>Mammalian DRC, Ciliatory, Motility and Left-Right Body Asymmetry</td>
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<td>John Wallingford (University of Texas)</td>
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<td>Planar Cell Polarity, Ciliogenesis, and Human Disease</td>
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<td>2:30 pm – 4:30 pm</td>
<td>Room 105</td>
<td>Major Transformations of the Amniote Nose</td>
<td>CHAIR: Tomasz Owerekowicz (California State Univ., San Bernardino)</td>
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<td>A.W. Crompton (Harvard University)</td>
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<td>Origin of the Mammalian Nose</td>
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<td>Timothy Smith (Slippery Rock Univ.)</td>
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<td>Nasal Morphometry in Primates: Is There a Sensory Trade-Off for Visual Specialists?</td>
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<td>Jason Bourke (Ohio Univ.)</td>
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<td>Using Airflow Patterns to Aid Inferences of Nasal Soft-tissue Reconstructions in Dinosaurs</td>
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<td>Tomasz Owerekowicz (California State Univ., San Bernardino)</td>
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<td>4:00 pm – 5:00 pm</td>
<td>Exhibit Level</td>
<td>APS/AAA Undergraduate Student Poster Session</td>
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<td>4:10 pm - 4:30 pm</td>
<td>Room 102AB</td>
<td>e-Poster Slam – Education Posters</td>
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<td>5:00 pm – 6:15 pm</td>
<td>Room 102AB</td>
<td>Developmental Biology Award Hybrid Symposium H.W. Mossman Award Lecture in Developmental Biology featuring 2015 Young Investigator Award Recipient, Dirk Hockemeyer</td>
<td>CHAIR: Xiangmin Xu (Univ. of California, Irvine)</td>
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<td>Dirk Hockemeyer (Univ. of California, Berkeley)</td>
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<td>Elucidating Telomerase Function in Human Tumor and Stem Cell</td>
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<td>Brad Amendt (The Univ. of Iowa)</td>
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<td>TBX1 Protein Interactions and microRNA-96-5p Regulation Controls Stem Cell Proliferation during Craniofacial and Dental Development</td>
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<td>Annita Achilleos (Stowers Institute for Medical Research)</td>
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<td>The Craniofacial-specific Role of the Ribosomal Gene Polr1c and its Role in Treacher Collins Syndrome</td>
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<td>Darren Bridgewater (McMaster Univ.)</td>
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<td>Developmental Origins for Kidney Disease in Shroom3 Deficient Mice</td>
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**Sunday, MARCH 29**

**CARDIOVASCULAR BIOLOGY MINI-MEETING**

**5:00 pm – 6:30 pm**
**Room 104AB**

**Cardiovascular Biology Platform Session**

**CHAIR:** Katie Bentley (Harvard Medical School)

Bruno Larrière (Univ. of Montreal)

Targeting BMP Signaling for the Treatment of Neovascular Age-Related Macular Degeneration

Przemyslaw Sapieha (Univ. of Montreal)

Semaphorin 3A and VEGF Promote Inflammation in Retinopathy

Feilim Mac Gabhann (Johns Hopkins Univ.)

Context-Specific Regulation of VEGF Receptor Signaling

Christopher Carman (Harvard Medical School)

Vascular Endothelia Mechanically Sense Barrier Quality and Maintain Functional Integrity through ROS-Dependent Actin Remodeling

Ramaseswary Krishnan (Beth Israel Deaconess Medical Center)

Force Chains And Gap Formation in Thrombin-induced Endothelial Permeability

Katie Bentley (Harvard Medical School)

Temporal Dynamics of Vascular Patterning, an Integrative Approach

**5:00 pm – 6:15 pm**
**Room 104C**

**Cell Biology Award Hybrid Symposium**

**CHAIR:** Julian Guttman

(Simon Fraser Univ.)

Bungo Akiyoshi (Univ. of Oxford)

Discovery of Unconventional Kinetochores in Kinetoplastids

Samantha Brugmann (Cincinnati Children's Hospital Medical Center)

GLI-dependent Etiology of Craniofacial Ciliopathies

Joseph Sanger (SUNY Upstate Medical Univ.)

Inhibition of the Ubiquitin Proteasomal System Reversibly Blocks Myofibrillogenesis

Karen Lo (Simon Fraser Univ.)

Identification and Characterization of a Francisella tularensis Protein required for Vacuole Escape and Tularemia Development

**5:00 pm – 6:30 pm**
**Room 105**

**Postdoc Platform Award Session**

Georgios Kararigas (Charite Univ. Hospital)

Sex-Specific Calcium Handling Underlying Sex-Specific Cardiomyocyte Death in Heart Failure

Elaine Wirrig (Cincinnati Children’s Hospital Medical Center)

Neural Crest-Derived Valve Interstitial Cells Calcify in the Klotho-Deficient Mouse Model of Aortic Valve Disease

Wuqiang Zhu (Univ. of Minnesota)

Heart Specific Deletion of RNA Binding Protein Rbfox1 Sensitizes Mice to Pressure Overload Induced Cardiac Dysfunction

Foteini Hassiotou (The Univ. of Western Australia)

Delineating the Cellular Hierarchy of Glioblastoma and Gliosarcoma for Identification of Therapeutic Targets

Girriso Benderro (Case Western Reserve Univ.)

Diminished Ang-2 Expression and Microvascular Density in COX-2 Knock-out Mouse Cerebral Cortex in Moderate Hypobaric Hypoxia

Katherine Brakora (UCSF)

Facial Development and Alterations in FGF Signaling in a Mouse Model of Crouzon Syndrome

**6:15 pm – 6:30 pm**
**Room 102AB**

**e-Poster Slam – Developmental Biology Posters**

**6:15 pm – 6:30 pm**
**Room 104C**

**e-Poster Slam – Cell Biology Posters**

Stop by AAA’s **Booth 1327**

in the Exhibit Hall

and take a **#selfie**

at our giant selfie booth!
Monday, MARCH 30

NEUROBIOLOGY MINI-MEETING

8:30 am – 10:00 am Room 104AB

PLENARY – The Anatomy of Memory and Neurodegenerative Disease: Prions, a Nobel Idea

CHAIR: Paul Trainor (Stowers Institute for Medical Research)

Eric Kandel (Columbia Univ.)
Persistence of Memory and Prion Mechanisms: A Perspective

Stanley Prusiner (Univ. of California, San Francisco)
Prions Causing Alzheimer’s and Parkinson’s—Quest for Effective Therapeutics

10:30 am – 12:00 pm Room 104C

Best Practices for Using Social Media as it Reshapes Academia and the Classroom

CHAIR: Jason Mussell (Louisiana State Univ. Health Sciences Center)

Frank LoMonte (Student Press Law Center)
Twitter Goes to College: Student and Employee Rights on Social Media

Kevin Dougherty (Baylor Univ.)
Expanding the Classroom with Social Media

Kirsten Brown (George Washington Univ.)
Creating and Controlling Your Academic Brand

Alison F. Doubleday (Univ. of Illinois at Chicago)
Current Trends in How Students use Technology and How Faculty can Support those in the Classroom (and out)

10:30 am – 12:00 pm Room 102AB

Anatomy Education Platform 1

CHAIRS:
Heather Billings (West Virginia Univ.) & Anna Edmondson (Georgia Health Sciences Univ.)
Christopher Ramnanan (Univ. of Ottawa)
Impact of Different Small Student Group Learning Approaches to Compressed Medical Anatomy Education

Rebecca Luft (Tufts Univ. School of Medicine)
Is Accreditation Driving Our Teaching in the Right Direction?

William Saltarelli (Central Michigan Univ.)
Implementing a Cooperative Learning Model in a Cadaver Anatomy Laboratory

Anita Killins (Harding Univ.)
Team-based Learning in Gross Anatomy Improves Academic Performance and Perceptions of Teamwork

Kimberly Betts (Geisel School of Medicine at Dartmouth)
A New Twist on PBL: A Pilot Study of a Problem-based Dissection Exercise

Stéfanie Attardi (Western Univ.)
Optimizing Communication in an Online Systemic Anatomy Course with a Laboratory

10:30 am – 12:30 pm Room 104AB

Genetic Factors in Abnormal Brain Development

David Katz (Case Western Reserve University)

Therapeutic Strategies for Restoring Neural Circuit Function in Rett Syndrome

Alcino Silva (UCLA)
Mechanisms and Adult Treatments for Cognitive Deficits Associated with Neurodevelopmental Disorders

Christopher Walsh (Harvard Medical School)
Genetic Factors Regulating Human Cerebral Cortex Development

12:00 pm – 1:00 pm Room 101

Career Networking Lunch

TOPIC: Careers Outside Academia

MODERATOR: Ann Zumwalt (Boston Univ.)

Advanced registration required

2:30 pm – 4:30 pm Room 102AB

Didactic Methods in the Anatomical Sciences: How Does Technology Help or Hinder? (Hybrid)

CHAIRS: Michael Hortsch (Univ. of Michigan)

Akram Abood Jaffar (Univ. of Sharjah)
Facebook in Anatomy Education: Why and How?

Bruce Wainman (McMaster Univ.)
The Effect of Image Quality and Image Presentation on the Recall of Anatomical Knowledge
Monday, MARCH 30

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Michael Hortsch (Univ. of Michigan)
“How We Learn May Not Always Be Good For Us” – Analytics of Students’ Study Strategies, Educational Resource Choices, and Learning Success in a Medical Histology Course

Haviva Goldman (Drexel Univ. College of Medicine)
Technology and Innovation in Histology: Adapting to a Changing Landscape of Teaching in Medical Microanatomy

Robert Druzinsky (Univ. of Illinois)
Tablets in the Gross Anatomy and Neuroanatomy Labs: Quick and Dirty Can Work

Claire Smith (Brighton and Sussex Medical School)
Shaping Neuroanatomy Education in Medicine: Implementing an iPad Friendly E-booklet to Support Practical Based Learning

Sonya Van Nuland (Western Univ.)
E-Learning: Effective or Defective? The Impact of Commercial E-Learning Tools on Learner Cognitive Load and Anatomy Instruction

NEUROBIOLOGY MINI-MEETING

2:30 pm – 4:30 pm Room 104AB
Symposium - Spinal Cord Injury and Repair Strategies

Chair: Brian Allman (University of Western Ontario)
Jacqueline Bresnahan (University of California, San Francisco)
Degeneration and Repair after Spinal Cord Injury (SCI) in the Non-human Primate (NHP)

Michael Beattie (University of California, San Francisco)
Degeneration, Repair, and Plasticity after SCI: A Central Role for Cytokines

Arthur Brown (Western University)
Sox9 Knock-down in Mice Improves Locomotor Recovery after Spinal Cord Injury by Reducing CSPG Levels and Facilitating Reactive Sprouting

Samuel David (McGill University)
Mechanisms Underlying Macrophage Polarization in Spinal Cord Injury - Detrimental and Beneficial Influences on Recovery

2:30 pm – 4:30 pm Room 104C
Evolution, Development and Relationships between Heart and Head Muscles: Surprising Implications for Vertebrate Origins and Medicine

Chair: Rui Diogo (Howard Univ.)

Rui Diogo (Howard Univ.)
Why Study Muscles: Bringing Together Anatomy, Evolution, Development, Genetics, Birth Defects and Medicine

Eldad Tzahor (Weizmann Institute of Science)
Cardiac and Craniofacial Development and Regeneration

Robert Kelly (Aix-Marseille University)
Connecting Heart and Head Muscle Development in a DiGeorge Syndrome Mouse Model

Lionel Christiaen (New York University)
Regulation of Cardiopharyngeal Fate Specification in a Simple Chordate

5:00 pm – 6:30 pm Room 102AB
Educational Research Platform Awards Session

Taylor Phelps (Medical College of Georgia at Georgia Regents Univ.)
The Influence of Spatial Ability on High and Low Order Anatomy Examination Questions

Jessica Kahl (Univ. of Colorado School of Medicine)
Quantification of Pattern Recognition Skills Acquisition in Histology Using an Eye-Tracking Device: First-Step toward Evidence-Based Histology Education

Artin Galoosian (GWU SMHS)
Improving Anatomical Knowledge through Interactive Modules on the OB/GYN Clinical Clerkship

Jessica Byram (Indiana Univ. School of Medicine)
Using Generalizability Analysis to Establish Guidelines for Designing Horizontally Integrated Anatomy Assessments

Guenevere Rae (Louisiana State Univ. Health Sciences Center)
Using the Brains We Have: Dissection of the Human Brain Assists the Medical Student in Learning and Retaining Neuroanatomy

Alexander Whelan (Univ. of Ottawa)
Benefits of Extracurricular Participation in Dissection in a Prosecution-Based Medical Anatomy Program
Monday, MARCH 30

NEUROBIOLOGY MINI-MEETING

5:00 pm – 6:15 pm  Room 104AB

Neurobiology Award Hybrid Symposium

C.J. Herrick Award Lecture in Neuroanatomy featuring 2015 Young Investigator Award Recipient, Feng Zhang

CHAIR: Thomas Jhou
(Medical Univ. of South Carolina)

Feng Zhang (The Broad Institute, Massachusetts Institute of Technology)
Development and Applications of CRISPR-Cas9 for Genome Manipulations
Xiangmin Xu (Univ. of California, Irvine)
Cell-type Specific Hippocampal Circuit Mapping by Genetically Modified Rabies Virus
Patrick Nahirney (Univ. of Victoria)
Lyon Hough (Missouri State Univ.)
Effects of Developmental Hyperserotonemia in the Rat Dentate Nucleus Neuronal Morphology

5:00 pm – 6:30 pm  Room 104C

Cardiovascular Development and Disease

CHAIR: L. Bruno Ruest (Texas A&M Univ. Baylor College of Dentistry)

Christine Seidman (Harvard Medical School)
Genetic Pathways in Congenital Heart Development
Laura Dyer (Middle Georgia State College)
BMPER-mediated BMP Signaling Promotes Cardiac Development
L. Bruno Ruest (Texas A&M Univ. Baylor College of Dentistry)
Endothelin-A Receptor Regulates Cdc42 Activity in Cardiac Outflow Tract Neural Crest Cells
Alexia Hulin (Cincinnati Children’s Hospital Medical Center)
Loss of Axin2 in Murine Aortic Valves Leads to Myxomatous Disease

5:00 pm – 6:30 pm  Room 105

Morphological Sciences Award Hybrid Symposium

CHAIR: Lionel Christiansen
(New York Univ.)

Richard Daneman (Univ. of California, San Diego)
Regulation of the Blood-Brain Barrier in Health and Disease
Ian George (Univ. of Missouri)
Quantifying the Connectivity of the Language-Specific Cerebrocerebellar Network (LSCN)
Andas Czirok (Univ. of Kansas Medical Center)
How and Why Embryonic Tissue Layers Move during Early Morphogenesis in Avian Embryos?
Melissa LaBonty (Tufts Univ.)
Understanding the Mechanisms Driving Ectopic Bone Formation in a Zebrafish FOP Model

6:15 pm – 6:30 pm  Room 104AB

e-Poster Slam – Neurobiology Posters

6:30 pm – 7:30 pm  A Foyer

Student Poster Reception

Regional Meeting

SATURDAY - May 30, 2015

Schulich School of Medicine and Dentistry,
Western University, London, Canada

Abstract Deadline – April 27
This is a great opportunity for students, postdocs and faculty to participate in a one-day meeting in London, Canada.

- Affordable registration rates for AAA Members and non-members.
- No abstract submission fee!
  One free abstract submission (per person) is included with your registration. Abstracts will be programmed as poster and oral presentations.
- Prizes will be awarded to students for poster and oral competitions.

Featuring Keynote Speaker
Dr. Ravi Menon, Canada Research Chair in Functional and Molecular Imaging

FOR MORE INFORMATION VISIT
http://www.anatomy.org/content/regional-meeting
Tuesday, MARCH 31

8:00 am – 10:00 am Room 102AB
Let’s Get EDucated! How Anatomists Can Help with Accreditation Requirements

CHAIR: Ann Poznanski (California Northstate Univ. College of Medicine)
Barbara Barzansky (American Medical Association)
Your Role in Meeting LCME Accreditation Standards

Virginia Lyons
Competencies 101: The Knowledge, Skills, Behaviors and Attitudes of a Top Notch Anatomy Educator
Kimberly Topp (University of California, San Francisco)
Wide and Deep Preparation for any Residency? Really?
Ann Poznanski (California Northstate University College of Medicine)
Curriculum Content Review: A Guided Collaborative Process in Continuous Quality Improvement

8:00 am – 10:00 am Room 104AB
The Evolutionary Tapestry of Vertebrate Morphology and Function

Co-sponsored by the International Society of Vertebrate Morphology
Co-sponsored by The Anatomical Record
CHAIR: Lawrence Wittmer (Ohio Univ.)
Colleen Farmer (University of Utah)
Evolution of Vertebrate Lung Morphology and Function
Roland Frey (Leibniz Institute for Zoo and Wildlife Research)
Convergent Evolution towards a Permanently Descended and Mobile Larynx in Some Species of Mammals
Dominique Adriaens (University of Ghent)
Computer Modelling and Biomimetics for Understanding the Evolution of Tail Grasping in Seahorses
Stephanie Pierce (Harvard University)
Towards a Whole Animal, Whole Lineage Perspective on the Evolution of Tetrapod Locomotion
Olga Panagiotopoulou (University of Queensland)
Biomechanics of Mammalian Feet during Locomotion: An Integrative 3D Analysis

Charles Roseman (Univ. of Illinois: Urbana-Champaign)
Morphological and Population Genomic Analysis Demonstrates that Natural Selection and Neutral Evolutionary Processes Contributed to the Evolution of the Human Skeleton
Kristen Savell (Univ. of Tennessee, Knoxville)
Selection Gradients and Ecogeographic Variance in the Human Post-crania
Rui Diogo (Howard Univ. College of Medicine)
The End of an Old Dogma with Crucial Implications for Medical and Biology Students and for Medicine: Regenerative, Developmental, Paleontological and Evolutionary Studies Contradict the Fore-hindlimb Serial Homology

10:30 am – 12:00 pm Room 102AB
Anatomy Education Platform 2
CHAIRS: Virginia Lyons (Geisel School of Medicine at Dartmouth) & Timothy Wilson (Univ. of Western Ontario)
Tracey Wilkinson (Univ. of Dundee)
Are Spot Test Multiple Choice Questions Easier to Answer than Short Answer Questions?
Kelli Wheeler (Medical College of Georgia at Georgia Regents Univ.)
Evaluation of the Impact of Peer Teaching within the Gross Anatomy Laboratory on Student Academic Performance
Sagar Chawla (Mayo Clinic)
The Hidden Learning Environment: Effect of Informal Student Networks on Team Performance in a Gross Anatomy Course
Ala’a El-Shaar (Boston Univ. School of Medicine)
Use of Gaze Tracking and EEG to Measure Short and Long-term Learning by Medical Gross Anatomy Students
Jean Langlois (Centre Hospitalier Universitaire de Sherbrooke)
Vision-Based Spatial Abilities and Pictures of Objects Recognized from Haptic Perception

10:30 am – 12:00 pm Room 104AB
Evolution and Comparative Anatomy Platform
CHAIR: Tamara Franz-Odendaal (Mount Saint Vincent Univ.)
Emily Rayfield (Univ. of Bristol)
Genetic and Environmental Control on Mandibular Form and Function in Mice
Julia Molnar (Coastal Carolina Univ.)
Changes in Vertebral Morphology with Increasing Aquatic Adaptation in Crocodylomorphs
Daniel Urban (Univ. of Illinois at Urbana-Champaign)
Mechanisms of Mammalian Middle Ear Ossicle Transition from the Reptilian Jaw Joint
Janine Ziemann (Howard Univ. College of Medicine)
Cephalic Muscle Evolution in Chordates
Tuesday, MARCH 31

Matthew Borths (Stony Brook Univ.)
Using Geometric Morphometrics to Examine Cranial Disparity in Extinct and Extant Marsupial and Placental Carnivores

Neal Anthwal (Kings College London)
The Evolution and Development of The Mandibular Coronoid Process in Mammals

10:30 am – 12:00 pm Room 104C

Stem Cells, Tissue Engineering & Regeneration

CHAIR: Martine Dunnwald (Univ. of Iowa)

Jennifer Paxton (Univ. of Edinburgh)
Enhancing Engineered Ligament Strength using a Multi-strand Approach

Emily Gilbert (Univ. of Guelph)
Neural Stem/Progenitor Cells of the Spinal Cord are Activated in Response to Tail Loss in the Leopard Gecko

Elizabeth Hutchins (Arizona State Univ.)
Integrated Transcriptomic, Proteomic, and MicroRNA Data Identify Key Regulators of Developmental and Repair Processes during Tail Regeneration in the Green Anole Lizard

Diana Ramirez-Bergeron (Case Western School of Medicine)
Impaired Vascular Oxygen Sensing Affects the Maintenance and Regeneration of the Bone Marrow

Kazuhiko Shimizu (Tokyo Women’s Medical Univ.)
Roles of Podoplanin Positive Cells in Wound Healing of the Mouse Tongue

Pelagie Favi (Northeastern University)
Fabricating Microporous Nano Silver Bacterial Cellulose Scaffolds Using a Laser-cutting Instrument for Bone Tissue Regeneration

12:00 pm – 1:00 pm Room 101

Career Networking Lunch

Topic: Mid-to-Late Career Transitions

Moderator: Michael Lehman (Univ. of Mississippi Medical Center)

Advanced registration required

2:30 pm – 4:30 pm Room 102AB

Keep Calm and Carry On Educating

Co-sponsored by the Anatomical Society

Chair: Claire Smith (Univ. of Sussex)

Peter Bazira (Hull York Medical School)
Discourse Perspectives on Learning Anatomy by Whole-body Dissection

Gabrielle Finn (Hull York Medical School)
Students’ Personality and Learning Anatomy

Victor Nyamse (Glasgow Caledonian University)
The Anatomy Schema Network

Claire Smith (Univ. of Sussex)
Spatial Ability and Learning Anatomy

2:30 pm – 4:30 pm Room 104AB

The Development and Control of Vertebrate Morphology

Co-sponsored by the International Society of Vertebrate Morphology

Co-sponsored by The Anatomical Record

Chair: Dominique Adriaens (University of Ghent)

Karen Sears (University of Illinois)
Timing the Developmental Origins of Mammalian Limb Diversity

L. Patricia Hernandez (George Washington University)
Origin, Development, Function, and Evolution of Cypriniform Trophic Novelties

Rebecca German (Northeast Ohio Medical University)
Sensorimotor Integration in Anatomy and Function during Feeding

10:30 am – 12:00 pm Room 105

Bones, Cartilage & Teeth Platform

Chair: Ralph Marcucio (Univ. of California, San Francisco)

Haza Star (King’s College London)
The Role of the Eda Pathway in the Morphogenesis of Molar Roots

L Bruno Ruest (Texas A&M Univ. Baylor College of Dentistry)
Activation of RANKL and MMP Production by Endothelin Signaling in Cultured Periodontal Fibroblasts

Katherine Wronowicz (Univ. of California, San Francisco)
FGF and TGFβ Signaling are Required during Secondary Chondrogenesis in the Jaw Skeleton

Nicholas Mignemi (Vanderbilt Univ.)
The Temporal and Spatial Development of Vascularity in a Healing Displaced Fracture

Grace Bundens (Cooper Medical School of Rowan Univ.)
Development of a Serum-free, Three Dimensional Cell Culture Model for Primary Human Articular Chondrocytes to Test Potential Therapeutics

Stephanie Moore (Vanderbilt Univ.)
Fibrinogen Regulates MMP-9 Processing of VEGF-induced Angiogenesis and Tumor Growth in Osteosarcoma

Sessions and events are held at the Boston Convention & Exhibition Center, unless otherwise noted.
Tuesday, MARCH 31

2:30 pm – 4:30 pm  Room 104C
Breaking the Barrier: The Gastrointestinal Tract in Health and in Inflammatory Bowel Disease  
**CHAIRS:** Abdo Jurjus (American Univ. of Beirut) & Inaya Hajj Hussein (Oakland Univ. William Beaumont School of Medicine)

Abdo Jurjus (American University of Beirut)
Inflammation in Colorectal Cancer Inflammatory Bowel Disease, and Diabetes Mellitus: The Link
Francesco Cappello (Univ. of Palermo)
Role of Chaperones in Healthy Bowel and IBD
Jean Marie Reimund (Strasbourg University)
New Insight in Inflammatory Bowel Disease Pathophysiology: Current and Future Therapeutic Applications
Inaya Hajj Hussein (Oakland University)
Integrating Histology, Gross Anatomy and Histopathology in a Case Based Approach to Inflammatory Bowel Disease

2:30 pm – 4:30 pm  Room 105
Making Connections: Comparative Biomechanics and Evolution of Joints  
**CHAIR:** Casey Holliday (Univ. of Missouri)

Elizabeth Brainerd (Brown Univ.)
Costo-vertebral Joints in Amnionites: To What Extent Does Joint Shape Determine Rib Motion during Breathing?
Casey Holliday (Univ. of Missouri)
PMJs and TMJs: Convergence in the Craniomandibular Joints of Crocodilians and Mammals
Robert Kambic (Harvard University)
Skeletal Kinematics Reveal the Complex Interactions of Degrees of Freedom at Joints
Henry Tsai (University of Missouri)
Solutions for Gigantism: Evolutionary and Biomechanical Implications of Dinosaur Hip Joint Soft Tissues

5:30 pm – 6:00 pm  Room 104AB
Henry Gray Distinguished Educator Award Symposia  
Arthur Dalley (Vanderbilt University School of Medicine)
Through a Camera Lucida, Darkly: The State and Future of Anatomical Education

6:00 pm – 6:30 pm  Room 104AB
Ladman Award Symposia  
Kathryn Jones (Indiana University School of Medicine)
Service and Mentoring: The Joy in Academics

7:00 pm – 8:00 pm  Westin Boston Waterfront – Harbor Ballroom
Closing Awards Reception

8:00 pm  Westin Boston Waterfront – Harbor Ballroom
Closing Awards Ceremony Dinner *

* Pre-purchased tickets will be distributed at the Anatomy Lounge, Convention Center, Room 103. Limited tickets will be available on-site.
Wednesday, APRIL 1

9:30 am – 11:00 am  Exhibit Hall B
Late Breaking Poster Session

1:15 pm – 3:30 pm  Room 257AB
Function of the Extracellular Matrix in Development and Disease
Co-sponsored by: AAA and ASBMB

Peter Byers (Univ. of Washington)
Recessive Forms of Osteogenesis Imperfecta and Implications for Mechanisms of Disease

Ying Yin (NIH)
Cargo Receptor Traffics Many Matrix Proteins Out of the Endoplasmic Reticulum by Binding to N-Terminal IleProVal-Like Motif

Jeffrey Gorski (Univ. of Missouri-Kansas City)
Crosstalk between Bone and Muscle: Deletion of Mbtps1 in Bone Leads to Age-Dependent Increase in Muscle Size and Contractile Function

Néjma Bélaadi (Univ. of Nantes)
SUN2 Accumulation Contributes to Vascular Smooth Muscle Cell Alterations Induced by Matrix Rigidity

Sukhbir Kaur (NIH)
Role of CD47 in Triple Negative Breast Cancer

Ralph Marcucio (UCSF)
Mechanisms of FGF-Mediated Morphogenesis

See you next year in San Diego!

APRIL 2-6, 2016
American Association of Anatomists Annual Meeting at Experimental Biology 2016

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Get involved in AAA’s Annual Meeting!

Put your research front and center by submitting a session proposal for an education or scientific symposium in 2016.

http://www.anatomy.org/content/symposia-proposal-form
Governance Meetings & Poster Sessions

GOVERNANCE MEETINGS

Friday, March 27
AAA Board of Directors*
8:00 am – 5:00 pm
Faneuil, Westin Boston Waterfront

Saturday, March 28
Fellows Circle Meeting*
12:30 pm – 2:30 pm
Faneuil, Westin Boston Waterfront
Publications Committee*
2:00 pm – 3:30 pm
Hale, Westin Boston Waterfront

Sunday, March 29
Members Meeting
12:00 pm – 12:30 pm
Room 104C, CC
Scientific Affairs Committee*
1:00 pm – 2:30 pm
Hale, Westin Boston Waterfront

Monday, March 30
Professional Development Committee*
7:00 am – 8:30 am
Room 101, CC
Membership Committee*
12:30 pm – 2:30 pm
Hale, Westin Boston Waterfront

Tuesday, March 31
ASE Editorial Board Meeting*
7:00 am – 8:00 am
Hale, Westin Boston Waterfront
Public Affairs Committee*
7:00 am – 8:30 am
Room 101, CC
Educational Affairs Committee*
12:30 pm – 2:30 pm
Hale, Westin Boston Waterfront

*Invitation Only

POSTER SESSIONS

Be sure to take time to visit the Anatomy posters in the Convention Center Exhibit Hall AB.

Sunday, March 29
DISPLAY HOURS: 7:30 AM – 5:00 PM
PRESENTATION TIME: 12:30 PM – 2:15 PM
Anatomy
Anatomy Education (Day 1)
Cardiovascular Biology
Cell Biology

Monday, March 30
DISPLAY HOURS: 7:30 AM – 5:00 PM
PRESENTATION TIME: 12:30 PM – 2:15 PM
Anatomy Education (Day 2)
Bones, Cartilage & Teeth
Neurobiology

Tuesday, March 31
DISPLAY HOURS: 7:30 AM – 4:00 PM
PRESENTATION TIME: 12:30 PM – 2:15 PM
Anatomy: Form & Variation
Anatomy: Functional Anatomy & Biomechanics
Biological Anthropology
Evolution and Comparative Anatomy
Imaging
Development & Growth
Regenerative Medicine, Stem Cells,
Wound Healing & Bioengineering

APS/AAA Undergraduate Student Poster Session
Sunday, March 29
East Registration, Exhibit Level
HOURS: 4:00 PM – 5:00 PM

Late-breaking Anatomy Posters (2 viewings)
Tuesday, March 31
NW Lobby A
DISPLAY HOURS: 8:00 AM – 5:00 PM
PRESENTATION TIMES: 10 AM – 10:30 AM and
4:30 PM – 5:00 PM

Wednesday, April 1
Exhibit Hall B
DISPLAY HOURS: 7:30 AM – 6:00 PM
PRESENTATION TIME: 9:30 AM – 11:00 AM

Sessions and events are held at the Boston Convention & Exhibition Center, unless otherwise noted.
Thank you for joining us in Boston!

We want to thank everyone who helped plan the Annual Meeting. Especially, the following committees and award competition judges for their hard work in planning a fantastic program:

Program Committee
Educational Affairs Committee
Professional Development Committee
Advisory Committee for Young Anatomists

Visit AAA’s Booth #1327 in the Exhibit Hall

Follow us on twitter @anatomymeeting and use #anatomy15 and #expbio