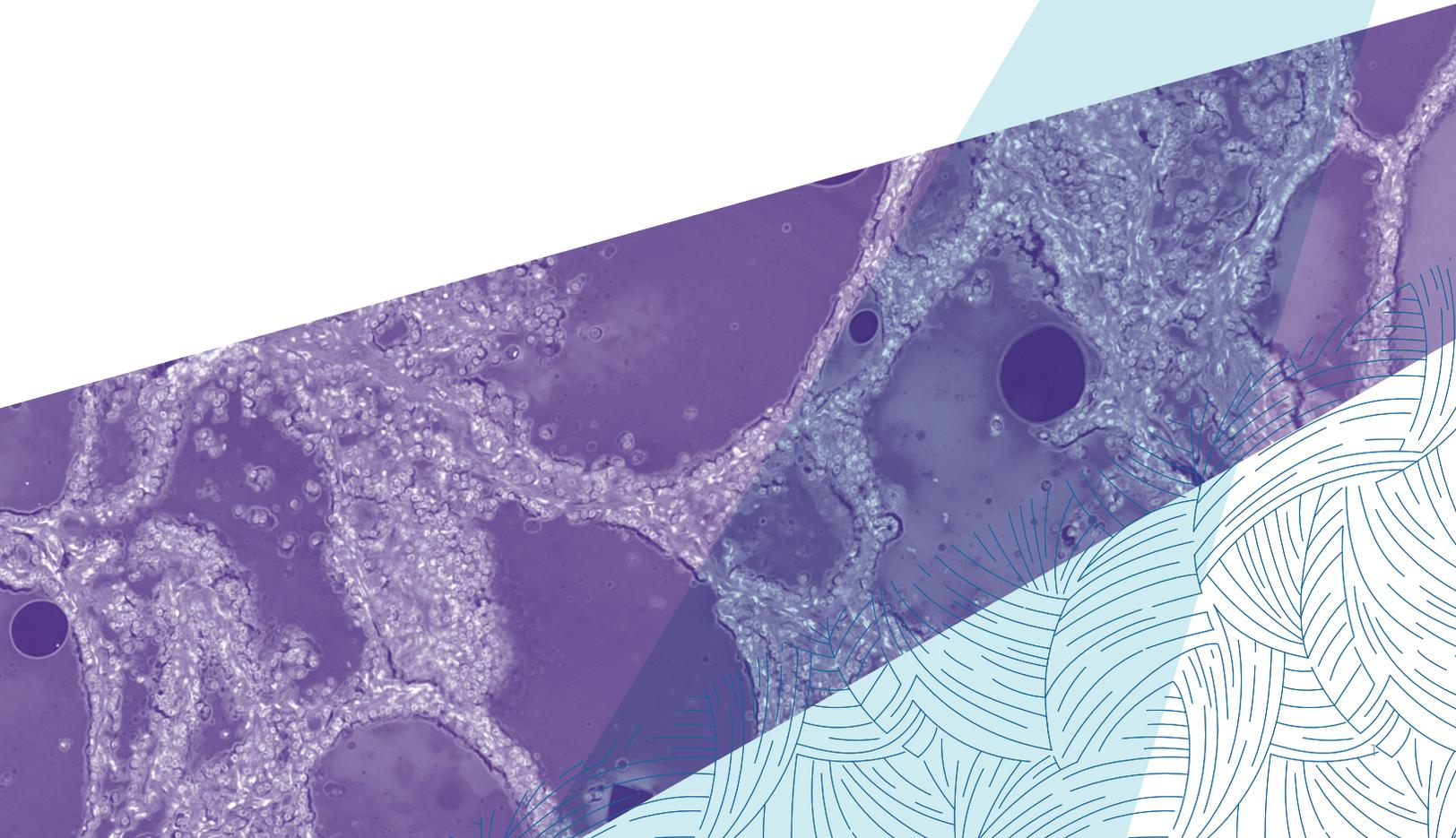
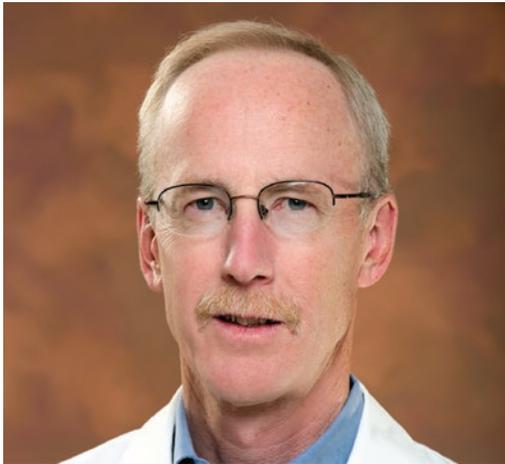


YEAR IN REVIEW  
2019



# REFLECTIONS FROM THE PRESIDENT

**Rick Sumner**  
President 2019–2021



In 2019, AAA built on our strong foundation in a big way.

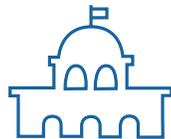
It was a year of new initiatives, new beginnings, and new connections — among them our new name and me as your elected leader beginning April 9, 2019. We focused on making our members' experience with AAA the best and most beneficial it can be. We established new partnerships, approved new awards, launched a new website, took the lead on Capitol Hill, and realigned our committees with modern realities.

Through it all, we fortified AAA's place as the undisputed leader in anatomical science through research, education, and professional development.

I took great pride in helping lead and represent our society through so many important firsts. When we launched our new name, brand, website, and more at the IFAA Congress, I was reminded how invested our Board, members, and staff are in AAA's future, and how highly they value AAA.

I also enjoyed my experience at the SciComm Boot Camp (see page 5), where I gained real-world perspectives on the importance of being able to translate what we do in understandable and impactful ways. It was equal parts engaging, surprising, and a boost to my own scientific storytelling capabilities. If I'm honest, it forced me out of my comfort zone — especially the mock on-camera interview and improv that broke down barriers through laughter to make us all feel a little (okay, a lot) more human.

*2019 was foundational, preparing us for a vibrant future and fortifying AAA's place as the undisputed thought leader in anatomical science through research, education, and professional development.*



*Our eight member representatives participating in Hill Day was more than any other FASEB-member society! This advocacy is important because it takes our message directly to legislators.*

I've been humbled by this role, and I thank all of you for the opportunity to serve you. AAA connects us to each other through our shared interest in scientific curiosity and discovery. Thank you for belonging and engaging with the Association. It's been a pleasure to continue the legacies so ably laid out by my predecessor, Phil Brauer, and by all who came before him.

## **Advocacy**

Our eight member representatives participating in Hill Day was more than any other FASEB-member society! This advocacy is important because it takes our message directly to legislators. The Board is committed to supporting advocacy efforts, with even greater participation in years to come.

Another highlight came when we took the lead, along with the Human Anatomy & Physiology Society (HAPS), regarding a proposed body donation bill. The task force I appointed represented all members' interests exceedingly well. The welcome response we received portended a dialogue that ensures teaching institutions will not be negatively impacted if the legislation moves forward.

## **Journals**

Members rely on AAA for the provision of information, education, professional development, and networking. Our three peer-reviewed journals help fulfill three of those four benefits — although one could argue that appearing in a journal also helps networking! Investing in our journals is critical to our mission — especially when you consider that the majority of AAA's offerings are, in turn, funded by journal revenue. It's a symbiotic relationship from which we all benefit, and I was pleased to see our journals provided a new home in 2019: the Hub, hosted by our publishing partner Wiley, represents the next step in delivering digital journal content and promoting vibrant research.

## **SCGDB**

AAA sponsored the Annual Meeting of the Society for Craniofacial Genetics and Developmental Biology (SCGDB) on October 14-15, 2019, in Houston, Texas, where we laid the groundwork

for an affiliate relationship that capitalizes on the shared interests of both societies' members. The formal affiliation — approved by SCGDB at its meeting and by AAA at our November Board meeting — will generate broader exposure for both organizations, as well as opportunities to strengthen research, professional development, advocacy, and education. It's a mutually beneficial relationship that I'm excited about. I know this affiliation will serve to connect science and scientists more than ever.

### Governance

The Board took a major step toward one of our strategic goals by formally establishing the Diversity, Equity, and Inclusion (DEI) Committee after the foundational work led by the D&I Task Force (formed in 2016) clearly demonstrated the need for a more long-term, focused effort. Read more on page 24 and discover why it's important to update your personal information to help the Association advance this critical work. Our goal is to ensure every person who engages with AAA feels welcome, supported, and safe.

The Publications Committee actively worked throughout 2019 to plan for growth and succession in the coming years, including the search for a new Editor-in-Chief of *The Anatomical Record*. With this in mind, the Board approved two actions: (1) removing the

Executive Director from the Committee and (2) adding the Committee Chair to the Board as a non-voting, ex-officio member, to ensure the Committee's work is well connected to Board discussions and decisions.

### Preparing for the Future

While the long-term future of Experimental Biology (EB) remains unknown beyond 2022, the Board is attentive to what's in AAA's best interest, which includes creating a contingency plan for 2023 and beyond if EB is disbanded. This is a complicated issue, but we're taking a proactive approach, rather than being reactive, and will seek input from stakeholders in due course. As the future of EB continues to unfold, rest assured, we'll keep you informed.

Earlier this year, we conducted a membership survey, as we've done every three years since 2013. Your input and evaluation of our progress in meeting your needs and advancing the goals of the strategic plan help us stay focused on what matters most to you. We shared high-level results with you in June via *Anatomy Now*. One of the actions we're taking as a result of your feedback is rolling out new awards to support mid-career members in 2020.

Read on to discover what we've accomplished, preview what's coming, and discover how you can get involved in your professional society.

*The Board took a major step toward one of our strategic goals by formally establishing the Diversity, Equity, and Inclusion (DEI) Committee. Our goal is to ensure every person who engages with AAA feels welcome, supported, and safe.*

### In Memoriam

AAA honored the legacies of several leaders of the anatomy community in 2019; please join us in remembering the many accomplishments and contributions of the following AAA members:

**Karen Hitchcock, Ph.D., FAAA**, who joined AAA in 1971 and served as its fourth woman president, 1990-1991. She presided over the 104th Annual Meeting in Chicago in 1991, where members ratified the decision to join FASEB (which it did in 1993). She subsequently chaired the Henry Gray Award Committee, presenting the award to the Association's third woman president, Elizabeth Hay, in 1992. Dr. Hitchcock was named a Fellow of the AAA in 2010.

**Gordon Kaye, Ph.D.**, a former consulting and associate editor of *The Anatomical Record* for more than 20 years. Dr. Kaye was an active AAA member for many years, serving as the Public Affairs Committee chairman during the late 1980s.

**Keith Moore, Ph.D., FAAA**, who had a significant impact on anatomical medical education, authoring 16 anatomy books and more than 60 papers. Dr. Moore received the first Henry Gray Distinguished Educator Award in 2007 and used his prize to support what was then called the Young Anatomist's Publication Award. He was inducted as a Fellow the following year.

# THE YEAR IN REVIEW: A LOOK BACK AT 2019

Throughout this report, the names of members are printed in bold. Become a member at [anatomy.org](http://anatomy.org)!



Our first-ever Science Communication Boot Camp helped sharpen storytelling skills. Read more, along with staff and member milestones, on [page 5](#).



On [page 6](#), see how the society transformed its identity for only the second time in its history with a new name and brand.



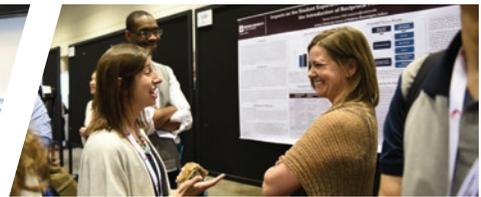
Dinosaurs and dogs were big hits in the news, but they weren't the only creatures to make a media splash. Celebrate a sampling of anatomical research on [page 8](#).



From podcasts to post-primary education, members' outreach activities create impact. Get inspired to engage on [page 10](#).



Anatomists made enormous steps in advocacy — on the Hill, online, and on campus. On [page 12](#), see how members are advancing anatomy and how you can, too.



At our Annual Meeting at Experimental Biology 2019, more than 1,000 anatomy attendees set records for abstracts, attendance, and media hits. Relive it on [page 14](#).



On [page 16](#), take a virtual trip to London and the 19th Congress of the IFAA, where members reaffirmed AAA's commitment to our international community.



Effective governance and partnerships make AAA stronger. Turn to [page 18](#) to review your elected leadership and the connections we're making to advance anatomy.



Flip to [page 20](#) to celebrate our 2019 award recipients.



Together we SOAR. Learn how on [page 22](#) in a report by Innovations Program grant recipient and Committee for Early-Career Anatomists member Rachel Menegaz.



Do you count in AAA? Leadership and volunteers answered "yes" with advancements in diversity, equity, and inclusion. Read more on [page 24](#).



Get a snapshot of AAA's 2019 financial status on [page 26](#), and the Association's nearly \$1 million investment in member benefits on [page 27](#).



Participants and organizers of AAA's inaugural Science Communication Boot Camp.

## HELPING SCIENTISTS SHARE STORIES AND CREATE IMPACT

Science has a communication problem. AAA set out to solve it with an Innovations Program grant to support a SciComm BootCamp — custom-designed to teach members the art of storytelling take part in hands-on workshops in applied improvisation techniques to learn to connect with an audience in real time, and distill messages into language that is easily understood. The brainchild of members **Jason Organ** and **Krista Hoffmann-Longtin**, the three-day program was held in July at the Indiana University (IU) School of Medicine in Indianapolis with support from IU faculty, FASEB, and the Alda Center for Communicating Science. The insightful and engaging Boot Camp was funded by the AAA Innovations Program because it directly aligns with our strategic plan goal to lead in science communication and builds a framework for training members to better engage with legislators, media, and the public.

# SciComm

## BOOT CAMP

*“Recent communication research indicates that simply providing more and better information will not improve public understanding of science. Our workshop was designed to address this issue; by focusing on storytelling and message framing, we give participants the tools needed to change public perceptions and encourage future scientists.”*

— KRISTA HOFFMANN-LONGTIN, SCICOMM BOOT CAMP COFOUNDER



*84% of scientist respondents say limited public knowledge about science is a “major problem.”*

Source: Public and scientists' views on science and society, Funk, C. and L. Rainie, Pew Research Center, 2015



**What is your biggest take home message from the SciComm Boot Camp?**



It is our responsibility, as scientists, to package and deliver our message in a way that reaches our target audiences.”



Listening to and empathizing with your audience helps you create a more engaging dialogue.”



Storytelling! Most importantly for me, the Boot Camp reminded me I can tell my research story in small snapshots and anecdotes that will engage my audience.”



Attendees like Jason Mussell practice going with the flow in the “ta da” exercise.

# NEW NAME, NEW BRAND, NEW OPPORTUNITIES

It was a year of new beginnings, launched when members overwhelmingly voted in support of a name change — from the American Association of Anatomists to the American Association for Anatomy (AAA). For the educators, researchers, and allied health professionals working in the anatomical sciences who call AAA their professional home, the change recognized the diverse, inclusive, integrated, and international community that is anatomy. For the Association, the change introduced a new opportunity to freshen and rebrand our identity and illustrate our remarkable ability to connect the science of anatomy across disciplines and serve as the thought leader in science communication.



AMERICAN ASSOCIATION FOR ANATOMY

## Why change our name after more than a century?

Because anatomy is holistic, and we're more than individual anatomists. We're a diverse, inclusive, integrated community that connects science across disciplines.

#forAnatomy

### A Historic Vote

In January, members voted to change the organization's name for only the second time in its 131-year history. The new name, the American Association for Anatomy, better reflects the diversity and inclusion of the scientific society; opens the door to those studying, teaching, and researching anatomy; and more ably positions the association as a voice for all members, for anatomy.

### A New Brand

With a new name and a new identity, AAA turned to its Board and membership for ongoing guidance in shaping the Association's future. Through surveys, focus groups, and other research, staff worked with consultants and designers to develop a unique, modern brand. Board members reviewed logo treatments and approved the final design. Messaging focused on **connecting** science, knowledge, careers, research, and those working in anatomy to help illustrate the synergies and interdependencies between disciplines.

President **Rick Sumner** and Executive Director Shawn Boynes, along with officers and members, unveiled the vibrant new brand at the 19th Congress of the International Federation of Associations of Anatomists (IFAA) in London, on August 9, where it was met with enormous enthusiasm. (Read about IFAA on page 16.)



2014



2019

The new logo features three separate components coming together to form an abstract 'A' in the negative space. The three components also symbolize the three pillars outlined in the organization's mission statement: research, education, and professional development. The triangle in the center can be interpreted as a delta symbol, representing the constant change occurring in the field of anatomy.



*"I love this logo! It's brilliant. Loving the focus on the mission and representing all things #anatomy @AnatomyOrg!"*

*"AAA supports and promotes all aspects of anatomical sciences in education and scientific research," said then-President Phil Brauer, in 2018. "The new name helps us to emphasize the discipline rather than the profession and encourages scientists, educators, students, and the public to recognize anatomy as a foundational science."*

## ALL-NEW WEBSITE

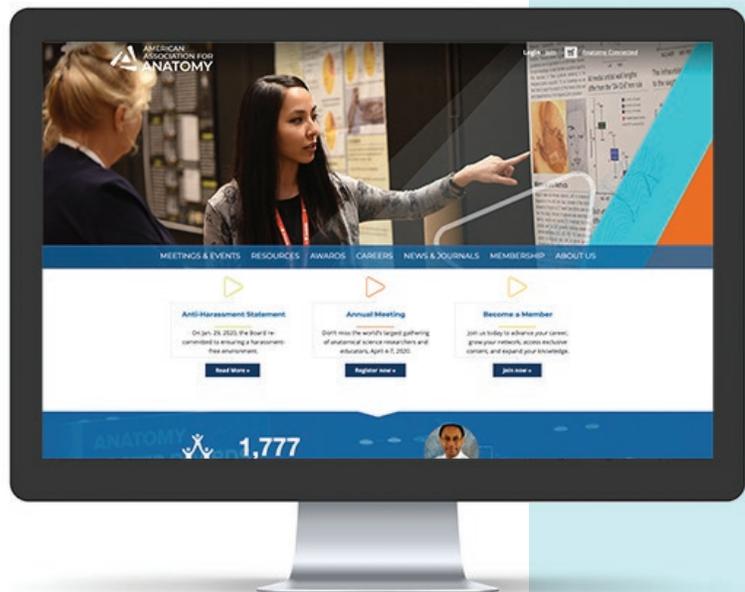
Of course, no rebranding would be complete without a refreshed online presence. To close out the year, AAA re-launched anatomy.org on a sophisticated, cloud-based platform designed to give users a more cohesive experience through a fully responsive site, meaning that users can easily view content on any device.

More than a mere refresh, staff engaged a content strategist to examine the organization's approach to content organization, creation, and delivery, and asked usability testers to verify the outcome, a unique micro-volunteering opportunity for members! Our goal? To preserve and position AAA's rich programming and superb content while making it easily accessible to the public and members through intuitive, streamlined navigation.

In 2020, we'll implement single sign-on (SSO), allowing members to use one set of credentials across many platforms.

## DATABASE

When AAA's strategic plan was updated in 2017, leadership made it clear that it was time to invest in and strengthen the association's infrastructure. So,



in Fall 2019, AAA launched an all-new database — on the same platform as our new website — to improve staff functions, better collect and analyze data, track progress on strategic initiatives, and boost members' self-service experience.

# AAA IN THE NEWS

From puppy dog eyes to the mighty T-rex, from CNN to SNL, AAA and anatomy were noticeable in the news in 2019!



## AAA Publications Hub Launched

With AAA's brand and website enjoying a total re-launch in 2019, our journal website hosted by Wiley also received an important upgrade. A one-stop shop for digital content of all three AAA journals, the Hub also allows members to meet the editors, see recent tweets, peruse special issues, and more. Access the Hub any time from [anatomy.org/journals](http://anatomy.org/journals).



LEFT: The world's largest *Tyrannosaurus rex*, nicknamed Scotty, is the largest dinosaur skeleton ever found in Canada.

(credit: Amanda Kelley) RIGHT: Arthur Sahlstein, co-discoverer of the new fossil crocodyliform *Scolomastax sahlsteini*, named in his honor. (credit: Arthur Sahlstein)

## Scotty the T-rex

The *Tyrannosaurus rex* is the biggest and probably best known dinosaur, and in 2019, "Scotty" — the largest T-rex specimen ever found — helped catapult *The Anatomical Record* to new heights after paleontologists reported on the mostly complete dino skeleton that took two decades to fully excavate and analyze. Coverage in news media — as varied as major TV networks, National Geographic, the *New York Times*, and the Weather Channel — resulted in the highest Altmetric score of all manuscripts ever published in *The Anatomical Record* and landed the research in the top 5% of all research scored by Altmetric, a data science company that tracks where published research is mentioned online.

## New Species Unearthed in Texas

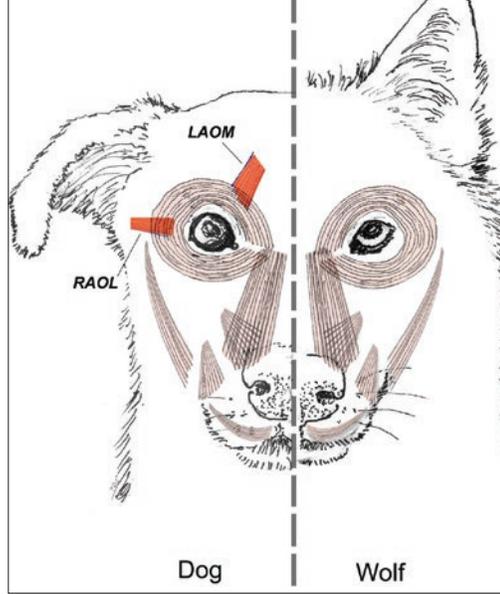
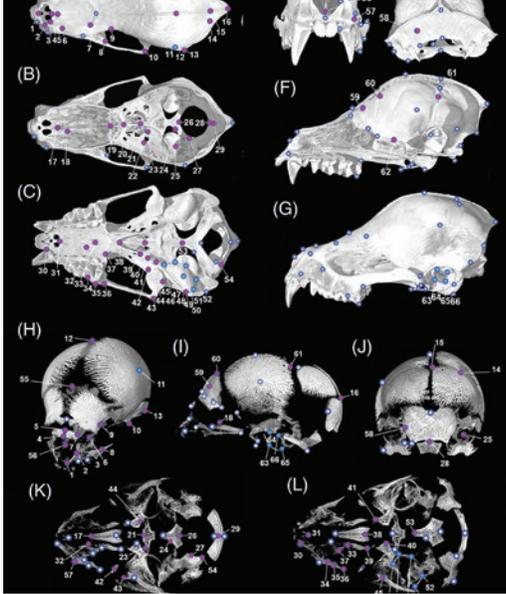
Researchers announced the discovery of a new species in Arlington, Texas, where paleontologists and local volunteers excavated fossils dating from 96 million



years ago — including an unusual jaw from a small crocodyliform (a distant crocodile relative), now named *Scolomastax sahlsteini* in honor of Arthur Sahlstein, co-discoverer of the Arlington Archosaur Site and the new fossil. Lead author **Chris Noto**, and **Alan Turner**, along with several co-authors, published their findings in AAA's journal because, Noto said, "I was excited to publish through *The Anatomical Record*, as the journal would support inclusion of a 3D figure in the online PDF version of my paper. Because we have a 3D model of the specimen we were describing, it seemed like a natural fit to include that model in our paper so people could move it around and examine it for themselves. I don't know of another journal that offers this feature."

## Focus on Anatomists

Reports of shortages of anatomists have circulated for years — reaching a high point in 2005 when a study published in *Academic Medicine* indicated that department chairs "expected moderate to



LEFT: From the *Developmental Dynamics* manuscript, "Peramorphosis, an evolutionary developmental mechanism in neotropical bat skull diversity," landmarks characterize cranial shape and development in bats. (credit: Jasmin Camacho & Alexander Heyde)  
 RIGHT: Facial musculature comparison of wolves and dogs, described in the *PNAS* manuscript, "Evolution of facial muscle anatomy in dogs." (credit: Tim D. Smith, Cambridge University Press, Cambridge, UK)

great difficulty recruiting anatomists over the next five years." AAA members **Adam B. Wilson**, and **William S. Brooks**, sought to determine if that shortage still existed in the U.S./Canada and explored whether it extended into Europe. Their findings were reported in *Anatomical Sciences Education*, with an article entitled "A Look at the Anatomy Educator Job Market: Anatomists Remain in Short Supply," which Brooks also discussed on Anatomy Education Podcast #76.

Also attracting media attention in 2019 were **Bruce Wainman** and medical ethicist Jon Cornwall, who co-published "Body Donation after Medically Assisted Death: An Emerging Consideration for Donor Programs" in *Anatomical Sciences Education*. The authors suggested that the anatomical scientist community needs to establish ethically appropriate guidelines around these donations. They later appeared in a lively AAA webinar — "Do Euthanized Bodies Have a Place in the Anatomy Lab?" — which addressed the history of body

bequeathal, practical issues around medically assisted body donors, and whether there is an acceptable moral and ethical framework for euthanized body donors in anatomy education.

### Why Bat Faces Matter

Not many would say bats are cute, but we now know that the bizarre-looking creatures can't help it; they've tweaked their skull and facial development to adapt to their wildly different diets. "The insights could suggest how mammals as a whole evolved their diversity of diets and specialized skulls," reported Phys.org, citing research that appeared in *Developmental Dynamics*. "Some have evolved very long snouts to feed on flower nectar, whereas others have evolved very flat faces to eat large fruit. Some species have evolved skulls and teeth that allow them to catch and eat small birds and rats, and others are able to drill into mammal skin and drink blood."

### Masters of Manipulation

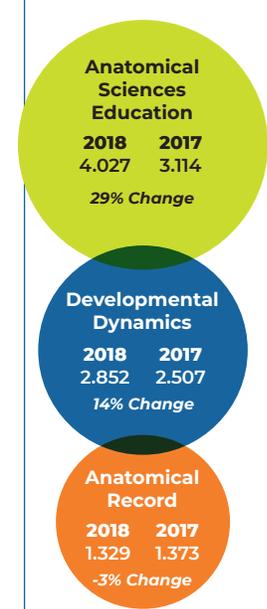
Biological anthropologist **Anne Burrows** confirmed what millions of dog owners suspected: "puppy dog eyes" are real! Burrows and an international research team led by a comparative psychologist from the University of Portsmouth's Dog Cognition Centre studied the facial muscle anatomy and facial movement behavior of dogs and wolves. They discovered that the facial muscles of both species were similar, except above the eyes, where dogs have a small muscle — absent in wolves — allowing dogs to raise their inner eyebrow. By looking mostly at working breeds, toy breeds, and mutts, the team found that "puppy dog eyes" evolved over thousands of years to help dogs better communicate with humans. The study received widespread attention, and Burrows appeared on the Science Friday podcast, where she talked about how dogs evolved these muscles and why people are so susceptible to their big, sad-looking eyes.

### Members @ EB19

The following research gained worldwide attention at Experimental Biology 2019 — and increased our media coverage by 40% over EB18!

- Training Persons with Parkinson Disease using an Advanced CAVE Virtual Reality System (**CBS Philly**)
- Porphyromonas Gingivalis Infections Underline Association of Periodontitis with Systemic Diseases (**U.S. News**)
- Rescuing Sensorimotor Declines in a Rat Model of Musculoskeletal Disorders: Is Rest Best? (**Science Daily**)
- An Unusual Case of Levocardia with Situs Inversus (**BBC**)
- Functional Morphology of the Dolphin Clitoris (**Saturday Night Live**)

### IMPACT FACTOR

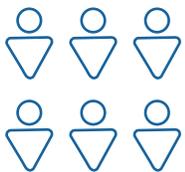


Clarivate Analytics released 2018 Impact Factors in June 2019. *Anatomical Sciences Education* rose to third in its category (Education, Scientific Disciplines).

# THE IMPACT OF OUTREACH

It seems obvious; the more we engage — with each other, with our association, and with the anatomy community — the more connected we become. But sometimes, it feels impossible. AAA grants, awards, and financial support make it easier for members to do something out of their norm, learn from each other, and share knowledge in easily accessible formats.

*In 2019,  
290 members*



*received an  
award, grant,  
or scholarship*



*to support  
anatomical  
research, anatomy  
education, and  
professional  
development.*



Gabrielle Finn discusses art-based public engagement techniques in the EB 2019 symposium, “Anatomy for All: Engaging the Public with their Bodies.”

## **Cultivating the Next Generation of Scientists in Nigeria**

There is increasing loss of interest in sciences among secondary school and university students, especially in Africa, despite the growing need for scientists with respect to global scientific advancements. In May, 200 primary and secondary students and teachers participated in the Science Advocacy Program for Youngsters (SAPFY), organized by **Smart Mbagwu**, a member of the Ambassador Committee. The outreach program aimed to promote science advocacy in early-childhood and post-primary education, help identify and nurture the next generation of scientists, and introduce special non-curricular based programs for students at different levels. The result: a support system and workable template that would ensure a seamless scientific learning experience for youngsters.

## **26th Weinstein Cardiovascular Development Conference**

Weinstein 2019 — dedicated to the dissemination of unpublished research in the fields of cardiac development and cardiac regeneration — was held May 9-11 in Indianapolis, Indiana, with **Anthony Firulli** attending. Uniquely, all platform talks were given by graduate students, postdoctoral fellows, and early-stage assistant professors, including 10 breakout sessions that allowed both clinical and basic researchers to gain

a better understanding between treatments and their underlying mechanisms. Keynote addresses were given by Antoon Moorman, Professor Emeritus at the Academic Medical Centre Amsterdam, and Lynne Maquat, a National Academy Scientist who holds the J. Lowell Orbison Distinguished Service Alumni Professorship at the University of Rochester and is one of the world's leading experts on RNA biology.

## **Early-Career Investigators Present Advanced 3D Imaging Research at ICVM**

The International Congress of Vertebrate Morphology (ICVM) is the world's largest multinational professional meeting dedicated to furthering research and education about vertebrate anatomical systems. It promotes and advances the study of vertebrate morphology through the thoughtful cultivation of international collaborations among attendees and programming that spans the intersection of anatomy with integrative biology. Like AAA at Experimental Biology, ICVM is home to meaningful interactions between early-career investigators and senior scholars, presents effective recruitment opportunities for exceptional students, and remains an engaging forum for deep intellectual feedback. AAA supported three early-career investigators who gave platform presentations at the Congress in Prague, Czech Republic, under the tutelage of **Paul Gignac** and **Haley O'Brien**.



SAPFY primary school participants learn about microscopy at the Nnamdi Azikiwe University, Nigeria, histology lab.

### VMD Surpasses 1,200 Users

The Virtual Microscopy Database (VMD) hit a major milestone in 2019: Registered users surged to 1,200 (up 40% from 2018), representing 86 different countries (up from 73 in 2018). VMD users have access to more than 3,500 virtual histology and pathology image files organized in 19 collections. Two new collections were added in 2019, with more to follow in 2020! Individuals and institutions who make their microscope image collections available worldwide through the VMD, and member contributions like one received from **Michael Doyle** and The Buonacorsi Foundation in 2019, help the VMD thrive. One-quarter of all subscribers are AAA members. Registration is free at [virtualmicroscopydatabase.org](http://virtualmicroscopydatabase.org).

### Member Resource: Anatomical Competencies

Educators are facing a challenging reality: While there is renewed focus on the use of outcome- or competency-based education in undergraduate medical education, there has also been a significant decline in curricular hours available for the anatomical sciences. To help, AAA's Anatomical Curriculum Task Force, consisting of an international representation of AAA members, provided recommendations for modern medical curricula to be taught during the preclinical phase of medical training that is relevant to all practicing physicians. The result is four major competencies — Gross Anatomy, Embryology, Histology, and Neuroanatomy — accessible to members on [anatomy.org](http://anatomy.org) under "Resources."



*According to a 2019 study by Edison Research and Triton Digital, the total number of people in the U.S. who have ever listened to a podcast passed 50% for the first time, illustrating that the medium has crossed into the mainstream.*

### Tapping into Podcasts

Podcasting is a popular, attractive, and unique educational tool for anatomy educators and researchers. AAA supports three podcasts hosted by passionate anatomists.



#### Anatomy Education Podcast:

Hosted by James Pickering, to share information, exchange views, and continue learning. This podcast promotes cutting-edge

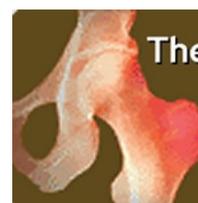
anatomy education under way around the world, featuring more than 84 episodes with more than 30,000 downloads.



#### Ask Anatomist Podcast:

Hosted by **Michelle Lazarus**, providing discussion between experts in the field on a medically interesting topic. The mini-series A Bone to Pick was

recorded on site at EB19, featuring interviews with scientists to provide insights into how laboratory research is impacting the medical field and changing what we know and understand about anatomy and our bodies.



### The A&P Professor

**The A&P Professor Podcast:** A podcast for anatomy and physiology faculty hosted by **Kevin Patton**. The series includes searchable, accessible transcripts of recorded episodes — thanks to a 2018 AAA Education Outreach Grant and ongoing support that funds transcription for accessibility. "Captioned audiograms create some benefit in allowing people to read along with the audio. Transcription also makes it easier for people to find the content," Kevin explained.

# ADVOCATING FOR ANATOMISTS



LEFT: Lorinda Smith and Idaho Senator James Risch talked about the importance of NIH and NSF funding. RIGHT: Rebecca Hartley met with New Mexico Representative Xochitl Torres Small, along with Graciela Unguez representing the Society for Developmental Biology.

By advocating for (or against) legislative policy, AAA works to protect the interests of members. Communicating with policymakers is a key part of our strategic plan. Leadership and staff work regularly with members and colleagues to effectively represent the profession through engagement with legislators, media, the public, and like-minded organizations.

As a member society of the Federation of American Societies for Experimental Biology (FASEB), AAA members are further represented by a powerful advocacy team, the FASEB Office of Public Affairs (OPA), which works with AAA and other FASEB member societies to develop and promote policies to advance research and education in the biological and biomedical sciences.

Advocacy and media training were key aspects of the first SciComm Boot Camp for anatomy students and scientists. Participants had the opportunity to learn from and practice with reporters, public affairs professionals, and FASEB staff. See page 5 for more information about the event.

## Capitol Hill Day

On March 7, 2019, scientists headed to Capitol Hill to visit congressional representatives and ask for their support of research funding and bipartisan endorsement of federal research agencies. Of the 24 FASEB member societies represented, AAA sent the largest delegation: 8 members and 2 staff.

In sum, participants met with 109 congressional offices, urging legislators to raise budget caps and support increased funding for the National Institutes of Health, National Science Foundation, Department of Energy Office of Science, Veterans Administration Medical and Prosthetic Research Program, and the competitive research program administered by the Department of Agriculture. Highlights of the visits were widely shared through Tweets and social media posts (including the member photos shown here), ensuring our message was shared well beyond Washington, D.C.

## Signed by Scientists

AAA periodically signs on to advocacy letters regarding specific pieces of legislation, policy, or actions proposed or enacted by Congress, the administration, or other government officials. The Board of Directors voted to add our name to several advocacy letters in 2019, notably:

**Proposed Title IX amendments**, January 30, recommending that any changes address the prevalence and harm of sexual harassment. Proposed provisions would “reinforce barriers created by sexual harassment and leave no one with a regulatory obligation to address sexual harassment. These proposals are not mandated by, nor do they reflect, decades of administrative and court interpretations of Title IX. The administration

## Year-Round Advocacy at Home

We encourage and support our members to advocate with us! Find tips, resources, and funding facts at [anatomy.org/advocacy](http://anatomy.org/advocacy).



Request a meeting



Plan a visit



Share your story



Write to Congress



Attend a Meeting



LEFT: Biological researchers — including Gwen Childs (far left) — encouraged legislators to #RaiseTheCaps and #FundScience during FASEB Capitol Hill Day. RIGHT: Al Sinning (left) and Jason Mussell (right) had a great day lobbying for sustainable science funding along with Michael Ryan representing the American Physiological Society.



has provided no compelling reasons, or evidence, to demonstrate that its proposal is consistent with the broad intent of Title IX to eliminate sex-based discrimination in educational institutions.”

**Physician shortage**, April 10, 2019, supporting legislation that would provide a responsible increase in Medicare support for graduate medical education to address an impending national physician workforce shortage. “Though shortfalls will affect all Americans, the most vulnerable populations, like those in rural and underserved areas, will be the first to feel the impact of the deficit of physicians.”

**Foreign influence in science**, September 4, encouraging vigilance in order to safeguard research but also ensuring the U.S. remains a desirable and welcoming destination for researchers from around the world. “Finding the appropriate balance between our nation’s security and an open, collaborative scientific environment requires focus and due diligence.”

**Body donation regulation**, September 9, led by AAA and co-signed by the Human Anatomy and Physiology Society (HAPS), sharing concerns about H.R. 1835, co-sponsored by Representative Bobby Rush (IL), and showing support for legislation that ensures donors are treated with dignity and respect. **Laura Johnson, Jim Williams, and Joy Balta** comprised a Task Force that researched the issues and drafted AAA’s response to the proposed legislation. Congressman Rush’s office responded

positively to our letter, and AAA looks forward to ongoing dialogue to ensure teaching institutions will not be negatively impacted if the bill moves forward.

In correlation with the letter — and the expectation of pending, related legislation — the AAA Board of Directors revised our *Donation of Bodies for Education & Biomedical Research Standard* to better reflect lessons learned since the policy was first adopted 10 years ago and informed by media scrutiny of for-profit body donation programs.

**@AnatomyOrg**

In conjunction with the Association’s name change (see page 6), AAA introduced a new Twitter handle. Formerly @AnatomyMeeting, members can now follow and tag us at @AnatomyOrg. Why change the handle? Because our engagement on Twitter is about much more than just the Annual Meeting... and it saves a few characters in your next Tweet!

Throughout the year, members already active on Twitter stepped up to be Twitter Correspondents at key events, including EB19 (page 14) and the IFAA Congress (page 16). Hill Day representatives even shared pictures and exchanges from their meetings with congressional offices. This strategy is a unique, ongoing micro-volunteering opportunity, as well as a great way to grow their Twitter audience, amplify their voices through AAA social media channels, and speak up for the profession.

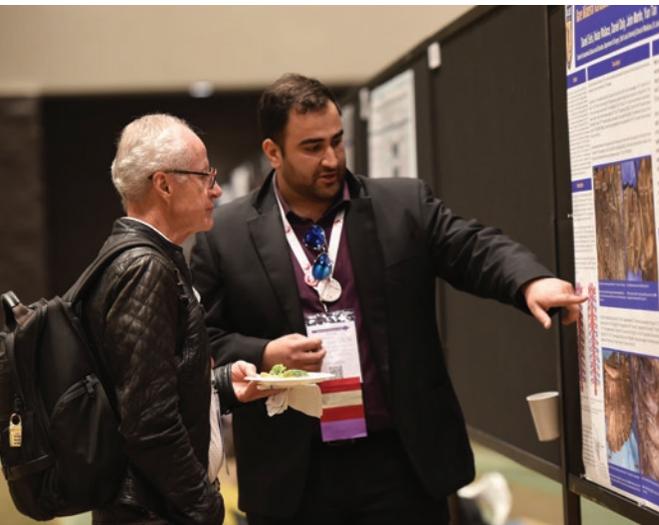
*Throughout the year, members already active on Twitter stepped up to be official AAA Twitter Correspondents at key events, including EB19 and the IFAA Congress.*

*Interested in this or other micro-volunteering opportunities to support your association? Get involved at [anatomy.org/volunteer/](http://anatomy.org/volunteer/)*

# ANNUAL MEETING AT EXPERIMENTAL BIOLOGY 2019

Orlando, Florida | April 6–9, 2019

The wonders of technology have connected us in ways we may never have imagined, but face-to-face meetings are still the gold standard for networking and scientific, education, and professional development opportunities, as well as for celebrating the synergies that happen when leading scientists, educators, and experts gather under one roof. At AAA's Annual Meeting in Orlando, Florida, we held **53 sessions** featuring **179 oral talks**, showcased **551 poster presentations**, and welcomed **1,032 attendees**.



## NEW! Poster Schedule

After EB18, members told us it was difficult to juggle their time between poster presentations and other programming. We listened, offering unopposed poster presentations for the first time at EB19. This new format gave presenters and members time to enjoy vibrant scientific conversations dedicated. Per tradition, AAA alternated even- and odd-numbered posters so presenters could see each other's work, and we renewed the popular Student and Postdoc Poster Reception with a twist: 10 dedicated exhibit tables for universities gave attendees a unique new way to learn about graduate programs and speak with university representatives.

## Keynote Speaker: Dr. Janet Rossant

Dr. Rossant spotlighted her work in embryogenesis and stem cells, and shared her perspective as a leading female scientist, an important focus as AAA continues to celebrate inclusivity and diversity in

the field. For more than 30 years, Dr. Rossant has studied embryogenesis and its genetic control in both health and disease and has made seminal contributions to our understanding of early development and embryogenesis, including the identification of novel placental stem cells.

## Special Interest Mini-Meetings

Building on the popularity of EB mini-meetings, the 2019 program included two, offering attendees a deeper dive into **cardiovascular biology** and **neurobiology** through a series of symposia around these special-interest topics. Dr. Nenad Bursac, Duke University, concluded the cardiovascular biology mini-meeting with a discussion of stem cell engineering for striated muscles modeling and repair, while Dr. Danelle Devenport, Princeton University, capped the neurobiology session with a talk about planar cell polarity and how it contributes to morphogenesis of tissues.



*The Annual Meeting at Experimental Biology is by far AAA's most popular offering. **More than three in five** respondents have attended this event.*



*Satisfaction with the Annual Meeting correlates positively to overall membership satisfaction. The meeting, networking, and awards have the most significant impact on satisfaction with membership.*



### NEW! Cross-Society Symposium

In a new collaboration between AAA, APS, and ASIP — and in direct response to members' request for cross-society activities — AAA chaired a symposium on renal development and disease featuring speakers from all three societies. Abstracts included “Development of the Kidney Glomerular Filtration Barrier,” “Novel protein trafficking and signaling pathways in kidney physiology and pathophysiology,” and “Renal Inflammation: Novel Mechanisms of Leukocyte Trafficking.” The symposium was co-chaired by **Dale Abrahamson** and **Martine Dunnwald**.

### NEW! Career Central

There's always a lot happening at Career Central, and the 2019 program offered a completely reimagined menu of options, including micro-learning opportunities on topics as varied as finding funding, improving communication

skills, and staying out of copyright trouble; resume reviews; workshops; and one-on-one appointments for personalized mentoring.

### EB TV

With nearly 10,000 attendees roaming Experimental Biology, there's no way to meet everyone or attend every session. But thanks to on-site TV studios, the insights of three AAA speakers were captured on camera and aired to a much larger audience. Viewers had the opportunity to “meet” **Adam Taylor** and find out what he's learned from working with rare diseases like Alkaptonuria and what it teaches us about cartilage and bone remodeling; listen in as **Janet Philp** explained why it's imperative to help the public understand the marvel of human anatomy; and sit down for a chat with **Joan Richtsmeier** about her research and what it means to receive the Henry Gray Scientific Achievement Award. Watch them all on the **AAAnatomists** YouTube channel!

PICTURED: Scenes from poster receptions and session presentations. For more photos and videos, visit [anatomy.org](http://anatomy.org) to find links to our social media pages, including Flickr.



# 19<sup>TH</sup> CONGRESS OF THE IFAA

A strong delegation of AAA Board members, travel award winners, and presenters went to London to attend the 19<sup>th</sup> Congress of the International Federation of Associations of Anatomists (IFAA), an event that brings together anatomists from around the globe once every few years. The IFAA seeks to stimulate collaboration and support of its member societies worldwide to advance the study of anatomy.

At the General Assembly, delegates elected the IFAA Executive Board (2019-2024)—including the continuation of President Beverley Kramer of South Africa and the election of AAA member **Thomas Gest**, as Treasurer. While the next Congress was already scheduled for 2021 in Istanbul, delegates voted to hold the 2024 Congress in South Korea.

The Anatomical Society (AS) and AAA co-sponsored a Student Social to provide young anatomists from around the world an opportunity to connect. The official program included six plenaries and more than 40 symposia, five of which were sponsored by AAA:

### The Anatomy of our Anatomy: How Humans and their Relatives Came to Be

Organized by Kurt H. Albertine, Ph.D., FAAAS, FAAA, Editor-in-Chief, *The Anatomical Record*, and Jeffrey T. Laitman, Ph.D., FAAAS, FAAA, Senior Associate Editor, *The Anatomical Record*  
Co-sponsored by *The Anatomical Record*

### Exposing it in public; Anatomy Engagement, Communication and Outreach

Organized by Adam Taylor, Ph.D., Lancaster University, and Jason Organ, Ph.D., Indiana University School of Medicine



### Barriers, Bugs and Bandages

Organized by Martine Dunnwald, Pharm.D., Ph.D., University of Iowa, and Jennifer McBride, Ph.D., Cleveland Clinic Lerner College of Medicine

### Disruptive and Constructive Innovation in Anatomy

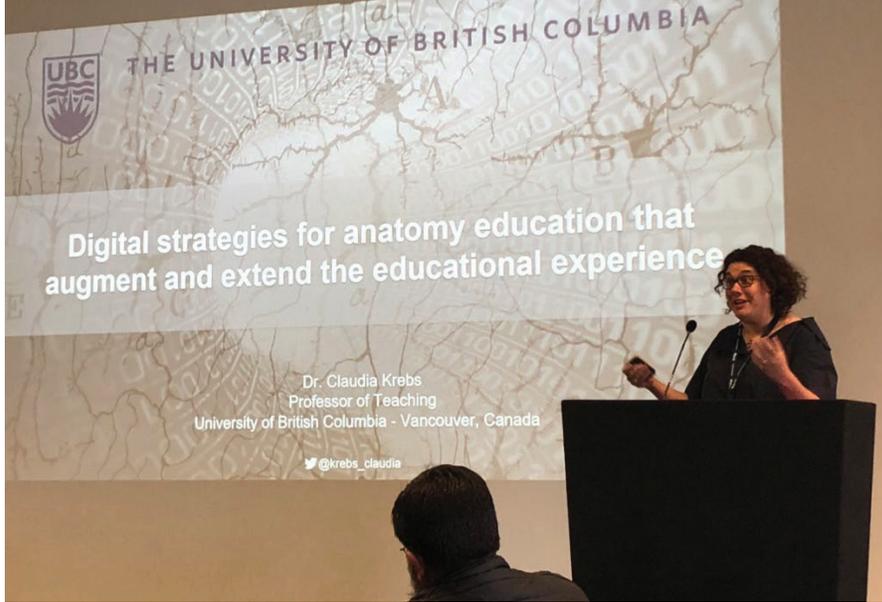
Organized by Claire Smith, Ph.D., Associate Editor, *Anatomical Sciences Education*, and Wojciech Pawlina, M.D., Editor-in-Chief, *Anatomical Sciences Education*  
Co-sponsored by *Anatomical Sciences Education*

### The Developmental Anatomy of Craniofacial and Neural Tube Birth Defects and Prospects for their Repair and Prevention

Organized by Paul Trainor, Ph.D., Stowers Institute for Medical Research, Editor-in-Chief, *Developmental Dynamics*, and Karen Liu, Ph.D., King's College London  
Co-sponsored by *Developmental Dynamics*



*“AAA’s travel award gave me the opportunity to attend my first international anatomical conference, where I met and interacted with anatomists from all over the world. One highlight was a session on international mentorship, on how to recruit former students to give back their expertise and skillset to their alma mater. This makes use of the diverse knowledge that former students, who live and work in different parts of the globe, can offer. It’s something I have a keen interest in developing between my home institution in the USA and my home country of Kenya.” — HABIBA CHIRCHIR*



LEFT: Delegates gather at the Anatomical Society booth, host of the IFAA Congress in London.

RIGHT: Claudia Krebs discusses digital education strategies as part of the symposium "Brave New E-World! The Promises and Pitfalls of Digital Learning Resources for Teaching the Anatomical Sciences" chaired by Michael Hortsch and James Pickering.

**AAA was honored to support 10 scientists with travel awards to present their research at the Congress:**

- Anette Wu**, Columbia University
- Dara Orbach**, Mount Holyoke College
- Lisa MJ Lee**, University of Colorado School of Medicine
- Anthony Huang**, Southern Illinois University, School of Medicine
- Habiba Chirchir**, Marshall University
- Smart Mbagwu**, Nnamdi Azikiwe University/University of Fribourg
- Sarah Amugongo**, Saint Olaf College
- Mikaela Stiver**, University of Toronto
- Laura Johnson**, University of Missouri
- Shikera Fearon**, University of the West Indies–Mona Campus, Western Jamaica

*"My participation would not have been possible without the generous support of the AAA Travel Award. The conference broadened my perspective on the shared, global nature of many of our educational activities in anatomy, and I was able to sustain and create relationships with colleagues who are instrumental in my burgeoning research program on body donation programs, which has applicability in an international context."*

— LAURA JOHNSON



Shikera Fearon, Lisa Lee, Mikaela Stiver, Laura Johnson, and Shawn Boynes at the all-new AAA booth.

*"I presented an oral presentation at IFAA, and being part of a session with so many international contributors was a wonderful experience. I learned so much about approaches to anatomy education in completely different settings than my norm. The whole conference overall had such informative sessions, and networking on an international scale felt new but was also really exciting. It was also great to have such an AAA presence there, and to know I could always have people to chat with, within my 'home' society."* — ANGELIQUE DUEÑAS

# CONNECTING SCIENCE, RESEARCH, AND PEOPLE

Partnerships make AAA stronger, enable us to more easily share best practices, and encourage advances in science. We strengthened ties and created new ones during a year that was all about celebrating our new brand, our new name, and our diverse membership. Because no matter our individual backgrounds, scientific inquiry, or professional endeavors, we're all #ForAnatomy.

## AAA Forms First-Ever Affiliation



AAA took the important step of forming an affiliation with the Society for Craniofacial Genetics and Developmental Biology (SCGDB) in 2019, with this mutually beneficial partnership becoming effective in 2020. All existing SCGDB members became AAA members for 2020, and any AAA member can join SCGDB for just \$10 more per year. SCGDB membership provides the right to stand for office and vote in their elections, as well as eligibility for SCGDB-sponsored awards.

Founded in 1975, SCGDB represents the professional interests of its members in the field of developmental biology and at the intersection of development, genetics, evolution, and disease. The Society is dedicated to advancing the knowledge, health care, and prevention of craniofacial disorders through education and research. While an affiliate of AAA, SCGDB maintains its own officers, annual meeting, website, and awards. To find out more, visit [anatomy.org/SCGDB](http://anatomy.org/SCGDB).

## Stopping Sexual Harassment in Science

When the Societies Consortium on Sexual Harassment in STEMM (science, technology, engineering, math, and medicine) launched in February, AAA joined as one of 53 inaugural members, because the initiative directly aligns with our strategic priorities related to diversity, equity, and inclusion.

Through a collective effort and investment, the consortium model brings together leading academic and professional societies like AAA to develop high-quality resources that benefit from multiple perspectives and national expertise, in a time- and cost-efficient manner. The initiative works to advance professional and ethical conduct, climate, and

culture across the STEMM fields, reflecting a shared understanding that professional societies have a unique responsibility in their role as standard-setters to address the pervasive problem of sexual and gender harassment.

In the fall, the American Association for the Advancement of Science (AAAS) convened consortium members around the topics of member engagement, culture change, restorative remedies, and building communities that are actively intolerant of sexual and intersecting harassment.

## Advancing Civic Science: A Cross-Society Initiative

Along with representatives from FASEB and dozens of other scientific societies, AAA staff attended the Civic Science Kick-Off Meeting in September — the first in a series laying the groundwork for a more cohesive whole among societies as they work toward influencing long-term culture change within the scientific enterprise to increase value and support for meaningful civic science engagement.

The initiative is funded by the Kavli Civic Science Fellowship at the American Society for Cell Biology and led by Rose Hendricks, Ph.D. It leverages a collective impact model, convening participants to discuss opportunities and challenges that scientific societies experience in supporting civic science, including effectiveness, sustainability, scalability, political factors, and social and cultural factors.

AAA's participation in the effort furthers our strategic goal to lead in science communication, including public engagement. We look forward to continuing this cross-society work in 2020, as the group articulates and refines a common agenda and identifies specific issues to tackle together.

## Staff

In 2019, we welcomed two new staff members to our team: Bill Rowan, Director of Communications and Marketing, and Sophia Guilday, Executive Assistant. Liz Phares was celebrated for 10 years of service to the Association and promoted to Senior Manager, Membership Services.

*What is  
civic science?*



*outreach*



*science*



*communication*



*public engagement*



*advocacy*



**2019-2020 Board of Directors** Seated: Bryon Grove, Valerie DeLeon, Rick Sumner, Phil Brauer, Martine Dunnwald, Ralph Marcucio. Standing: Ann Zumwalt, Julia Boughner, Shaun Logan, Jennifer McBride, Diana Rigueur, Maria Serrat, Heather Richbourg, Julian Guttman, with Executive Director Shawn Boynes.

*The Association is exceedingly grateful for the dedication to advancing anatomy espoused by these Board members, who completed their service in 2019:*

*Kimberly Topp, P.T., Ph.D.,  
Past President*

*Jason Organ, Ph.D.,  
Director*

*Rebecca Pratt, Ph.D.,  
Director*

*Sonya Van Nuland, Ph.D.,  
Student/Postdoc Director*

## Governance

AAA held its annual election for the Board of Directors in January, with four new members joining the board in April.

### 2019-2020 Board of Directors

#### President (2019-2021)

**Rick Sumner, Ph.D.**, Rush University Medical Center, Chicago, IL

#### President-Elect (2019-2021)

**Valerie DeLeon, Ph.D.**, University of Florida, Gainesville, FL

#### Past President (2019-2021)

**Philip Brauer, Ph.D.**, Kansas City University of Medicine and Bioscience, Kansas City, MO

#### Secretary/Treasurer (2019-2023)

**Bryon Grove, Ph.D.**, University of North Dakota School of Medicine and Health Sciences, Grand Forks, ND

#### Program Co-Chairs

**Martine Dunnwald, Pharm.D., Ph.D.**

(2016-2020), University of Iowa, Iowa City, IA

**Ralph Marcucio, Ph.D.** (2018-2022), University of California, San Francisco, San Francisco, CA

## Directors

**Julia Boughner, Ph.D.** (2019-2022), University of Saskatchewan, Saskatoon, SK, Canada

**Julian Guttman, Ph.D.** (2017-2020), Simon Fraser University, Burnaby, BC, Canada

**Shaun Logan, Ph.D.** (2018-2021), Texas A&M University, Dallas, TX

**Jennifer McBride, Ph.D.** (2017-2020), Cleveland Clinic Lerner College of Medicine, Cleveland, OH

**Maria Serrat, Ph.D.** (2019-2022), Marshall University, Huntington, WV

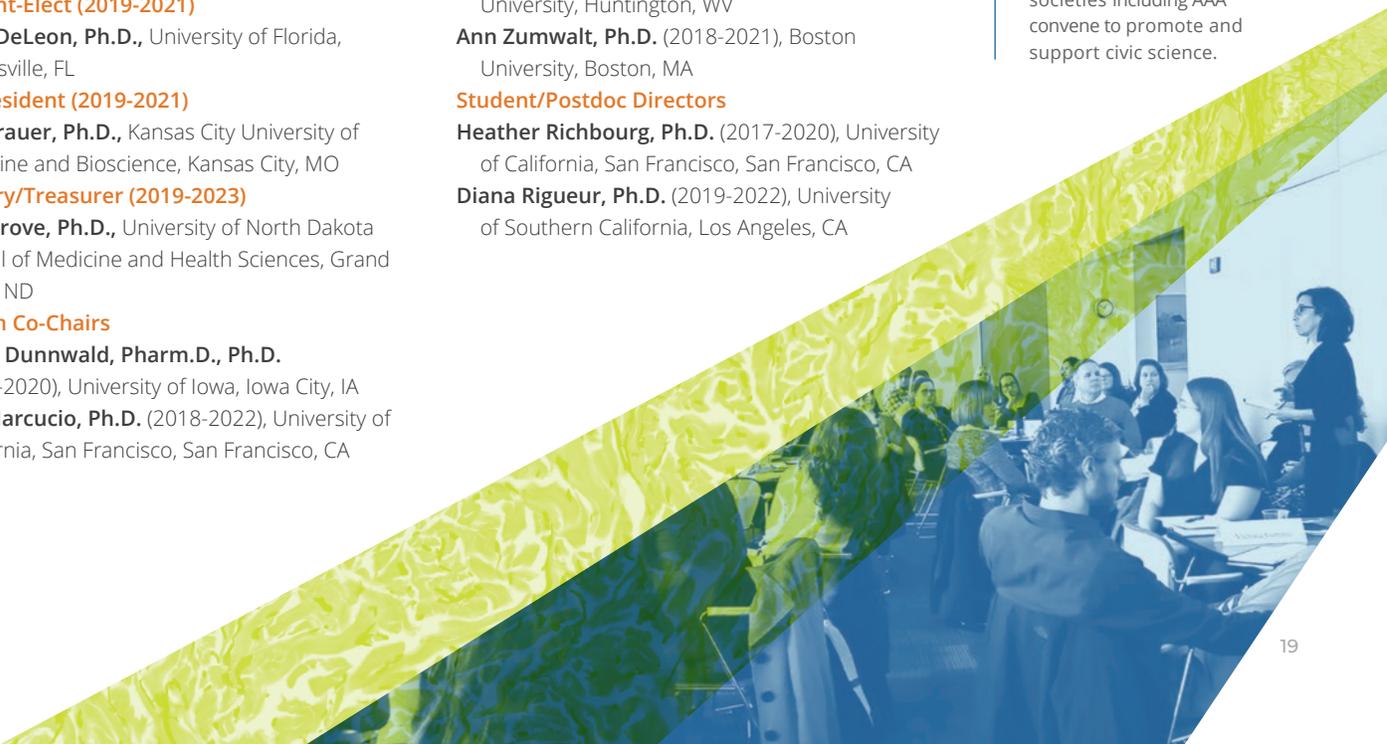
**Ann Zumwalt, Ph.D.** (2018-2021), Boston University, Boston, MA

#### Student/Postdoc Directors

**Heather Richbourg, Ph.D.** (2017-2020), University of California, San Francisco, San Francisco, CA

**Diana Rigueur, Ph.D.** (2019-2022), University of Southern California, Los Angeles, CA

BELOW: Scientific societies including AAA convene to promote and support civic science.



# SCHOLARSHIPS, GRANTS, AND AWARDS

Congratulations to the hundreds of AAA members who were honored during 2019 for their exemplary service, groundbreaking research, and innovative ideas for the future! AAA bestowed more than \$216,770 in 2019 for awards, research grants, and scholarships, ensuring that members are supported and recognized at every phase of their careers.

## A.J. Ladman Exemplary Service Award

**Judith Venuti, Ph.D.**, Oakland University William  
Beaumont School of Medicine

## Henry Gray Distinguished Educator Award

**Anne Agur, Ph.D.**, University of Toronto (CAN)

## Henry Gray Scientific Achievement Award

**Joan Richtsmeier, Ph.D.**, Pennsylvania  
State University

## Basmajian Award

**Adam Taylor, Ph.D.**, Lancaster Medical School (GBR)

## Fellows

**Anne Agur, Ph.D.**, University of Toronto (CAN)

**Mary Barbe, Ph.D.**, Temple University

**Darrell Evans, Ph.D.**, The University of  
Newcastle, Australia

**Michael Hortsch, Ph.D.**, University of Michigan

**David Ornitz, M.D., Ph.D.**, Washington University  
School of Medicine

**Jean Sanger, Ph.D.**, SUNY Upstate Medical University

**Mark Teaford, Ph.D.**, Touro University

**Rocky Tuan, Ph.D.**, Chinese University of Hong Kong

**Katherine Yutzey, Ph.D.**, Cincinnati Children's Hospital  
Medical Center

## Early-Career Investigator Awards

### R.R. Bensley Award in Cell Biology

**Kevin Cheung, M.D.**, Fred Hutchinson Cancer  
Research Center

### C.J. Herrick Award in Neuroanatomy

**Stephan Lammel, Ph.D.**, University of  
California, Berkeley

### Morphological Sciences Award

**Paul Gignac, Ph.D.**, Oklahoma State University  
Center for Health Science

### H.W. Mossman Award in Developmental Biology

**Maria Lehtinen, Ph.D.**, Boston Children's Hospital

## Innovations Program

**Rachel Menegaz, Ph.D.**, University of North Texas  
Health Science Center: Summer Opportunities in  
Anatomy Research (SOAR) Program

## Postdoctoral Fellowships

**Karyn Jourdeuil, Ph.D.**, University of Maryland,  
College Park

**Marta Losa Llabata, Ph.D.**, University of California,  
San Francisco

**Christopher Mayerl, Ph.D.**, NEOMED



Judith Venuti receives the A.J. Ladman Exemplary Service Award at EB 2019 from then-President Phil Brauer.



*84% of members who have been in the field for seven years or less look to AAA for award opportunities specific to biomedical researchers early in their training.*

## Fellows Grant Award Program

**Greg Vanden Heuvel, Ph.D.**, Western Michigan  
University Homer Stryker M.D. School of Medicine

## Education Research Scholarship

**Margene Anderson**, University of Wisconsin, Madison

## Anatomy Training Program

**Ryan Hillmer, Ph.D.**, Medical College of Wisconsin

**Debora Kaliski, Ph.D.**, University of the Incarnate Word

**Shanu Markand, Ph.D.**, Emory University

## Short-Term Visiting Scholarships

**Sarah Amugongo, Ph.D.**, St. Olaf College

**Habiba Chirchir, Ph.D.**, Marshall University

**Taylor Friemel**, Pennsylvania University

**Margaret Hall, Ph.D.**, Midwestern University

**Elizabeth Jewlal**, Western University (CAN)

**Roxanne Larsen, Ph.D.**, University of Minnesota

**Margaret McNulty, Ph.D.**, Indiana University School  
of Medicine

**Christopher Noto, Ph.D.**, University of Wisconsin

**Rebecca Pratt, Ph.D.**, Oakland University William  
Beaumont School of Medicine

**Marc Spencer, Ph.D.**, The George Washington University

## Outreach Grants

**Danielle Bentley, Ph.D.**, University of Toronto (CAN)

**Anthony Firulli, Ph.D.**, Indiana University

**Paul Gignac, Ph.D.**, Oklahoma State University

**Francis Kirera, Ph.D.**, Mercer University

**Izuchukwu Okafor**, Nnamdi Azikiwe University (NGA)

**Guojun Sheng, Ph.D.**, Kumamoto University (JPN)

**Abigail Tucker, Ph.D.**, King's College London (GBR)



### Morphological Sciences Award Named in Honor of Pioneering Scientist

The Board honored Dr. William Montague Cobb by naming an early-career investigator award, originally established in 2008, after him. The newly named W.M. Cobb Award in Morphological Sciences will honor his legacy with its first recipient in 2020.

A member for three decades, Dr. Cobb received the Henry Gray Scientific Achievement Award in 1980. He was the first African American to earn a Ph.D.

in Physical Anthropology and used scientific methods to debunk racist ideas about human anatomy.

“For his numerous contributions to anatomy, anthropology, science, and social justice, Dr. Cobb’s impact is enduring,” said AAA President Rick Sumner. “The Board agreed naming this award in his honor was a fitting inspiration for those early in their anatomy careers engaging in meaningful scientific research.”

### Beyond AAA: Members Making an Impact

The following members were recognized for their contributions by the broader scientific community:

#### AAAS FELLOWS:

**Rick Sumner, Lynne Opperman, and David Ornitz** were elected by their American Association for the Advancement of Science (AAAS) peers to the 2019 Class of AAAS Fellows — a lifetime distinction that celebrates individual AAAS members for “extraordinary achievements across disciplines.”

#### AAMC AWARDS:

**Mohammed Khalil** was honored with the Association of American Medical Colleges (AAMC) Alpha Omega Alpha Robert J. Glaser Distinguished Teacher Award for his clear understanding of educational psychology, proven record of effectiveness and innovation in teaching, and contributions to student development.

#### SDB PRIZE:

**Gary Schoenwolf**, special projects editor and a driving force behind *Developmental Dynamics* special issue on Advances in Evolutionary and Developmental Biology, was awarded the Viktor Hamburger Outstanding Educator Prize by the Society for Developmental Biology (SDB).



Kate Lesciotto applauds award recipients during the closing ceremony at EB 2019.

#### SCGDB AWARDS:

**Joan Richtsmeier** received the 2019 David Bixler Distinguished Scientist Award from the Society for Craniofacial Genetics and Developmental Biology (SCGDB). The award is the Society’s highest scientific honor created to recognize long-term distinguished leadership and meritorious contributions to the craniofacial sciences by a senior-level SCGDB member. **Geoff Sperber** was honored with SCGDB’s Lifetime Achievement Award, for his long-standing contributions to the field and to the Society.

### Annual Meeting Competition Awards (First Place)

*Postdoctoral Platform Award*

*Sponsored by Developmental Dynamics*

**Emily Gilbert**  
University of Toronto (CAN)

*Langman Graduate Student Platform Award*

**Brooke Vinson**  
Medical College of Georgia, Augusta University

*Educational Research Platform Award*

**William Albabish**  
University of Guelph (CAN)

*Postdoctoral Poster Award*

**Kirstin Brink**  
University of British Columbia (CAN)

*Graduate Student Poster Award*

**Adam Groh**  
University of Western Ontario (CAN)

*Student/Postdoctoral Education Research Poster Award*

*Sponsored by Anatomical Sciences Education*

**Kimberly McBain**  
McGill University (CAN)

*Undergraduate Student Poster Award*

**Katherine Green**  
University of Chicago

# RECRUITING THE NEXT GENERATION OF ANATOMISTS

By Rachel Menegaz



When I first joined the Department of Physiology and Anatomy at the University of North Texas (UNT) Health Science Center (HSC) as an assistant professor for the Center for Anatomical Sciences, I quickly realized that at a graduate-only campus, it was difficult to recruit prospective undergraduate students into a program that many simply didn't know existed.

The more I talked to graduate students who had found their way to UNT, in fact, the more I realized that many undergrads — especially those who don't share a campus with an anatomy graduate program or have similar opportunities at their home institutions — don't realize that anatomy is an active research field and a viable option for grad school. Very few of us started in anatomy as a first career, and as I looked back over my own journey here, I recognized that a lack of exposure is probably our biggest stumbling block.

This so-called "diversity bottleneck" — or, the loss of representative diversity between undergraduate and graduate programs — spurred me to action, as I sought ways to overcome the challenges of recruiting and retaining a diverse and talented population of young scientists from undergraduate programs. Once recruited, I thought, additional opportunities for early-career mentorships and student engagement could open up, with the goal of preparing students for the "three-legged" (research, teaching, and service) nature of academic careers.

In 2018, my colleague, **Scott Maddux**, and I pooled lab funds to support two undergraduate interns for the anatomy department; the effort gained statewide attention and was enormously successful, with the first two interns hailing from large state undergraduate institutions with active research capabilities.

Shortly after our pilot ended, I saw AAA's Innovations Program, and I thought that it would be a great fit for our Summer Opportunities in Anatomy Research (SOAR) program. The proposal and application process offered insightful and informative discussions with AAA, and we realized there was further opportunity in helping undergrads understand how to approach graduate schools: Working with graduate advisors, we developed workshops for topics such as how to start the application process, find an attractive program, and develop a CV. We created a seminar series on Careers in Anatomy and incorporated a mini-anatomy course. By making our awards application about more than cross-pollinating undergrad and anatomy grad schools, the program became a holistic way for students to research and plan their futures.

## Supporting the Strategic Plan

AAA's Board of Directors selected SOAR for the Innovations Program, awarding \$50,000 for a two-year cycle to support a total of six interns in 2019 and 2020. Ultimately, SOAR became a 10-week internship offering hands-on experiences in

*"I learned a lot about myself and have gained clarity on my career path. I am very grateful that I was able to network and gain mentors that are willing to assist wherever my path may lead."*

— Janessa Bushman, 2019 SOAR intern



anatomical research, education, and outreach to undergraduate students. It addresses the goals of the AAA Strategic Plan in several ways:

- Recognize and support a diverse range of awardees at all stages of their professional development by creating a program that connects undergraduate students with graduate students and AAA faculty.
- Expand opportunities to showcase the role of anatomy and the range of contributions of anatomists in research, education, and service.
- Develop programs for outreach to potential members and programs of engagement and career development by recruiting the next generation of anatomists from diverse and underrepresented groups, with a focus on retaining those students through individual mentorship and early-career preparation.

The 2019 SOAR program ran May 15-July 19, culminating in research poster presentations by SOAR interns at a campus-wide research appreciation day. The interns — all first-generation college students — also were selected to present their research at the Annual Meeting at Experimental Biology 2020, with two of them even competing for Undergraduate Student Poster Awards.

### Preparing Students for Research, Teaching, and Service



The SOAR program, celebrated for its holistic approach to helping students research and plan their futures, also included:

- A seminar series in biomedical sciences research hosted by the UNTHSC Center for Diversity and International Programming (CDIP).
- A trip to Texas A&M HSC hosted by **Shaun Logan** and **Matthew Kesterke**, featuring a neuroscience lecture, anatomy facility tour, and career discussion.

- A tour of the UNTHSC Human Vascular Physiology lab, where Steven Romero and lab members demonstrated research techniques used to study physiology in human volunteers.
- Student-led workshops in gross anatomy, forensic osteology, a neuromuscular reflex clinic, a “scrub-in” clinic teaching aseptic technique, and a student-run panel on careers in the biomedical sciences at the Texas Academy for the Biomedical Sciences (TABS) Summer Bridge Program, for 9th grade students.
- Workshops in scientific communication, including lightning talks on research projects and practice presentations on the research posters for the Annual Meeting.
- Professional development activities, including seminars on Ph.D. careers and careers in anatomy, and workshops on preparing a curriculum vitae/résumé and applying to graduate school.
- Gross anatomy workshops, including a four-day prosection-based workshop on functional anatomy of the upper limbs taught by Scott Maddux for pre-matriculation UNTHSC students, and a series of prosection-based anatomy labs taught by Center for Anatomical Sciences faculty on head and neck anatomy, cardiopulmonary anatomy, and neuroanatomy.

### The Future of SOAR

I hope SOAR will grow to other campuses. Our 2019 interns have become advocates for and ambassadors of the program. Based on the huge response we received — 87 applications in 2019 — we know that the need isn’t exclusive to UNT.

An equally important realization is the immense value of awards like AAA’s Innovations Program. The grant supported this effort, but the process also really helped improve the program: The feedback provided by AAA’s review committee solidified our ideas and grew our scope, ensuring that we could make an impact on the society as a whole and extend beyond our own institution.

ABOVE: Holly LaRocque helps a 9th grade student from the Texas Academy of Biomedical Sciences (TABS) into a surgical gown for a lesson on aseptic technique in surgery.

LEFT: Amber Cooper teaching a forensic osteology lab for 9th grade students from the Texas Academy of Biomedical Sciences (TABS).

LEFT PAGE: Matthew Kesterke (far left) and Shaun Logan (far right) hosted SOAR interns (left to right) Holly LaRocque, Amber Cooper, Jenessa Bushman, and UNTHSC SMART Program participant Avery Boley at Texas A&M to learn about craniofacial research and anatomy careers.

# AAA: OPEN AND WELCOMING TO ALL

The Diversity and Inclusion Task Force — now the Diversity, Equity, and Inclusion (DEI) Committee — was convened in 2016 in response to member feedback and started meeting regularly in 2017. Their first product — the Diversity and Inclusion Statement — demonstrated our commitment to **welcoming, developing, and maintaining scientists and educators in a culture that embraces individuals with diverse life experiences**. AAA’s Board took the important step of transforming the Task Force into a standing committee at the April Board meeting, recognizing that this important work of engaging and representing all members will be constant and ongoing. The committee membership was also expanded from eight to 12 members, effective January 2020, with new members selected through the annual Call for Volunteers that took place in Fall 2019. At its November meeting, the Board also approved a new DEI award, to be developed and funded in 2020.



LEFT: Scott Lozanoff explores virtual reality at SACNAS. CENTER: Heather Richbourg speaks to an ABRCMS attendee. RIGHT: Rebecca Fisher, a member of the DEI Committee, sports a “How can I help?” button at EB 2019.

## Steps Toward Improved DEI

- Expand the information members can voluntarily provide in their member profile, against which we measure progress and representation
- Highlight accomplishments of underrepresented members
- Expand special interest groups on Anatomy Connected, such as LGBTQ+ in Anatomy, launched in 2019; Women in Anatomy; and topical discussion groups
- Modify volunteer application to highlight contributions to DEI
- Unconscious bias training for volunteer leaders
- Recruitment and awareness during awards application, nominations, and selection
- Each committee’s report to the Board includes actions on DEI
- Outreach to historically black colleges and universities (HBCUs) Hispanic-serving institutions (HSIs), and prospective Regional Meeting hosts and attendees



*Although “American” is in our name, we’re an international society: 22% of members live outside the U.S.!*

## AAA Represents!

In full alignment with our strategic imperatives to increase outreach to and career development for underrepresented groups in STEM, AAA was proud to exhibit at the following events.

SACNAS, the Society for Advancement of Chicanos and Native Americans in Science, holds the largest multidisciplinary and multicultural diversity event in the country. AAA exhibited at their meeting October 31-November 2 in Honolulu, represented by member **Scott Lozanoff** of the University of Hawaii.

In Anaheim, California, in November, Student/ Postdoc Board Member **Heather Richbourg** and Engagement Manager **Kelly Cox** represented AAA at the Annual Biomedical Research Conference for Minority Students (ABRCMS), which aims to increase minorities, veterans, and people with disabilities in the STEM fields. Board Member **Shaun Logan** also attended.

## Celebrating LGBTQ+ Year-Round



Gary Farkas chats with Betty Smoot at EB 2019.

In March, **Gary Farkas** attended the Out to Innovate Summit at the University of Southern California on behalf of AAA. Organized and presented by the National Organization of Gay and Lesbian Scientists and Technical Professionals (NOGLSTP), the Summit

provided an opportunity to network and learn from 150 LGBTQ+ scientists, educators, postdocs, and graduate and undergraduate students in a supportive, safe, and collaborative environment.

"I enjoyed learning more about NOGLSTP, its participants, and how the organization can help promote LGBTQ+ professional development, advocacy, and visibility within AAA," said Farkas.



*At EB19, 55% of symposium chairs and speakers were female, and 50% of the symposium proposals included speakers from underrepresented groups.*

"I connected with other LGBTQ+ STEM professionals and discussed current matters concerning LGBTQ+ professionals and students in academia and science. Ultimately, I hope we can promote collaboration, visibility, and empowerment, while mitigating bias in the workplace."

During AAA's Annual Meeting at Experimental Biology in April, several members met to discuss how AAA can support LGBTQ+ initiatives, further engage with NOGLSTP, develop informative webinars, and create a safe hub for LGBTQ+ anatomists, scientists, educators, postdocs, and students.

To continue the conversation and in celebration of June's Pride Month, AAA launched LGBTQ+ in Anatomy on Anatomy Connected. This group aims to empower, encourage, and support lesbian, gay, bisexual, transgender, queer, intersex, asexual, and allied scientists, educators, and students through inclusion, community, education, discovery, peer support, and networking in pursuit of promoting the values of equity, diversity, and inclusion in the AAA and the scientific community at large.

*"As a Haitian-American, who now resides in Canada, I am passionate about these issues. When I went to college, we had a number of folks who looked like me who were pursuing degrees in the sciences. However, when I went to graduate school, there were just two of us. As an associate professor at McGill, when I look around at our faculty meetings, I can still count on one hand the number of other black professors in our department. This is not what I want for the next generation."* — LOYDIE JEROME-MAJEWSKA, CHAIR, DEI COMMITTEE



## Be Counted!

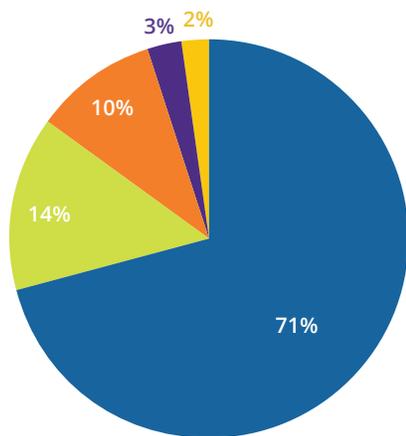
AAA collects member demographics in a few ways, notably in your member profile page when you log in to the all-new anatomy.org. Previously, we collected data on Anatomy Connected, where roughly 200 members — less than 12% of our membership — answered at least one demographic question. We'd like to improve upon that, so we have a fuller idea of who we're serving.

**You can help by logging in to the website to complete your Personal Information.**

Some members may understandably have concerns — about privacy, how the data will be used, or who can access it. Rest assured this data is visible only to you and staff.

# 2019 FINANCIALS

AAA remains financially healthy and committed to supporting its members by investing in programs and services that strengthen our mission and strategic goals. These charts provide an overview of revenue sources and primary expense categories as of December 31, 2019 (unaudited).



## Income

**\$1,578,291.56**

**Royalties 71%**

**Annual Meeting 14%**

**Membership Dues 10%**

**Contributions 3%**

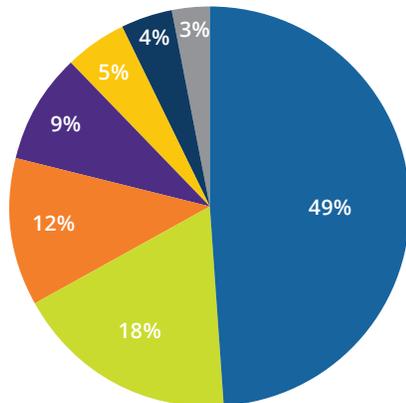
**Advertising 2%**

Income decreased 8.87% in 2019, due to a one-time incentive payment from Wiley in 2018 and a small decrease in Annual Meeting income. However, advertising revenue went up.

**Royalty Income:** revenue earned from journal subscriptions

**Contributions:** revenue received from member donations and sponsorships

**Advertising:** revenue generated from the job board and newsletter



## Expenses

**\$2,172,703.65**

**General & Administrative 49%**

**Annual & Regional Meetings 18%**

**Awards 12%**

**Committees & Governance 9%**

**Member Retention & Development 5%**

**Newsletter & Journals 4%**

**Website 3%**

The Association saw category decreases in Newsletter & Journals, as well as in Annual & Regional Meetings, in part because there was no Regional Meeting in 2019. Increased expenses correlate to strategic investments in staff (General & Administrative), new software (Member Retention & Development and Website), and training for all volunteer leaders (Committees & Governance). Overall, expenses decreased 3.87%.

**General & Administrative:** includes accounting/auditing fees, bank/credit card fees, computer/IT service expenses, rent, insurance, office supplies, staff salaries/benefits, payroll/human resources expenses, and consulting fees

## INVESTMENTS

*As of September 30, 2019*

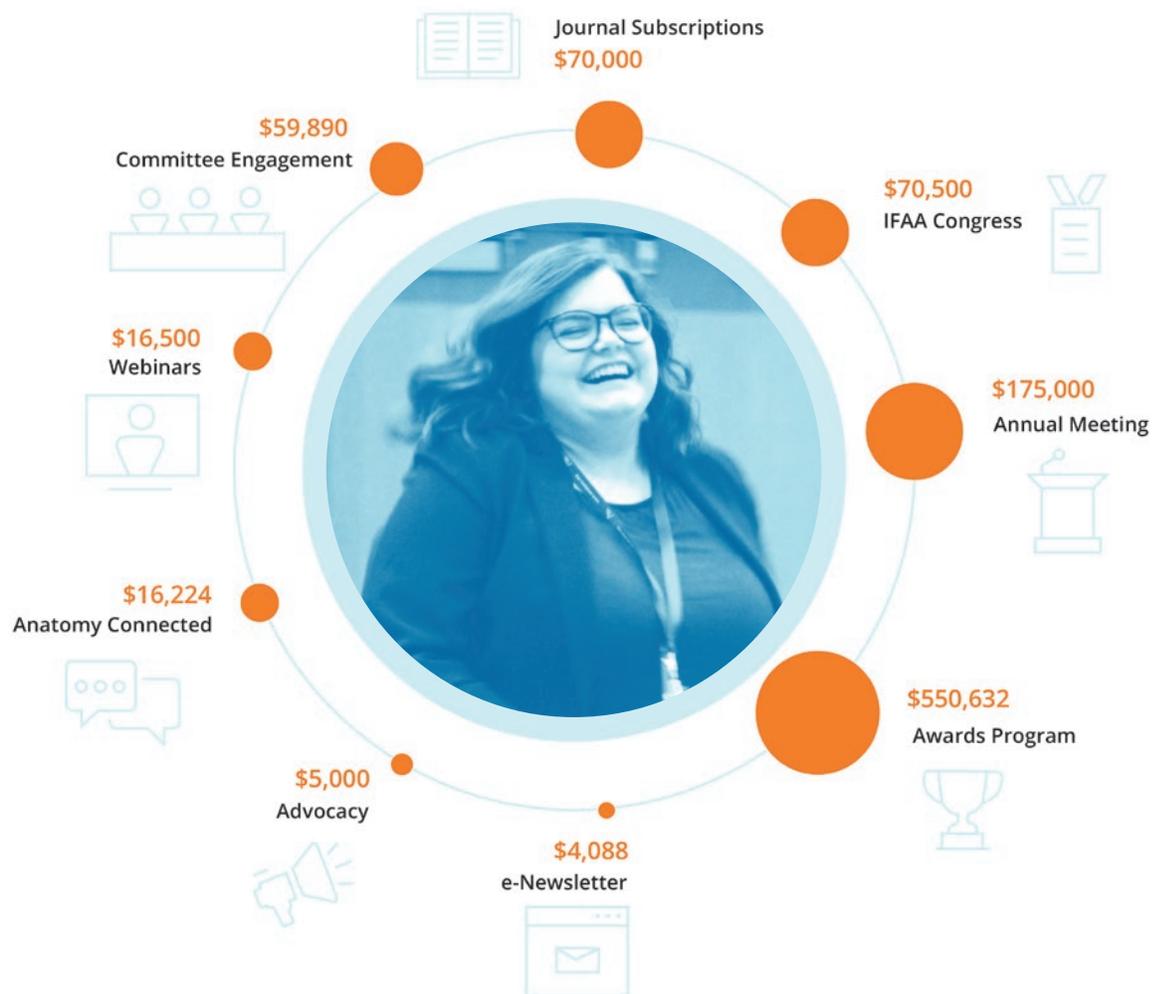
The Journal Trust Fund held **\$10,307,546 in assets** — a year-to-date increase of **14.97%**.

AAA Directed Funds held **\$197,816** — a year-to-date **increase of 10.91%**.

Total invested funds: **\$10,505,362**

# NEARLY \$1 MILLION IN MEMBER BENEFITS

AAA provided **\$967,834** in member support in 2019 (plus staff resources) to deliver member value through strategic initiatives and scientific advancement.



**\$4,088:** *Anatomy Now*, an **e-Newsletter** for and about members, published 208 articles and 50 featured jobs in 2019 — an effort that relies on modern technology, staff resources, and member contributions to deliver useful information each month.

**\$5,000:** Each year, AAA supports Board and member **Advocacy** through policy statements, letters, and — invaluable — bringing members to FASEB's Hill Day.

**\$16,224:** **Anatomy Connected** helps members engage year-round, beyond the Annual Meeting. In 2019, members launched 2 new communities: 3D Printing Interest Group and LGBTQ+ in Anatomy.

**\$16,500:** **Webinars** connect members with hot topics, emerging research, and expert speakers. In 2019, we covered topics from body donation policies to 3D printing.

**\$59,890:** **Committee Engagement** — regular meetings, conference calls, and online collaboration — is critical to advancing the strategic plan. Our 4 standing committees and 7 ad hoc committees rely on the volunteer leadership of 78 active members.

**\$70,000:** Did you know **Journal Subscriptions** reflect a cost to the Association? Even though AAA owns the three journals, the Association pays publisher Wiley for member subscriptions.

**\$70,500:** As a founding member of the IFAA, supporting the **IFAA Congress** is a strategic imperative. The Association offered travel awards, supported symposia, and launched its new name/brand in London.

**\$175,000:** Our 2019 **Annual Meeting** at Experimental Biology in Orlando brought together 1,032 anatomy attendees to connect with others across the life sciences.

**\$550,632:** Our robust **Awards Program** funds education innovation and scientific research and recognizes members at all career levels. (Actual amount dispersed each year may differ based on applications received.)



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Travel and competition award winners gather in celebration, closing the Annual Meeting at Experimental Biology 2019.

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