EMPOWERING DISCOVERY TO IMPROVE HEALTH
It’s the science of life and medicine.

Through the study of how the body works in health and disease, physiologists contribute to fundamental breakthroughs in science and medicine. Swedish chemist and inventor Alfred Nobel recognized this when he included “Physiology or Medicine” among the annual prizes he endowed to recognize achievements that better humanity.
ABOUT APS

The American Physiological Society (APS) is a foundational, essential driving force behind the discipline of physiology and its contributions to scientific discovery and humanity. Founded in 1887, APS is one of the oldest professional scientific societies in the U.S. Presently, the Society has ~11,000 members holding doctoral degrees in physiology and/or medicine (or degrees in other health professions). APS publishes 15 research journals, organizes scientific meetings and conferences, offers numerous career development and research grant awards, advocates for sound science policy and research funding and supports extensive educational programs in the biomedical and biological sciences.
Looking back at 2016, I look forward to what is in store for APS and physiology in 2017.

In 2016, APS held our annual meeting at Experimental Biology in San Diego; organized three excellent APS conferences focused on teaching and learning, inflammation and cardiovascular disease, and exercise; and co-sponsored two international meetings on physiology in Dublin and Beijing. All of these meetings offered ample opportunities for sharing discoveries, interacting with colleagues and developing collaborations. I ask that you consider organizing an APS conference yourself—a great benefit that comes with being an APS member.

Over the past year, we worked to evaluate issues confronting APS and physiology as a whole. To those who participated in focus groups and surveys, we sincerely thank you for your invaluable input. We will use your feedback this coming year in strategic planning sessions to review the Society’s strengths and weaknesses and the challenges that exist for our discipline and to create a comprehensive strategic plan that addresses the needs of our members and other stakeholders over the next several years. Ultimately, our goal is to ensure that all scientists in academia, industry and government and the public highly value physiological research for its indispensable role in biological and biomedical research discoveries.

Thank you to our committee members, staff and leadership for their dedication and support of the Society’s numerous meetings, programs and awards in 2016. I also extend my sincere appreciation to all of our donors and sponsors, without whom we could not provide the vast majority of our programs and awards. In particular, I thank ADInstruments for beginning a partnership with APS and considerably increasing its support of APS awards, programs, meetings, sections and groups.

It has been a great honor to be APS president, and I am certain that the next president, Dennis Brown, will do his very best to ensure that 2017 is another great year for the Society.

“Ultimately, our goal is to ensure that all scientists highly value physiological research for its indispensable role in biological and biomedical research discoveries.”

Jane F. Reckelhoff, PhD
89th APS President
APS Has 10,684 Members

27% of APS members are international
31% of APS members are trainees

29% of APS members are women
68% of APS members are men

Distribution by Region

<table>
<thead>
<tr>
<th>Region</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>72.8%</td>
</tr>
<tr>
<td>Europe</td>
<td>9.5%</td>
</tr>
<tr>
<td>Asia</td>
<td>6.5%</td>
</tr>
<tr>
<td>Canada</td>
<td>5.3%</td>
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<tr>
<td>South America</td>
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<tr>
<td>Oceania</td>
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<tr>
<td>Africa</td>
<td>0.6%</td>
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<td>Mexico</td>
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<tr>
<td>Caribbean</td>
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<tr>
<td>Central America</td>
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Members by Section

<table>
<thead>
<tr>
<th>Section</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiovascular Section</td>
<td>20.99%</td>
</tr>
<tr>
<td>Cell &amp; Molecular Physiology Section</td>
<td>12.85%</td>
</tr>
<tr>
<td>Environmental &amp; Exercise Physiology Section</td>
<td>10.63%</td>
</tr>
<tr>
<td>Central Nervous System Section</td>
<td>9.51%</td>
</tr>
<tr>
<td>Endocrinology &amp; Metabolism Section</td>
<td>7.79%</td>
</tr>
<tr>
<td>Respiration Section</td>
<td>7.65%</td>
</tr>
<tr>
<td>Renal Section</td>
<td>7.27%</td>
</tr>
<tr>
<td>Neural Control &amp; Autonomic Regulation Section</td>
<td>5.67%</td>
</tr>
<tr>
<td>Gastrointestinal and Liver Physiology Section</td>
<td>5.58%</td>
</tr>
<tr>
<td>Teaching of Physiology Section</td>
<td>4.48%</td>
</tr>
<tr>
<td>Comparative &amp; Evolutionary Physiology Section</td>
<td>3.85%</td>
</tr>
<tr>
<td>Water &amp; Electrolyte Homeostasis Section</td>
<td>2.35%</td>
</tr>
<tr>
<td>None</td>
<td>1.37%</td>
</tr>
</tbody>
</table>
APS conferences are leading venues for sharing new and exciting research discoveries in physiology and fostering collaboration and scientific innovation.

**EXPERIMENTAL BIOLOGY 2016**
- April 2–6
- San Diego, CA

**INTEGRATIVE BIOLOGY OF EXERCISE VII**
- November 2–4
- Phoenix, AZ

**INFLAMMATION, IMMUNITY AND CARDIOVASCULAR DISEASE**
- August 24–27
- Westminster, CO

**INSTITUTE ON TEACHING AND LEARNING**
- June 20–24
- Madison, WI

**PHYSIOLOGY 2016**
- July 29–31
- Dublin, Ireland

**Attendees:**
- EXPERIMENTAL BIOLOGY 2016: 11,488 (36% were physiologists)
- INTEGRATIVE BIOLOGY OF EXERCISE VII: 350
- INFLAMMATION, IMMUNITY AND CARDIOVASCULAR DISEASE: 135
- INSTITUTE ON TEACHING AND LEARNING: 124
- PHYSIOLOGY 2016: 1,169
Personally, I was humbled to learn of the exciting research being done in countries outside the U.S., Asia and Western Europe. I met scientists from the Middle East and Eastern Europe that do not typically attend large meetings in the U.S., and I am very grateful for that opportunity. Scientifically and professionally, attending and presenting my work at [Physiology 2016] was a tremendous opportunity, giving me the chance to share our research with a truly international community.

— Physiology 2016 attendee

Nearly 7,000 physiologists attended APS conferences in 2016.

APS trainees have dinner with the 2008 Nobel Prize in Chemistry Awardee, Roger Y. Tsien, who gave the APS Nobel Prize Lecture at EB 2016 on his discovery and development of the green fluorescent protein. Sadly, Dr. Tsien passed away in August 2016.

APS President Jane Reckelhoff and The Physiological Society (TPS) President Richard Vaughan-Jones welcome attendees to Physiology 2016, an APS/TPS joint meeting that attracted physiologists from 69 countries.
Awards

APS provided more than $1 million in awards in 2016 to support the career development of physiologists and recognize excellence in research and professional service. Early career physiologists benefit tremendously from unrestricted funds that allow them to explore new research areas, purchase essential—and often costly—equipment and attend meetings. Ultimately, these awards help produce exciting discoveries that lead to improvements in health. Generous individuals and organizations support these much-needed awards, without which we would be unable to offer them.

Anthony Macknight, a well-respected APS member and founder of ADInstruments, devoted his career not only to physiology research but also to education. To honor Macknight’s dedication to innovative teaching and support of the next generation of physiology educators, ADInstruments created the Macknight Early Career Innovative Educator Award. The award recognizes an early career physiologist for incorporating state-of-the-art teaching techniques and effectively utilizing technology to engage undergraduate students in physiology education. Award recipients receive a travel award and the ADInstruments LabTutor Physiology Teaching System.

Data Sciences International (DSI)

The S&R Foundation established the Ryuji Ueno Award in partnership with APS in 2002. The Ueno Award is given annually to an individual demonstrating outstanding promise based on his/her research in wound healing, tissue remodeling, organ regeneration or stem cell biology, providing $30,000 for the awardee’s research program.

“Thank you! These funds were instrumental to getting my career off to a strong start.”

— Gregory E. Demas, PhD
Past Research Career Enhancement Award winner
Among the most respected and frequently cited in the world, APS publications cover the breadth of physiological research, from the cellular and molecular to the organ and system level.

In 2016, APS published over 3,500 peer-reviewed original research and review articles in 15 distinct journals and 10 book monographs. The Society’s Physiological Reviews journal provides state-of-the-art coverage of timely issues in physiology and biomedicine and currently and consistently ranks No. 1 in the field of physiology.

SUPPORTING EXPERIMENTAL REPRODUCIBILITY AND TRANSPARENCY

Last year, the National Institutes of Health awarded APS a three-year grant to develop a training module titled “Controls in Animal Studies Professional Skills Course.” The module aims to promote good practices in designing studies involving research animals and enhance the reproducibility of scientific results. Teaching materials for the module are in development and will be piloted and revised in the coming year.

In addition to the education efforts to enhance the reproducibility of scientific results, the Publications Department has updated the Information for Authors to include a new section called “Promoting Transparent Reporting in APS Publications.” The section encourages good practices to improve reporting of experimental information in research articles. APS journals have also begun to commission review articles that describe and facilitate best practice through a series titled “Cores of Reproducibility in Physiology.”

PHYSIOLOGICAL REPORTS IS NOW IN MEDLINE

APS publications embarked on an innovative collaboration in 2013 in launching Physiological Reports, an open access journal, with its sister society in the UK, The Physiological Society. The journal has been successful in creating a forum for research that may not fit the scope and criteria of other journals in physiology and related disciplines, including the societies’ own publications. Physiological Reports continues to grow and thrive, with Acta Physiologica, the journal of the Scandinavian Physiological Society, now participating in the collaboration. We are happy to report that the journal has recently been included in Medline in addition to other important scientific indices and databases.

SIGNIFICANT UPGRADES TO THE ONLINE JOURNALS ARE COMING SOON

Efforts have been underway all year to update the processing, design and user interface of our journals. Some of these big changes that are critical to support digital search and structure remain “under the hood.” Other big changes will be visible in the next year as we start a partnership with a new online journal platform. We are excited for our online journals to have a brand new look and feel, with improved discoverability and functionality. We hope the changes encourage members to use our journal sites for content discovery, education and community engagement.
EARLY CAREER FELLOWS LEARN SCIENCE POLICY

On May 17, four APS Early Career Advocacy Fellows (ECAF) went to Capitol Hill to advocate for biomedical research funding increases. Accompanied by senior members of the APS Science Policy Committee, the four Fellows visited 11 congressional offices. This program provides early career investigators who are interested in research advocacy the opportunity to learn more about science policy and improve their outreach skills. Two Fellows are selected each January for a two-year fellowship, which begins with an orientation at the Experimental Biology meeting. The Fellows also participate in Science Policy Committee meetings and discussions of emerging issues throughout the year. In addition, each Fellow develops an independent project, and the second-year Fellows mentor the first-year cohort.

“I am already planning a trip with our graduate student and postdoc advocacy organization to go to our state capital and meet with congressmen about animal research and funding levels. Now I know how we should conduct ourselves and the materials we should provide to our representatives.”

— Past ECAF Ann M. Stowe

THE AMERICAN PHYSIOLOGICAL SOCIETY  •  2016 ANNUAL REPORT

EXPLORING SCIENCE POLICY AND ADVOCACY AT CHAPTER MEETINGS

The Office of Science Policy sponsored three sessions on science policy and advocacy-related topics at chapter meetings in 2016. The APS Chapter Advocacy Outreach Program provides opportunities for members to learn about research advocacy and improve their outreach skills at local chapter meetings. This can be particularly valuable for students, who may not be able to travel to the Experimental Biology meeting. In February 2016, Alicia Schiller presented a talk at the Indiana Physiological Society, “Difficult Topics in Research Advocacy: Animals in Research.” In October, Gaylen Edwards presented “Animal Data Reproducibility” to the Nebraska Physiological Society and Kevin Kregel presented “Advocacy for Science: Making a Compelling and Understandable Case” to the Iowa Physiological Society.

REDUCING REGULATORY BURDEN

The Animal Care and Experimentation Committee sponsored a symposium at Experimental Biology 2016 called “Having Trouble with Your IACUC?” The purpose of the symposium was to explore ways that researchers can work with their Institutional Animal Care and Use Committees (IACUCs) to reduce unnecessary regulatory burden. The speakers’ presentations were then posted to a new web page dedicated to help address the problem of regulatory burden: www.the-aps.org/ReducingBurden. The page includes links to resources that can help IACUCs and investigators work toward institutional policies providing effective animal welfare oversight without unnecessary regulatory burden.
APS works to inform the general public about the contributions of physiologists to many biomedical and biological advances.

PRESS RELEASES

Our longstanding press release program promotes studies published in APS journals to the media. Our press releases have been featured in news outlets such as the New York Times, L.A. Times and National Geographic.

2016 APS/AAAS MASS MEDIA SCIENCE AND ENGINEERING FELLOW

In an effort to empower scientists to effectively communicate research, APS sponsors a young scientist in the AAAS Mass Media Science and Engineering Fellows program. This 10-week summer program places science, engineering and mathematics trainees at media organizations nationwide. Fellows use their academic training as they research, write and report today’s headlines, sharpening their abilities to communicate complex scientific issues to the public.

As a AAAS Mass Media Fellow I got the chance to immerse myself in the world of professional science writers. Through this experience my love for sharing science was intensified, and I gained a better sense of my strengths and weaknesses. The support of APS and AAAS has given me the confidence and skills to pursue a career in science writing.

BLOGS

The Society’s I Spy Physiology blog highlights physiological concepts experienced in everyday life. In 2016, the blog was honored with an Association Media and Publishing EXCEL Award and published its 100th post. The Society also hosts the Life Lines blog, penned by anonymous comparative physiologist Dr. Dolittle, which discusses the fantastic physiology of all animals.

PHYSIOLOGYINFO.ORG

APS actively uses social media to promote new discoveries in physiology, increase public awareness of the discipline and engage our members. Platforms include Facebook, Twitter, LinkedIn and YouTube.

SOCIAL MEDIA

Over 18,000 People Reached

11,200 Facebook Likes

1,800 Twitter Followers

Got a physiological concept you’d like the general public to know about? Contact the APS Communications Office at communications@the-aps.org to be an I Spy Physiology guest blogger!
Recognizing the importance of science education and training, APS provides programs to keep students engaged in physiology from early elementary through graduate school.

The Society offers K–12 teacher professional development; organizes a nationwide annual outreach event; and recognizes excellence in student research at science fairs across the country. APS takes an active role in undergraduate biology education, providing a physiology educators’ community of practice, a biannual teaching conference and both online and in-person professional development. The Society proudly offers undergraduate summer research fellowships and recognizes excellence in undergraduate research with awards at both the national and local level.

**PHUN WEEK 10TH ANNIVERSARY CELEBRATION**

Physiology Understanding (PhUn) Week is a nationwide outreach program that brings physiologists to their local schools to engage students in fun physiology experiments. At EB 2016, APS celebrated the 10th anniversary of PhUn Week, recognizing 23 members for five years of participation and one member, Diane Munzenmaier, for 10 years of participation. Since 2005, PhUn Week has reached nearly 100,000 students across the U.S. and Puerto Rico.
Improving Health by Empowering Discovery

UNDERGRADUATE SUMMER RESEARCH FELLOWSHIPS

STEM research experiences are critical to excite students about pursuing a science career. In an effort to build and diversify the scientific workforce, APS has developed an undergraduate summer research fellowship (UGSRF) program that provides summer research experiences to over 80 undergraduate students across the U.S. each year, with particular emphasis on students underrepresented in STEM. Funding is provided by APS, NIH and NSF. Since the program’s inception, APS has supported nearly 600 undergraduate research fellowships.

UNDERGRADUATE RESEARCH AWARDS

Since 2004, the Society has awarded over 200 undergraduate students with the David S. Bruce Outstanding Undergraduate Abstract Award and over 100 undergraduate students with the David S. Bruce Excellence in Undergraduate Research Award. These competitive awards are presented to undergraduate students who demonstrate excellence in communicating their research at the Experimental Biology annual meeting. As of 2017, APS will rename the undergraduate abstract award as the Barbara A. Horowitz and John M. Horowitz Outstanding Undergraduate Abstract Award in recognition of a generous gift from APS members Barbara A. Horowitz and John M. Horowitz, who are strong supporters and mentors of undergraduate researchers.

“The support and resources provided by the [UGSRF] program formed the foundation upon which my future as a research scientist is being built.” — Former Fellow

2016 USA SCIENCE AND ENGINEERING FESTIVAL

More than 350,000 children, parents and teachers attended the 2016 USA Science & Engineering Festival (USASEF) at the convention center in Washington, DC, April 15–17. APS shared the “Medicine and Health” area with other professional societies, National Institutes of Health (NIH), National Science Foundation (NSF) and other federal agencies and companies. Seven APS members, including committee members and APS Minority Outreach Fellows, engaged thousands of attendees in hands-on physiology activities related to the cardiovascular system and thermoregulation.

↑ Children participate in physiology experiments at the 2016 USA Science & Engineering Festival.
Over the past 50 years, APS has worked diligently to encourage diversity within physiology and ultimately the entire scientific community. In recognition of our long-standing efforts, APS received the 2003 Presidential Award for Excellence in Science, Mathematics and Engineering Mentoring.

PORTER FELLOWSHIPS

Since 1967, in partnership with the William Townsend Porter Foundation, the Society has provided 252 multi-year graduate fellowships to 140 underrepresented racial and ethnic minority students enrolled in programs leading to a PhD in physiology. In 2017, we look forward to celebrating the 50th anniversary of the decision to redirect the focus of the Porter Fellowship to support underrepresented minorities and increase diversity in the profession.

APS awarded eight Porter Fellowships in 2016 to graduate students from across the U.S.

2016–2017 PORTER FELLOWS

Olubusayo Awe
Johns Hopkins School of Medicine
Hepatic Kisspeptin 1 in reproduction and metabolism

Mariano Colon-Caraballo
Ponce Health Science University
Enhancer of zeste homolog 2 (EZH2) in endometriosis

Ijeoma Obi
University of Alabama at Birmingham
Angiotensin type 1 receptor and TNF receptor 1 in ELS-induced blood pressure sensitivity

Victoria Parker
University of Iowa
Interaction of chlorinated PCBs and sulfotransferases in endocrine regulation

Candy Rivas
University of Arizona
Protease-activated receptor 2 in asthma and airway relaxation

Jinae Roa*
Scripps Institute of Oceanography
Acid-base sensing and regulation in sharks and rays

Lindsey Stavola
Yale University
Polycystin channel complex function in mitochondria

Diarra Williams
Texas A&M University
Bone turnover mechanisms in hypogonadism and Down syndrome

*2016–2017 Eleanor Ison Franklin Fellow
“Being a Porter Fellow is extremely advantageous because we leave connected to resources and people in the field, with a stronger focus on our goals and better prepared for pursuing our careers.” — Past Porter Fellow

“The most significant contribution the Porter Fellowship has provided me (aside from financial support) is the opportunity to interact with people from similar backgrounds, and it has highlighted some of those who work to support efforts of inclusion and diversity.” — Past Porter Fellow

MINORITY TRAVEL FELLOWSHIPS

APS has supported more than 600 underrepresented trainees and faculty to travel to APS conferences through our Minority Travel Fellowship Program. These meetings give Fellows the opportunity to present their research, strengthen their professional networks and enhance their career prospects. In 2016, APS provided a total of 46 travel fellowships, six of which were made possible by the generous support of Janssen Pharmaceuticals.

Minority Travel Fellows at EB 2016
INVESTMENTS

Of the total invested funds of $64.7 million at December 31, 2016, $60.3 million was invested in a portfolio of professionally managed long-term funds, and the remaining $4.4 million was invested in short-term funds that support the Society’s general operations, including several small award programs and the Society’s sections.

Professionally managed long-term funds support the Society’s numerous larger awards programs and contribute to its reserve fund. Up to 4 percent of the trailing three-year average of the reserve fund may be used to support the annual operating budget. Investments in the long-term fund enjoyed a return of 4 percent in calendar year 2016.
### Statements of Financial Position
at December 31

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Assets</strong></td>
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<td></td>
</tr>
<tr>
<td>Cash and cash equivalents</td>
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<td>$975,423</td>
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<td>Investments</td>
<td>64,661,652</td>
<td>63,777,605</td>
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<tr>
<td>Accounts receivable</td>
<td>392,949</td>
<td>895,401</td>
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<td>Pledges receivable</td>
<td>520,585</td>
<td>412,523</td>
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<td>Accrued interest and dividends</td>
<td>123,407</td>
<td>132,189</td>
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<td>Advances to section editors</td>
<td>65,753</td>
<td>69,463</td>
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<td>Prepaid expenses</td>
<td>326,868</td>
<td>323,448</td>
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<td>Inventory</td>
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<td>61,900</td>
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<td>Furniture, fixtures and equipment</td>
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<td>1,444,658</td>
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<td><strong>TOTAL ASSETS</strong></td>
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<td>$68,092,610</td>
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<tr>
<td><strong>Liabilities and net assets</strong></td>
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<td></td>
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<tr>
<td>Accounts payable and accrued expenses</td>
<td>$1,628,068</td>
<td>$2,073,515</td>
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<tr>
<td>Unearned revenue - subscriptions</td>
<td>5,778,905</td>
<td>6,846,162</td>
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<tr>
<td>Unearned revenue - dues and other</td>
<td>523,810</td>
<td>594,587</td>
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<tr>
<td><strong>TOTAL LIABILITIES</strong></td>
<td>$7,930,783</td>
<td>$9,514,264</td>
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<tr>
<td><strong>NET ASSETS</strong></td>
<td>59,926,134</td>
<td>58,578,346</td>
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<tr>
<td><strong>Total liabilities and net assets</strong></td>
<td>$67,856,917</td>
<td>$68,092,610</td>
</tr>
</tbody>
</table>

### Statements of Activities and Changes in Net Assets
at December 31

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operating revenue</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subscriptions</td>
<td>$11,289,219</td>
<td>$11,153,861</td>
</tr>
<tr>
<td>Author fees</td>
<td>2,956,053</td>
<td>3,066,418</td>
</tr>
<tr>
<td>Membership dues</td>
<td>1,148,614</td>
<td>1,123,272</td>
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<tr>
<td>Conferences and meetings</td>
<td>1,040,994</td>
<td>802,401</td>
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<tr>
<td>Grants and contracts</td>
<td>607,979</td>
<td>739,526</td>
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<tr>
<td>Contributions</td>
<td>666,630</td>
<td>656,977</td>
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<tr>
<td>Advertising</td>
<td>155,530</td>
<td>183,225</td>
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<tr>
<td>Other income</td>
<td>535,305</td>
<td>405,937</td>
</tr>
<tr>
<td><strong>TOTAL OPERATING REVENUE</strong></td>
<td>$18,400,324</td>
<td>$18,131,617</td>
</tr>
<tr>
<td><strong>Operating expenses</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Publications</td>
<td>$11,106,848</td>
<td>$10,832,777</td>
</tr>
<tr>
<td>Membership and meetings</td>
<td>2,521,878</td>
<td>2,446,106</td>
</tr>
<tr>
<td>Education</td>
<td>2,341,058</td>
<td>2,422,519</td>
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<tr>
<td>Marketing and communications</td>
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<td>1,051,242</td>
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<td>Science policy</td>
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<td>852,542</td>
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<tr>
<td>Council designated</td>
<td>882,622</td>
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<tr>
<td>Development</td>
<td>483,834</td>
<td>435,711</td>
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<td><strong>TOTAL OPERATING EXPENSES</strong></td>
<td>$19,357,799</td>
<td>$18,760,206</td>
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<td><strong>OPERATING CHANGE IN NET ASSETS</strong></td>
<td>(957,475)</td>
<td>(628,589)</td>
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<td><strong>Income from investments</strong></td>
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<td></td>
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<tr>
<td>Net realized gains</td>
<td>$2,520,187</td>
<td>$2,594,420</td>
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<tr>
<td>Net unrealized gains/(losses)</td>
<td>(702,441)</td>
<td>(2,653,474)</td>
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<td>Interest and dividends</td>
<td>1,166,718</td>
<td>1,166,481</td>
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<td>Investment management fees</td>
<td>(679,201)</td>
<td>(686,985)</td>
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<td><strong>NET INCOME FROM INVESTMENTS</strong></td>
<td>$2,305,263</td>
<td>$420,442</td>
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<td><strong>Change in net assets</strong></td>
<td>1,347,788</td>
<td>(208,147)</td>
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<td><strong>Net assets, beginning of year</strong></td>
<td>58,578,346</td>
<td>58,786,493</td>
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<tr>
<td><strong>NET ASSETS, END OF YEAR</strong></td>
<td>$59,926,134</td>
<td>$58,578,346</td>
</tr>
</tbody>
</table>
Hers Earliest Experiments

Growing up in Joliet, Illinois, Barman was interested in science early. “At the age of nine, I spent the summer trying to ‘teach’ soap to float. I had this idea that if Ivory soap could float, other soaps should be able to also,” she remembers. “So each week I made my dad bring home a different brand of soap from the grocery store where he worked so I could try to train them how to float in the bathtub.” Her experiments “failed miserably,” and in the years that ensued, becoming a scientist was not something she thought about much.

She became more interested in science during high school and then went on to Loyola University in Chicago to study biology. Two new faculty members who started during Barman’s senior year—Edward Cardona and Albert Rotermund—helped pique her interest in physiology. She enjoyed taking the vertebrate and cellular physiology courses that Cardona and Rotermund (respectively) taught, and she served as a lab assistant with Cardona in a human anatomy and physiology course. “As much as I enjoyed this experience, it did not dawn on me that a research career was in my future,” she says. “In fact, on the last day of my undergraduate training, I sat on the floor of Cardona’s office, almost in tears with worry, and asked what I could do with a degree in biology. He said, ‘Sue, you really seem to like physiology so you should get a PhD in physiology.’ I am thankful that he had the insight to help get me started on the right track to enter a graduate program in physiology.”

Getting Involved in APS

Barman became an APS member during her graduate studies in the physiology department at Loyola University Medical Center. “Walter C. Randall (55th president of APS), as chair of the department of physiology at Loyola University Medical Center, made a point of enrolling all the students in APS when they passed their doctoral qualifying exam. He instilled in us the benefits of being a member of our professional society,” she says.

Barman’s involvement picked up speed when she agreed to serve on the CNS Section Steering Committee at the request of APS member Celia Sladek in the late 1980s. “This became a stepping stone to serving on other APS committees and eventually even serving on Council and then as its president. Indeed, since joining the CNS Section Steering Committee, I have had some role within the Society almost nonstop.

“Early on I realized—and appreciated the fact—that the APS is really a member-driven Society. Many of the programs it supports have their birth in individual and group members of the APS. The APS has become like an extended family for me.”

She balanced APS involvement with career-related roles, including serving on several National Institutes of Health (NIH) study sections. “I got an early start to serving on NIH study sections because they ‘needed women’ to serve. And I attributed my early grant reviewing as training for how to write a grant. It worked because I had 26 years of NIH grant support without ever needing to revise an application.”

Now a professor of pharmacology at Michigan State University, Barman remains a strong supporter of professional membership organizations. “Joining a professional organization early in your career should be a priority. I have been a strong advocate of promoting APS activities that maintain the physiology pipeline and provide benefits to trainees and junior scientists,” she says. “Every APS member should strive to ensure that the discipline of physiology remains an exciting field of research and educational endeavors. And one key step to making this happen is to encourage them to be involved in the Society, not only by taking advantage of the awards and programs it offers, but also by serving on committees to help shape the Society’s future.”

Leaving a Professional Legacy

Professional membership can also provide a path to a lasting legacy in
The Filley Family Legacy
Helping Young Physiologists Succeed

Giles Franklin Filley was born in 1915 in New York City. He grew up both on Long Island and in Greenwich, Connecticut. He earned his BA at Williams College in 1937 and his MD at Johns Hopkins University School of Medicine in 1942. Soon after graduating from medical school, he contracted tuberculosis, and upon recovery from this illness, vigorously pursued a career in pulmonary medicine and physiology. After a medical internship and residency, he conducted research on pulmonary physiology in Saranac Lake, New York, as associate physiologist in the Department of Physiology at the Edward L. Trudeau Foundation from 1947 to 1953, and then for the next two years as director of the Department of Physiology at the Trudeau-Saranac Institute. In 1955, he joined the faculty of the University of Colorado School of Medicine, advancing to the position of professor of medicine in 1969. While remaining engaged in the care of patients with respiratory diseases, he was most fascinated by respiratory physiology and the study of acid-base and blood gas regulation, contributing over 100 professional publications and two books describing his research and scholarship. He also took great pleasure in mentoring many aspiring scientists to continue the work he was so passionate about.

In honor of Dr. Filley’s keen interest in helping young scientists begin productive careers in physiological research, his wife, Mary, and four sons, Dwight, Josh, Christopher and Jonathan, established the Giles F. Filley Memorial Awards for excellence in Respiratory Physiology and Medicine. Since 1994, two promising young investigators have been recognized annually for their potential to excel in physiological research. Dr. Filley’s family is pleased to make possible these opportunities for supporting young scientists who will carry forward the work he saw as vital for the future of medicine and the betterment of society.

APS has become like a family to me, so it seemed natural to add the APS as one of the beneficiaries of my estate.

— Susan M. Barman PhD, FAPS
Tony Macknight (director of education), Trevor McIntyre (CEO) and Michael Macknight (executive chairman, CIO)

APS + ADInstruments

APS and ADInstruments (ADI), a world leader in hardware and software development for data acquisition in the life sciences, entered into a new strategic partnership at the end of 2016. The aim of the partnership, which will be an extension of the long-standing relationship between the two organizations, is to provide APS members with additional support to help them achieve their goals.

As part of the partnership, ADI will expand its financial support for a range of early-career research awards across a number of fields, including cardiovascular, respiratory, physiological genomics and neural control and autonomic regulation. ADI will also begin supporting the APS Teaching Section’s Claude Bernard Distinguished Lectureship Award and will substantially increase support for the Macknight Early Career Innovative Educator Awards, the APS Institute on Teaching and Learning and educational workshops held at the Experimental Biology (EB) meeting, including the APS Physiology Understanding Week poster session, a workshop for high school students and teachers, and the APS Refresher Course in Physiology.

“Inspiring and rewarding the physiological community is one of our key goals at ADI, and we are honored to be able to do this in conjunction with the APS,” said Trevor McIntyre, CEO, ADI. “We hope that through this partnership we can help researchers and educators achieve their ambitions and assist APS with its mission to foster education, scientific research and dissemination of information in the physiological sciences.”

“We are thrilled to strengthen our longstanding relationship with ADI and feel honored that they’ve chosen us as their partner in the physiological community,” said Martin Frank, executive director, APS. “ADI co-founder Anthony Macknight has been an APS member for nearly 40 years. His understanding of physiology and of the needs of researchers shows in the valuable and innovative offerings in the ADI product line, from laboratory equipment to professional skills webinars. We are happy to help raise the visibility of the ADI portfolio as a professional service to our members.”

ADI and APS will celebrate the new partnership at the APS annual meeting at Experimental Biology 2017 (April 22–26 in Chicago) through the presentation of several awards and workshops.

ABOUT ADINSTRUMENTS

ADInstruments (ADI) is a world leader in the provision of hardware and software for data acquisition in the life sciences. Its comprehensive, easy-to-use products are highly cited in scientific journals and used in all of the top 100 colleges and universities in the world. For 30 years, it has been successful in developing quality products and providing great customer service. Products, including PowerLab, LabChart, Lt and LabTutor, along with a diverse range of proprietary and third-party hardware products enable users to record and analyze life science data quickly and efficiently, whether it is to further their academic or private industry research or to advance understanding of scientific concepts in life science classrooms.
For those individuals who are passionate about discovery, learning and health, the opportunity to make an exceptional impact by donating to APS programs is extraordinary.

**Annual Giving**

Annual gifts and grants supported numerous awards, fellowships and important programs that otherwise would not have been possible, including:

- ADInstruments Macknight Early Career Innovative Educator Award
- August Krogh Distinguished Lectureship and Bodil-Schmidt Nielsen Distinguished Mentor and Scientist Award—in partnership with Novo Nordisk Fonden
- DSI Dean Franklin Young Investigator Award
- NIDDK STEP-UP and NHLBI STRIDE Undergraduate Summer Research Programs
- NSF IOSP Undergraduate Summer Research Program
- Porter Physiology Development Fellowship—in partnership with the William Townsend Porter Foundation
- S&R Foundation Ryuji Ueno Award
- Walter B. Cannon Memorial Lecture—supported by Sucampo Pharmaceuticals

In 2016, with support from members and non-members, along with corporations, foundations, the federal government and other nonprofits, APS raised a total of $1,144,289 from 331 individuals and 56 organizations.

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APS supports numerous awards that foster the professional development of early career, established and senior physiologists. Many of these awards are supported through endowment gifts from physiologists and friends, who have created a lasting legacy through their gifts.

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