



November 30-December 3

2023

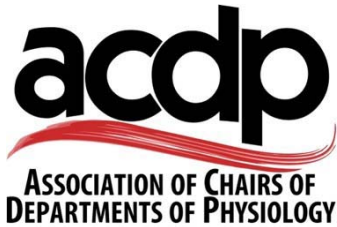
acdp
ASSOCIATION OF CHAIRS OF
DEPARTMENTS OF PHYSIOLOGY

Leadership Retreat

Royal Sonesta Hotel

Retreat Theme

**Innovation & Networking in Physiology: Music,
Mind, Brain, & Body**



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Dear Colleagues,

I am Kebreten F. Manaye, 2023 President of the Association of Chairs of Department of Physiology (ACDP). Greetings and welcome to the ACDP Leadership Retreat. I am happy to see you in San Juan, a beautiful city in Puerto Rico. I hope you have productive, collegial, and fun meeting with the many talks prepared for you by topic experts. I am pleased to announce to you that our membership continues to grow with a diverse representation of Chairs of Physiology Departments in graduate and undergraduate schools.

This year's Program focuses on new innovative topics. This year's Service Awardee, Merry Lindsey (Meharry Medical College), will start the meeting off with a talk on Thursday evening. We have three new Chair Lectures to be delivered by Ling Qi (University of Virginia, Medical School), Amos M. Sakwe (Meharry Medical College), and Julia Busik (University of OK). In addition, Priscila Sanabria (Univ. Central del Caribe) will update us on her department. We will celebrate our 2023 Guyton Awardee, Gary C. Sieck (Mayo Clinic). We will also hear about the **Hot Topics**, which is our Retreat theme: Music, Mind, Brain, and Body talks from experts in the benefits of music in physiology and cardiovascular pathology, including mental disorders, moderated by Dr. Emmeline Edwards (NCCIH/NIH).

In addition, there will be presentations about undergraduate training and workshops on cultivating your career and collaborating with colleagues and more by nationally known educator Suzanne Ross (Univ. of PA Perelman). I am sure you will agree that this will be of great interest to all of us as we lead multidisciplinary departments. These sessions are devoted to better understanding the different models of teaching in Physiology at the undergraduate, graduate and medical student levels and discussing what our academic role will likely be in the future with growing high technology teaching, which is demanded by the current students.

Thank you for coming! Enjoy the meeting and in the most magnificent Royal Sonesta Hotel with a fantastic location, and beautiful beaches and comfortable rooms with excellent views. Don't hesitate to take advantage of the many tourist attractions locally and throughout PR on your free afternoons (See our Website).

Sincerely,

A handwritten signature in black ink that reads 'Kebreten Manaye'.

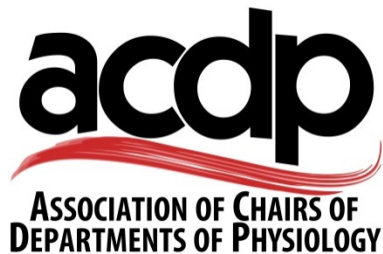
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2022-2023

Kebreten F. Manaye, President
Toni R. Pak, President-elect
Christopher Hardin, Past-President
V. Gustavo Blanco, Secretary/Treasurer


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Rachelle H. Crosbie, Councilor (2025)
James P. Herman, Councilor (2023)
Bina Joe, Councilor (2024)

YS Prakash, Councilor (2023) Larry
J. Suva, Councilor (2025) Nicholas A.
Delamere, CFAS Rep. (2025) Patricia
E. Molina, CFAS Rep. (2024)





ACDP Leadership Retreat
November 30-December 3, 2023
Royal Sonesta Hotel
San Juan, Puerto Rico
Program Book

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Thursday, November 30	
	<i>Arrivals, tours, leisure on your own</i>
1:00-3:00 pm	<i>Registration (Lobby Flex Space)</i>
3:00-4:30 pm	ACDP Council Meeting (NOTE: for ACDP officers only) at Olas Room
5:30-6:30 pm 	<p>Merry Lindsey, PhD</p> <p><i>“Physiology at the Crossroads: How to Go Up from Here”</i></p> <p><i>Distinguished Service Award Lecture</i></p> <p><i>Dean, School of Graduate Studies, Meharry Medical College</i></p> <p>at Azucenas Ballroom</p> <p><i>Presented by Patricia E. Molina, MD, PhD (recipient of Distinguished Service Award, 2022)</i></p>
6:30-7:30 pm	<i>Opening Reception* Boardwalk</i>
7:30 pm	<i>Dinner on your own</i>

**ACDP-registered attendees and ACDP-registered guests only.*

Friday, December 1	
7:00 – 8:00 am	<i>Breakfast & Registration at Azucenas Foyer</i>
8:00-8:10 am 	<p>Kebreten Manaye, MD, President, ACDP</p> <p><i>Welcome</i></p>
8:10-8:40 am 	<p>Scott Steen, CAE, FASAE</p> <p><i>"APS: Evolving to Meet the Changing Needs of Our Members and the Discipline."</i></p> <p><i>Executive Director, American Physiological Society</i></p>

<p>8:40-8:50 am</p> 	<p><i>New Chair Talks</i></p> <p>Ling Qi, PhD</p> <p><i>“When physiology meets with biophysics at UVA: emerging mechanisms and rare diseases.”</i></p> <p><i>University of Virginia Medical School</i></p> <p>Presented by: Kebreten Manaye, MD</p>
<p>8:50-9:45 am</p> 	<p>Suzanne Rose, MD, MEd</p> <p><i>“Cultivating your Career and Collaborating with Colleagues: Connecting through Mentorship, Coaching, Sponsorship, and Networking”</i></p> <p><i>Senior Vice Dean for Medical Education, Univ. of PA Perelman Sch. Med.</i></p> <p>Presented by: Kebreten Manaye, MD</p>
<p>9:45-10:00 am</p>	<p>Small Group Discussion (Suzanne Rose)</p>
<p>10:00-10:10 am</p>  <p>10:10-10:20 am</p> 	<p><i>New Chair Talks</i></p> <p>Amos M Sakwe, PhD, MSCI</p> <p><i>Significance of Calcium Signaling in Triple-negative Breast Cancer</i></p> <p><i>Meharry Medical College</i></p> <p>Julia Busik, PhD, FARVO,</p> <p><i>“Diabetes, Eye and Geroscience research in a merged Department – challenges and opportunities”</i></p> <p><i>University of Oklahoma</i></p>

<p>10:20-10:30 am</p> 	<p>Priscila Sanabria, PhD</p> <p><i>“Physiology Research and Education at Bayamón, PR”</i></p> <p><i>Universidad Central del Caribe</i></p> <p>Presented by: Annabell C Segarra, PhD</p>
<p>10:30-10:40 am</p>	<p><i>Coffee break</i></p>
<p>10:40-11:05 am</p>  <p>11:05-11:30am</p>	<p>Michael R. Stark, Ph.D.</p> <p><i>“What students want vs. what students need: Models of applied vs. foundational physiology education”?</i></p> <p><i>Brigham Young University</i></p> <p>Lisa Carney Anderson, PhD</p> <p><i>"Expanding Physiology Research Opportunities for Undergraduates: UPRIME and INPUT programs at the University of Minnesota"</i></p> <p><i>Dept of Integrative Biology & Physiology; Physiology Thread Leader for Pre-clinical Medical School Curriculum; Director of Education in IBP</i></p> <p><i>University of Minnesota</i></p> <p>Presented by: Toni R. Pak, Ph.D. (President-Elect ACDP 2024)</p>
<p>11:30 am-noon</p>	<p>Business Meeting, I</p> <ul style="list-style-type: none"> • <i>Financial Report (V. Gustavo Blanco, MD, PhD)</i> • <i>CFAS Report (Patricia Molina, MD, PhD)</i> • <i>Nominations of Officers</i>
<p>12:00-12:10 pm</p>	<p><i>ACDP Council Meeting (NOTE: for ACDP officers only)</i></p>
<p>12:00-6:00 pm</p>	<p><i>Lunch on your own and Afternoon on your own</i></p>

<p>6:00 -7:00 pm</p> 	<p><i>Gary C. Sieck, PhD, FAPS</i></p> <p><i>"Resilience in Neural Control of the Diaphragm Muscle"</i></p> <p><i>Arthur Guyton Award Lecture</i></p> <p><i>Department of Physiology & Biomedical Engineering, Mayo Clinic</i></p> <p><i>Presented by BINA JOE, PH.D., FAHA, FAPS, ISHF (recipient of Arthur Guyton Award 2022)</i></p>
<p>7:00 pm</p>	<p><i>Dinner on your own</i></p>

**ACDP-registered attendees and ACDP-registered guests only.*

<p align="center">Saturday, December 2</p>	
<p>7:00 – 8:00 am</p>	<p>Breakfast & Registration at Azucenas Foyer</p>
<p>8:00-8:20 am</p>  <p>8:20-9:05 am</p> <p>9:05-9:50 am</p>	<p><i>Emmeline Edwards, PhD</i></p> <p><i>"Music, Mind, Brain, and Body"</i></p> <p><i>National Center for Complementary and Integrative Health (NCCIH/NIH)</i></p> <p><i>Jacquelyn Kulinski, MD</i></p> <p><i>"Can Music Touch the Heart?"</i></p> <p><i>Medical College of Wisconsin</i></p> <p><i>Joke Bradt, PhD</i></p> <p><i>"The Impact of Music-based Interventions on Psychological and Physiological Outcomes in Chronic Conditions"</i></p> <p><i>Drexel University</i></p>

9:50 -10:35 am	Aza Allsop, MD, PhD <i>“Developing Community-based Music Therapeutics in Psychiatry” Yale School of Medicine and Howard University</i>
10:35-10:50 am	<i>Panel discussion: (Moderator: Emmeline Edwards)</i>
10:50-11:00 am	Coffee break
11:00: 11:15 am 	<i>Adler Archer, JD (Zoom Presentation)</i> <i>“Facilitating Inclusive Innovation in Healthcare”</i> <i>Johns Hopkins University</i>
11:15-11:30 am	<i>Linda Durnell, Ph.D, (Zoom Presentation)</i> <i>“Using Technology for Health and Wellness”</i> <i>John Hopkins University</i> <i>Presented by: Kebreten Manaye, MD</i>
11:30 am-noon	Business Meeting II <ul style="list-style-type: none"> • Election of Officers • 2024 Meeting Information (Toni Pak, PhD, President-elect)
12:00 - 6:30 pm	Lunch and afternoon on your own
6:30-7:00 pm	Cocktails at Querube Foyer*
7:00-9:00 pm	Meeting Banquet at Querube Ballroom*

*ACDP-registered attendees and ACDP-registered guests only.

Sunday, December 3	
All Day	Tours, leisure, and departures on your own



**Association of Chairs of Departments of Physiology
Physiology Programs Leadership Retreat Agenda
Royal Sonesta Hotel
San Juan, PR
November 30 - December 3, 2023**



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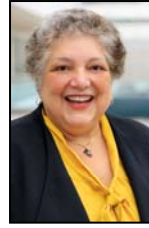
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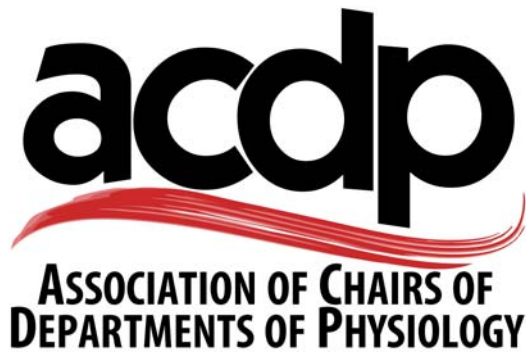
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AGENDA
ACDP Business Meeting I

(General membership)

December 1, 2023

- I. Call to order**
- II. Approval of 2022 draft meeting minutes**
- III. Call for names for 2024 Guyton Award Lectureship**
Submit nominations to Rachelle Crosbie, Larry Suva, or Toni Pak
- IV. Call for names for 2024 Distinguished Service Awardee**
Submit nominations to Toni Pak
- V. Call for nominations for officer positions (President, Secretary-Treasurer, Councilors)**
- VI. Financial Report (Blanco)**
- VII. CFAS Update (Molina)**
- VIII. New Business**
 - a. Changes to ACDP Space and Budget Survey (Crosbie/Suva)**
 - b. APS Discount on Membership for ACDP Members**
- IX. Information Only**
 - a. 2023 Horwitz/Horowitz Undergraduate Research Awardees**



**Association of Chairs of Departments of Physiology
Leadership Retreat
Marathon Key, FL
December 1-4, 2022**

**ACDP Business Meeting I
Minutes**

I. Call to Order

The Business Meeting was convened by President Christopher Hardin at 11:27 am on December 2, 2022.

II. Approval of 2021 Draft Meeting Minutes

The minutes from the 2021 Business Meetings were unanimously approved as submitted.

III. Call for names for 2023 Guyton Award Lectureship

Hardin requested nominations from the membership for the 2023 Arthur C. Guyton, Jr. Distinguished Award Lectureship. Any nominations should be sent to President-elect Kebreten Manaye or second-year Councilors Nancy Carrasco or Bina Joe for consideration.

IV. Call for names for 2023 Distinguished Service Awardee

Hardin also requested that any nominations for the 2023 ACDP Distinguished Service Award be submitted to Manaye for consideration.

V. Call for Nominations for Officer Positions

A call was made for nominations for President-elect, three open Councilor positions and CFAS Representative. The membership was reminded that the nominees for President need to have previously served on Council as either Councilors or Secretary-Treasurer. There are three Councilor positions as both Merry Lindsey and C. Lee Cox resigned when they accepted positions that meant they were no longer chairs. Cox was scheduled to rotate off Council but Lindsey had 1 year left. Therefore, the top two candidates for Council will receive 3-year terms and the third top candidate will receive a 1-year term with the ability to be re-elected next year. For CFAS Representative, Nick Delamere's term is ending but he is willing to be re-elected and continue to serve as he is now on the CFAS Board representing Basic Science. Although he is no longer Chair of his Department, Council agreed he should be considered for the position because of the high visibility he brings to physiology by being on the Board.

VI. Financial Report

The financial report was presented by Secretary-Treasurer Blanco, comparing the 2022 year-to-date budget numbers (as of 9/30/22) to 2021 at the same point in time. Blanco noted that ACDP remains in very good shape financially, although expenses were greater this year than last. Membership income is again up this year, an increase of \$2,500. There was a large turn-over in chairs and many new ones joined. A few more members have paid since September because of the meeting.

Under Expenses, Professional fees reflect the salary for Lowy. There will be no change in that line item by the end of the year. Credit card processing expenses were up because of the higher number of members joining online and the greater number of people registering for the meeting and the snorkeling and fishing trips. Travel expenses were up because the CFAS meeting was in person instead of virtual. Meeting expenses are the second deposit for this meeting. As the deposits were already paid in 2020 for the 2021 meeting, there were no expenses last year before the end of September. Dues expenses are for CFAS dues. At this point in the year, the budget is showing an decrease of \$5,152, but the Society remains in good shape.

VII. CFAS Update

Nicholas Delamere and Patricia Molina are the current ACDP representatives to the Council of Faculty and Academic Societies (CFAS) of the AAMC. CFAS was created in July 2013 and was formerly known as the Council of Academic Societies until it was opened to include two representatives from each of the 150 medical schools as appointed by the Deans. This was to ensure that faculty would be represented directly. The other two Councils are the Councils of Deans and of Administrators. Delamere previously served on the Program Committee and was recently elected to the CFAS Administrative Board.

Although neither could be at the Business Meeting, Molina recorded a presentation on the CFAS meetings for spring and fall 2022, which will be posted on the website.

The discussions of the Spring 2022 CFAS meeting were focused on leadership as far as what constitutes traditional (defined as a position, hierarchical and communication is one-way) versus contemporary leadership (defined as a behavior, shared or distributed, and communication is vertical, horizontal and diagonal). There was significant discussion on what leadership looks like across different institutions, what the landscape looks like at this time, how the pandemic has shifted traditional paradigms, how structures are evolving coming out of pandemic, and the importance of using the human potential to advance our missions by empowering the individuals who are willing to work to achieve the goals of the institution, department or team. Leaders now aren't only those who have the titles but all who have skin in the game. Discussions revealed how institutions are operating and most top-tiered institutions are moving more to the contemporary model.

The Fall 2022 AAMC Meeting was held in Nashville and was a meeting of all three AAMC Councils: CFAS, Council of Deans and Council of Teaching Hospitals. CFAS has six standing committees: Advocacy, Communication, Diversity and Inclusion, Biomedical Research and Education, Mission Alignment and Impact of Faculty Educators, and Faculty Resilience. It also has two structural committees with fixed membership and their activities are closed: Program and Nominating Committees. Delamere was previously appointed to the Program Committee.

Molina attended the Biomedical Research and Education Committee meeting. It was formed by basic scientists in response to changes in the structure of departments and mission alignment. The committee's discussion focused on 1) undergraduate medical education, on faculty as educators and the tug between basic scientists and clinicians (Where do faculty as educators fit? What does it mean to be an educator? Where are the curricula going?); 2) the sense among basic scientists that turf has been lost; 3) the issue of how core curriculum shifts impacting faculty life has not been addressed, and 4) how institutions are talking about the possibility of separating into departments of medical education vs. an office of medical education. There was also discussion on 5) how basic sciences faculty stay current and relevant in the changing landscape and restructuring, 6) the importance of integrating basic and clinical medical education, and 7) cultivating clinician scientists to make sure biomedical sciences stay in medical curriculum. This led to a discussion about the tracks for professional advancement at different institutions (clinician leader, clinician investigator, or clinician teacher vs. basic sciences researcher and science educator). Much discussion was centered around the value of teaching at different institutions, including what the competencies should be for faculty in terms of the opportunities for mentoring, teaching and leadership; what roles are important; how are they being evaluated; and how are they considered for promotion.

The AAMC Board Meeting with David Skorton included the recurring theme of the desire to integrate social determinants of health as an emerging topic and looking for solutions involving communities working on principles of trustworthiness between health care providers and communities. The AAMC is also working with the association of osteopathic medicine to develop competencies in undergraduate medical education.

A salient theme throughout the meeting was how to inspire faculty during this time of exhaustion. Molina found it to be reassuring to hear that this is widespread among faculty, staff and students across all types of institutions. There is a real struggle among the leadership to find a path forward while coming out of the pandemic. There was a significant motivation to have faculty engaged in finding solutions to this. Some possibilities include sharing and communicating between faculty and leadership, have frequent leadership meetings, make sure people feel valued and appreciated, connect with followers and show vulnerability, talk to stakeholders, involve staff and communicate the process as go through changes, reward staff, and for leaders to consider journaling and self-reflection.

Other themes in the meeting included coaching and leadership training, which attendees thought should start in medical school and involve not telling people what to do but letting them unlock their potential. Foundational competencies in undergraduate medical education were discussed, including loss of communication skills; a focus on medical knowledge, patient care, and procedures, but also on professionalism; and systems-based approaches to solving problems. To that end, pre-med competencies are being reviewed and will be released in 2023. CFAS was part of the advisory committee and the three aspects that are being strongly focused on are scholarly inquiry, self care and community engagement.

One tool available and worth sharing is a toolkit available for hiring diverse faculty on the AAMC website (aamc.org/professional-development/affinity-groups/cfas/diversity-inclusion-toolkit/resources). This relies on a holistic review of applicants for staff and faculty positions. Also of interest was the integration of climate change in the curriculum given by Rene Salas, MD (massgeneral.org/doctors/19364/renee-salas).

VIII. New Business

A. Changes to ACDP Space and Budget Survey

YS Prakash plans to continue working with a subcommittee to develop a questionnaire to send to membership asking what they would find helpful to include in a revised annual survey to make it more useful. However, previous subcommittee members are no longer available to serve and new volunteers were solicited. Rachele Crosbie and Larry Suva volunteered to serve on the subcommittee with Prakash.

B. Physiology Core Concepts

Richard Nichols presented an update on the physiology core concepts and the ACDP subcommittee working on them. In 2016 a group of ACDP members (Chris Hardin, Richard Nichols, Patricia Nichols, David Osborne, Gary Sieck, Dixon Woodbury, and Erica Wehrwein) met together to use input from the ACDP members to develop a set of core concepts to be taught in undergraduate physiology programs. On researching the topic, they found a paper by Joel Michael and Jenny McFarland (*The core principles ("big ideas") of physiology: results of faculty surveys*. 2011; *Adv Physiol Educ* 35:336 – 341) that had already begun this work. From that 2011 paper, Michael and McFarland listed 15 core competencies: Cell membrane, **Homeostasis**, Cell-cell communications, interdependence, **Flow down gradient**, Energy, Structure/Function, Scientific reasoning, Cell theory, Physics/chemistry, Genes to proteins, Levels of organization, Mass balance, Causality, Evolution.

The committee had two issues with this list based on a follow-up paper in 2016 (McFarland et al. 2016. *Adv Physiol Educ* 40:213-222: The first issue concerns the concept of homeostasis. It is stated that "For many physiologists, homeostasis is the central core concept in physiology. For our purposes, homeostasis refers to the

maintenance of a relatively stable internal environment by an animal in the face of a changing external environment and varying internal activity (31). This conceptual framework is limited to negative feedback mechanisms, because these are the types of homeostasis most often encountered in undergraduate physiology (31).” The issue is that the processes of control and regulation in physiological systems now encompasses other mechanisms, including central pattern generators, other predictive systems, and positive feedback. These concepts can be taught at many levels of sophistication as is the case for negative feedback. The second issue concerns the concept of “Flow Down Gradients.” This concept is limited to the flow of substances. Other fundamental constitutive relationships (stiffness, compliance, capacitance, inertia, viscosity, etc.) that are central to the understanding of physiological processes are not explicitly included in the core concepts. In summary, these definitions do not consider many of the other aspects of homeostasis and gradients that are relevant to the study of physiology.

The ACDP working group’s list contained eight concepts: Cell membranes and cell organization; **Homeostasis and regulation (negative and positive feedback, pattern generation, prediction)**; Interdependence, redundancy; Energetics, gradients and flows; **Physical systems (electrical, fluid, mechanical, thermal)**; **Chemical and electrochemical systems**; Genes to proteins, genomics, epigenetics, informatics; Levels of organization – whole greater than sum of parts. It was noted that evolution, science reasoning, causality, and structure function are all included the above topics. These concepts were transmitted by Richard Nichols to the PMIG (Physiology Majors Interest Group) working group. This working group opted to stay with the original concepts proposed by Michael and McFarland.

The APS group in 2017 further expanded their work into a book Michael et al., *The Core Concepts of Physiology. A New Paradigm for Teaching Physiology*, published by Springer and APS. Then in 2020, McFarland and Michael published another article on the core concepts *Reflections on core concepts for undergraduate physiology programs* (*Adv Physiol Educ* 44: 626-632). These publications represent a prodigious amount of work and the authors should be recognized for these contributions. However, the proposed concepts appear to be based primarily what is being taught currently with insufficient reference to what should be taught in a contemporary physiology course. To address this problem, some members of the ACDP feel that chairs and directors of physiology programs should have input into what students need to know to succeed in clinical training programs and graduate school and to understand the contemporary literature.

ACDP and its members have a large role in physiology education. Physiology chairs and directors are conversant with the latest physiological research and oversee curricula. The core concepts are dynamic and depend on advances in physiological research, of which the chairs and directors are very aware. Involvement of the ACDP in the educational mission of the APS would ensure that the core concepts advance with the field. Finally, the core concepts proposed by the ACDP working group can be taught at all educational levels, with the details adjusted appropriately for each level.

Hardin thanked Nichols for his continued updates on the undergraduate curriculum project and all his efforts on behalf of ACDP.

C. APS Discount on Membership for ACDP Members

Hardin reminded attendees that for the coming 2023 dues year, APS is offering a \$40 discount on membership to ACDP members who have paid their 2023 ACDP Dues. ACDP dues notices will go out around the first of the year.

D. Information Only

A list of the 2022 Horwitz/Horowitz Undergraduate Research Awardees was given to the membership. Hardin reminded attendees that ACDP donates \$2,500 each year in support of these undergraduate awards.

The meeting was adjourned at 11:27 am until the following day.

ACDP Business Meeting II Minutes

I. Call to reconvene

Hardin reconvened the business meeting at 11:30 am on December 3, 2022.

II. Election of Officers

The slate of nominees for President-elect, Councilors and CFAS Representative was announced and the membership voted by secret ballot. Toni Pak (Dept. of Cell & Molecular Physiology, Loyola University, Chicago) was elected President-elect. Rachelle H. Crosbie (Dept. of Integrative Biology & Physiology, University of California, Los Angeles) and Larry J. Suva (Department of Veterinary Physiology and Pharmacology Texas A&M University College of Veterinary Medicine) were elected Councilors with terms ending in 2025. James P. Herman (Dept. of Pharmacology and Systems Physiology, Univ. of Cincinnati College of Medicine) was elected Councilor with a term ending in 2023. Nick Delamere was re-elected as CFAS Representative with a term ending in 2025.

III. 2023 ACDP Meeting

President-elect Kebreten Manaye announced that the Royal Sonesta Hotel in San Juan, Puerto Rico will be the site for the 2023 ACDP Leadership Retreat. Again, it is not an all-inclusive resort. Possible excursions include trips to the rain forest, tours through Old Town San Juan, and snorkeling. There are many available restaurants nearby. Helms-Briscoe again handled the contract negotiations; Lowy will handle registration through the APS system. Attendees will need to make online hotel reservations and airline reservations on their own. The meeting will occur on November 30-December 3, 2023.

IV. Adjournment

The meeting was adjourned at 11:57 am.

Respectfully submitted,

V. Gustavo Blanco, M.D., Ph.D.
Secretary-Treasurer

ACDP Distinguished Service Awardees




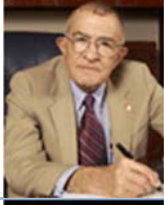











The ACDP Distinguished Service Award is presented annually to someone who has given long and illustrious service to ACDP, physiology as a discipline, and/or the field of science in general.





The awardee is selected by the President in consultation with ACDP Council. Awardees receive all-expenses paid trip to the annual ACDP meeting.

The award was formally known as the Outstanding Teaching Award but in 1978 its focus and name were expanded to the current Distinguished Service Award.







Year		Name	Year		Name
2023		Merry L. Lindsey, Ph.D. Meharry Medical College	2022		Patricia E. Molina, M.D., Ph.D. Louisiana State University Health Sciences Center, New Orleans
2021		Walter F. Boron, M.D., Ph.D. Case Western Reserve University School of Medicine	2020	Leadership Retreat Cancelled	
2019		Gary C. Sieck, Ph.D. Mayo Clinic College of Medicine	2018		Celia D. Sladik, Ph.D. University of Colorado, Denver
2017		Hershel Raff, Ph.D. Medical College of Wisconsin	2016		Susan Barman, Ph.D. Michigan State University
2015		John E. Hall, Ph.D. Univ. of Mississippi Medical Center	2014		Michael J. Joyner, M.D. Mayo Clinic

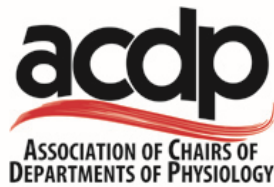
2013		Allen W. Cowley, Jr., Ph.D. Medical College of Wisconsin	2012		Ernest M. Wright, Ph.D., D.Sc. Univ. of California, Los Angeles
2011		R. John Solaro, Ph.D. Univ. of Illinois, Chicago	2010		John A. Williams, M.D., Ph.D. Univ. of Michigan
2009		Phyllis M. Wise, Ph.D. Univ. of Washington	2008		Irving H. Zucker, Ph.D. Univ. of Nebraska Medical Center
2007		William H. Dantzler, M.D., Ph.D. Univ. of Arizona	2006		Antonio Scarpa, M.D., Ph.D. National Institutes of Health
2005		No awardee - Joint meeting with AAMC	2004		Daniel C. Tosteson, M.D. Harvard Medical School
2003		L. Gabriel Navar, Ph.D. Tulane Univ.	2002		Gabor Kaley, Ph.D. New York Medical College
2001		Mordecai P. Blaustein, M.D. Univ. of Maryland School of Medicine	2000		Paul C. Johnson, Ph.D. Univ. of Arizona School of Medicine
1999		F. Norman Briggs, Ph.D. Medical College of Virginia	1998		Norman R. Alpert, Ph.D. Univ. of Vermont College of Medicine

1997		Carlton C. Hunt, M.D. Washington Univ. School of Medicine	1996		Arthur C. Guyton, M.D. Univ. of Mississippi Medical Center
1995		Aubrey E. Taylor, Ph.D. Univ. of South Alabama College of Medicine	1994		Stanley G. Schultz, M.D. Univ. of Texas, Houston Medical School
1993		Edward J. Masoro, Ph.D. Univ. of Texas Health Science Center at San Antonio	1992		Gerhard H. Giebisch, M.D. Yale Univ.
1991		No Awardee	1990		John T. Shepherd, M.D. Mayo Clinic & Foundation
1989		Walter C. Randall, Ph.D. Loyola Univ. Stritch School of Medicine	1988		William F. Ganong, M.D. Univ. of California, San Francisco
1987		Howard E. Morgan, M.D. Pennsylvania State Univ. Milton S. Hershey Medical Center	1986		Horace Davenport, Ph.D., Sc.D. Univ. of Michigan Medical School
1985		A. Clifford Barger, M.D. Harvard Univ. Medical School	1984		Harry D. Patton, M.D., Ph.D. Univ. of Washington School of Medicine
1983		Ernst Knobil, Ph.D. Univ. of Texas Medical School	1982		Hermann Rahn, Ph.D. Univ. at Buffalo

1981		Robert W. Berliner, M.D. Yale Univ. School of Medicine	1980		George Sayers, Ph.D. Case Western Reserve Univ.
1979		Ewald E. Selkurt, Ph.D. Indiana Univ. School of Medicine	1978		William F. Ganong, M.D. Univ. of California, San Francisco

Outstanding Teaching Awardees

Year		Name	Year		Name
1977		C. Ladd Prosser, Ph.D. Univ. of Illinois, Urbana	1976		Robert M. Berne, M.D. Western Reserve Univ.
1975		Arthur C. Guyton, M.D. Univ. of Mississippi	1974		Julius H. Comroe, Jr., M.D. Univ. of California, San Francisco
1973		Maurice Visscher, M.D., Ph.D. Univ. of Minnesota	1972		Robert F. Pitts, M.D., Ph.D. Cornell Univ.








Arthur C. Guyton Distinguished Lectureship Awardees

The Arthur C. Guyton Distinguished Lectureship Award was instituted in 2006 to recognize outstanding and cutting edge research in physiology or related areas. Awardees are invited to attend the ACDP fall meeting and present a seminar on their research.

Awardees are selected by the President in conjunction with members of Council based on membership recommendations. They receive travel, hotel, food, complimentary registration and an honorarium of \$1,000.

The Award was named for the late Arthur C. Guyton, University of Mississippi, a well-known researcher, educator, author, and long-time department chair. He was the only person to be awarded both the ACDP Outstanding Teaching Award and the ACDP Distinguished Service Award.

Year		Name	Title of Presentation
2023		Gary C. Sieck, Ph.D. Mayo Clinic	<i>Resilience in Neural Control of the Diaphragm Muscle</i>
2022		Bina Joe, Ph.D. Univ. of Toledo College of Medicine	<i>Physiology Research, Executive Leadership and the Pursuit of Happiness</i>
2021		Christin Carter-Su, Ph.D. Univ. of Michigan Medical School	<i>In Praise of Signal Transduction: Discovery of Pathways Affecting Growth, Obesity and Cancer</i>
2020		Leadership Retreat Cancelled	
2019		John E. Hall, Ph.D. Univ. of Mississippi Medical School	<i>Obesity, Hypertension and Kidney Dysfunction</i>
2018		Frank W. Booth, Ph.D. Univ. of Missouri	<i>Maximal Aerobic Training: An Ultimate Integration of Genes and Systems While Maintaining Homeostatic Harmony</i>

2017		R. John Solaro, Ph.D. Univ. of Illinois, Chicago	<i>Sarcomere Signaling and Guyton's Analysis of Cardiac Output Regulation</i>
2016		Monika R. Fleshner, Ph.D. Univ. of Colorado, Boulder	<i>The Neurobiology and Physiology of Exercise-Induced Stress Robustness</i>
2015		Leslie A. Leinwand, Ph.D. Univ. of Colorado, Boulder	<i>Redefining Snake Oil: Translating Python Biology to Mammalian Hearts</i>
2014		Gordon S. Mitchell, Ph.D. Univ. of Florida (formerly Univ. of Wisconsin, Madison)	<i>Harnessing Intermittent Hypoxia-induced Spinal Motor Plasticity: Breathing and Walking After Spinal Injury</i>
2013		José Jalife, M.D. Univ. of Michigan	<i>Searching For The Holy Grail: Upstream Therapy To Prevent Atrial Fibrillation Progression</i>
2012		Irena Levitan, Ph.D. Univ. of Illinois at Chicago	<i>Cholesterol Regulation of K⁺ Channels: From Biophysics to Vascular Biology</i>
2011		Paul A. Welling, M.D. Univ. of Maryland	<i>Potassium Channels Find Their Way in Membrane Traffic</i>
2010		Ferid Murad, M.D., Ph.D. Univ. of Texas, Houston	<i>Discovery of Nitric Oxide and Cyclic GMP in Cell Signaling and Their Role in Drug Development</i>

2009		<p>Helen H. Hobbs, M.D. Univ. of Texas Southwestern Medical Center</p>	<p><i>Genetic Protection Against Diseases of Dietary Excess</i></p>
2008		<p>Eric Olson, Ph.D. Univ. of Texas Southwestern Medical Center</p>	<p><i>Micro RNA, Heart Development and Disease</i></p>
2007		<p>H. Lee Sweeney, Ph.D. Univ. of Pennsylvania</p>	<p><i>Characterization of Myosin Super family and Pharmacological Strategies for the Treatment of Duchenne Muscular Dystrophy</i></p>

*Association of Chairs of Departments of Physiology
Revenue and Expenses and Changes in Net Assets
Year to Date as of September 30, 2023*

	2023 YTD			Totals at 9/30/22	Incr/(Decr)
	Annual Meeting	General	Totals at 9/30/23		
Revenue:					
Dues Income	\$ -	\$ 14,000	\$ 14,000	\$ 21,750	\$ (7,750)
Contributions	-	-	-	-	-
Interest Income	-	-	-	18	(18)
Total Revenue	-	14,000	14,000	21,768	(7,768)
Expenses:					
Professional Fees	-	2,500	2,500	3,336	(836)
Supplies	-	272	272	-	272
Credit Card Processing Fees	-	520	520	893	(373)
Travel	12,967	2,524	15,491	4,558	10,933
Meeting Expenses	-	-	-	3,060	(3,060)
Dues Expense - Associations	-	620	620	590	30
Awards	-	-	-	2,100	(2,100)
Total Expenses	12,967	6,436	19,403	14,537	4,866
Net Revenue/(Expenses)	(12,967)	7,564	(5,403)	7,231	(12,634)
Net Assets, Beginning of Year			51,704	73,803	(22,099)
Net Assets, End of Period*			\$ 53,951	\$ 81,034	\$ (27,083)

2023 Barbara A. Horwitz and John M. Horowitz Research Awardees

Emily Cleveland

*Montana State University,
Bozeman*

Zackarias Coker

*East Tennessee State University,
Johnson City*

Lauren Cooke

Gettysburg College, Pennsylvania

Mary Darrah

University of Colorado, Boulder

Siddarth Desari

*The Ohio State University,
Columbus*

Cynthia Dominguez

University of Vermont, Burlington

Jack Drda

*Dickinson College, Carlisle,
Pennsylvania*

Hiba Durrani

Benedictine University, Lisle, Illinois

Jackson Ernst

University of Iowa, Iowa City

Priya Giddens

Augusta University, Georgia

Anna Gonsalves

University of Missouri, Columbia

Joshua Gopaul

*Hospital for Sick Children, Ajax,
Ontario, Canada*

Dhruvan Gopinath

University of Utah, Salt Lake City

Chloe Johnson

Augusta University, Georgia

Sabrina Li

Emory University, Atlanta

Lauren Ling

Tufts University, Massachusetts

Maria Celeste Lopez Vasquez

*Cooper Medical School at Rowan
University, New Jersey*

Niya Kelley

*Southern Methodist University,
Dallas*

Astha Kulshrestha

*University of Virginia,
Charlottesville*

Kelia McMichael

*Wright State University, Fairborn,
Ohio*

Pooja Menon

*Michigan State University, East
Lansing*

Kayla Miller

University of Iowa, Iowa City

Brianna Monroe

University of Alabama, Birmingham

Favour Nnah

University of Utah, Salt Lake City

Sophie Sanchez

University of Wisconsin, Madison

Conan Shing

*University of British Columbia,
Vancouver*

Leviette Sigala

*University of Texas Health Science
Center, San Antonio*

Dana Truini

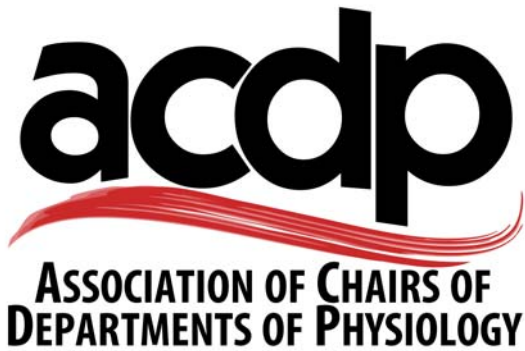
*Union College, Schenectady, New
York*

Kaylee-Abril Vasquez Reyes

*Oregon Health and Science
University Hospital, Portland*

Lucas Wang

*University of Nebraska Medical
Center, Omaha*



AGENDA
ACDP Business Meeting II

(General membership)

December 2, 2023

- I. Call to re-convene**
- II. Election of 2023-2024 Officers**
- III. 2024 ACDP Meeting Plans (Toni Pak)**
- IV. Adjournment**

ACDP 2022-2023 Officers

President (Term ends 2023)



Kebreten F. Manaye, M.D.
Dept. of Physiology & Biophysics
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Washington, DC
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Email: kmanaye@howard.edu

President-elect (Term ends 2023)



Toni R. Pak, Ph.D.
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Email: tpak@luc.edu

Past President (Term ends 2023)



Christopher Hardin, Ph.D.
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Email: hardinc@missouri.edu

Secretary-Treasurer (Term ends 2023)



V. Gustavo Blanco, M.D., Ph.D.
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Councilor (Term ends 2024)



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Councilor (Term ends 2025)



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Councilor (Term ends 2023)



James P. Herman, Ph.D.
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& Systems Physiology
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Councilor (Term ends 2024)



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Email: bina.joe@utoledo.edu

ACDP Officers (Cont'd)

Councilor (Term ends 2023)



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Rochester, MN
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Email: prakash.ys@mayo.edu

Councilor (Term ends 2025)



Larry J. Suva, Ph.D.
Dept. of Veterinary Physiology
& Pharmacology
Texas A&M University
College of Veterinary Medicine
College Station, TX
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Email: lsuva@cvm.tamu.edu

CFAS Representative (Term ends 2025)



Nicholas A. Delamere, Ph.D.
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University of Arizona
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Phone: 520-626-6425
Email: delamere@arizona.edu

CFAS Representative (Term ends 2024)



Patricia E. Molina, M.D., Ph.D.
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Email: pmolin@lsuhsc.edu

Executive Assistant



Melinda E. Lowy
6120 Executive Boulevard,
Suite #575
Rockville, MD 20852-9839
Phone: 301-634-7785
Email: acdp@physiology.org



Past Officers of ACDP

ACDP Presidents

3-yr term: President-elect, President, Past President

Year	Name	Institution	Early Term Ending
2023-24	Toni R. Pak, Ph.D.	Loyola Univ. Stritch Sch. of Med.	
2022-23	Kebreten F. Manaye, M.D.	Howard University Sch. of Med.	
2021-22	Christopher Hardin, Ph.D.	University of Missouri	Term extended due to Covid
2019-21	D. Buck Hales, Ph.D.	Southern Illinois Univ. Sch. of Med.	Term extended due to Covid
2018-20	Patricia E. Molina, M.D., Ph.D.	Louisiana State Univ. Hlth. Sci. Ctr.	Term extended due to Covid
2017-18	Janice H. Urban, Ph.D.	Rosalind Franklin Univ. of Med. & Sci./Chicago Medical School	
2016-17	Charles E. Wood, Ph.D.	Univ. of Florida Coll. of Med.	
2015-16	T. Richard Nichols, Ph.D.	Georgia Institute of Technology	
2014-15	Michael Sturek, Ph.D.	Indiana Univ.	
2013-14	Nicholas A. Delamere, Ph.D.	Univ. of Arizona	
2013-14	Michael B. Reid, Ph.D.	Univ. of Kentucky	Resigned as President-elect, took position as Dean
2012-13	Muthu Periasamy, Ph.D.	Ohio State Univ.	
2011-12	Marshall (Chip) Montrose, Ph.D.	Univ. of Cincinnati	
2010-11	Gary C. Sieck, Ph.D.	Mayo Med. Sch.	
2009-10	R. Clinton Webb, Ph.D.	Med. Coll. of Georgia	
2008-09	Meredith Bond, Ph.D.	Univ. of Maryland, Baltimore	
2007-08	Nicola C. Partridge, Ph.D.	UMDNJ-RW Johnson Med. Sch.	
2006-07	William S. Spielman, Ph.D.	Michigan State Univ.	
2005-06	Richard N. Bergman, Ph.D.	Univ. of Southern California	
2003-05	Peter M. Cala, Ph.D.	Univ. of California, Davis	
2002-03	Irving H. Zucker, Ph.D.	Univ. of Nebraska	
2001-02	Irving G. Joshua, Ph.D.	Univ. of Louisville	
2001-02	Phyllis M. Wise, Ph.D.	Univ. of Kentucky	Resigned as President-elect, took position as Dean
2000-01	Donald M. Bers, Ph.D.	Loyola Univ.	
1999-2000	William H. Dantzer, M.D., Ph.D.	Univ. of Arizona	
1998-99	R. John Solaro, Ph.D.	Univ. of Illinois at Chicago	
1997-98	Mordecai P. Blaustein, M.D.	Univ. of Maryland	
1996-97	Paul De Weer, M.D., Ph.D.	Univ. of Pennsylvania	
1995-96	L. Gabriel Navar, Ph.D.	Tulane Univ.	
1995-96	Robert D. Foreman, Ph.D.	Univ. of Oklahoma	
1994-95	Antonio Scarpa, M.D., Ph.D.	Case Western Reserve Univ.	
1993-94	Wayne E. Crill, M.D.	Univ. of Washington	
1992-93	Harel Weinstein, D.Sc.	Mount Sinai Sch. of Med.	
1991-92	Donald J. Marsh, M.D.	Brown Univ	
1990-91	Allen W. Cowley, Jr., Ph.D.	Med. Coll. of Wisconsin	
1989-90	Robert B. Gunn, M.D.	Emory Univ.	
1988-89	Donald T. Frazier, Ph.D.	Univ. of Kentucky	
1987-88	M. Ian Phillips, Ph.D., D.Sc.	Univ. of Florida	
1986-87	Stephen H. White, Ph.D.	Univ. of California, Irvine	

1985-86	Stanley G. Schultz, M.D.	Univ. of Texas, Houston, Med. Sch.	
1984-85	George A. Hedge, Ph.D.	West Virginia Univ. Sch. of Med.	Replaced Stephen White who was unable to serve
1983-84	Edward J. Masoro, Ph.D.	Univ. of Texas HSC, San Antonio	
1982-83	F. Norman Briggs, Ph.D.	Med. Coll. of Virginia	
1981-82	Franklyn G. Knox, M.D.	Mayo Clinic	
1980-81	Paul C. Johnson, Ph.D.	Univ. of Arizona Sch. of Med,	
1979-80	Jack L. Kostyo, Ph.D.	Univ. of Michigan Med. Sch.	
1978-79	Leonard Share, Ph.D.	Univ. of Tennessee Coll. Med.	
1977-78	Charles R. Park, M.D.	Vanderbilt Univ. Sch. of Med.	
1976-77	W. Francis Ganong, M.D.	Univ. of California, San Francisco	
1975-76	Howard E. Morgan, M.D.	Pennsylvania State Univ.	
1974-75	Norman R. Alpert, Ph.D.	Univ. of Vermont Coll. of Med.	
1973-74	James B. Preston, M.D.	SUNY Upstate Med. Ctr.	Replaced James O. Davis who resigned as President-elect
1972-73	E. B. Brown, Jr. , Ph.D.	Univ. of Kansas Med. Ctr.	
1971-72	Ewald E. Selkurt, Ph.D.	Indiana Univ. Sch. of Med.	
1970-71	Robert M. Berne, M.D.	Western Reserve Univ.	
1969-70	Ernst Knobil, Ph.D.	Univ. of Texas Med. Sch.	

ACDP Secretary-Treasurers
3-yr term; renewable terms

Year	Name	Institution	Early Term Ending
2019-23	V. Gustavo Blanco	Kansas Univ. Med. Ctr.	Term extended due to Covid
2013-19	Elsa I. Mangiarua, Ph.D.	Marshall Univ. Sch. of Med.	
2010-13	Susan DeMesquita, Ph.D.	American Univ. of the Caribbean	
2007-10	Chris Cheeseman, Ph.D.	Univ. of Alberta	
2004-07	Richard L. Moss, Ph.D.	Univ. of Wisconsin Sch. of Med.	
2002-04	Philip M. Best, Ph.D.	Univ. of Illinois	
1997-2001	Aubrey E. Taylor, Ph.D.	Univ. of South Alabama	
1994-97	R. John Solaro, Ph.D.	Univ. of Illinois at Chicago	
1991-94	Robert D. Foreman, Ph.D.	Univ. of Oklahoma	
1989-91	Douglas G. Stuart, Ph.D.	Univ. of Arizona Coll. of Med.	
1988-89	Allen W. Cowley, Jr., Ph.D.	Med. Coll. of Wisconsin	Elected President-elect
1985-87	Donald T. Frazier, Ph.D.	Univ. of Kentucky	Replacing L. Stone
1984	H. Lowell Stone, Ph.D.	Univ. of Oklahoma Hlth. Sci. Ctr.	Deceased
1981-84	George A. Hedge, Ph.D.	West Virginia Univ. Sch. of Med.	
1980-81	F. Norman Briggs, Ph.D.	Med. Coll. of Virginia	
1976-80	Franklyn G. Knox, M.D.	Mayo Clinic	
1974-76	Leonard Share, Ph.D.	Univ. of Tennessee Coll. of Med.	
1971-74	Howard E. Morgan, M.D.	Pennsylvania State Univ.	
1970-71	E. B. Brown, Jr.	Univ. of Kansas Med. Ctr.	Elected President-elect

Councillors

3-yr term; 6 Councillors total; 2 rotate off each year

Year	Name	Institution	Early Term Ending
2022-25	Rachelle H. Crosbie, Ph.D.	Univ. of California, Los Angeles	
2022-25	Larry J. Suva, Ph.D.	Texas A&M Univ. Coll. of Veterinary Medicine	
2022-23	James P. Herman, Ph.D.	Univ. of Cincinnati Coll. of Med.	Finishing Merry Lindsey's term
2021-24	Nancy Carrasco, M.D.	Vanderbilt Univ.	
2021-24	Bina Joe, Ph.D.	Univ. of Toledo Coll. of Med.	
2019-23	Merry L. Lindsey	Univ. of Nebraska Med. Ctr.	Term extended due to Covid, resigned summer 2022 as new Dean
2019-23	YS Prakash	Mayo Clinic	Term extended due to Covid
2018-22	C. Lee Cox, Ph.D.	Michigan State Univ.	Term extended due to Covid, resigned summer 2022 as new Dean
2018-22	Toni R. Pak, Ph.D.	Loyola Univ. Chicago	Term extended due to Covid
2017-21	Walter F. Boron, M.D., Ph.D.	Case Western Reserve Univ. Sch. Med.	Term extended due to Covid
2017-21	Gaylen L. Edwards, D.V.M., Ph.D.	Univ. of Georgia Coll. Vet. Med.	Term extended due to Covid
2016-19	V. Gustavo Blanco, M.D., Ph.D.	Kansas Univ. Medical Center	
2016-19	Christopher Hardin, Ph.D.	University of Missouri	
2015-18	Edward E. Morrison, Ph.D.	Auburn Univ.	
2015-18	Marlene A. Wilson, Ph.D.	Univ. of South Carolina Sch. of Med.	
2014-17	Kebreten F. Manaye, M.D.	Howard Univ. Coll. of Med.	
2014-17	D. Buck Hales, Ph.D.	Southern Illinois Univ. Sch. of Med.	
2013-16	Janice H. Urban, Ph.D.	Rosalind Franklin Univ. of Med. & Sci./ Chicago Med. Sch.	
2013-16	Pieter P. de Tombe, Ph.D.	Loyola Univ. Chicago Med. Sch.	
2012-15	Chris Cheeseman, Ph.D.	Univ. of Alberta	
2012-15	Joseph M. Metzger, Ph.D.	Univ. of Minnesota	
2011-14	Charles E. Wood, Ph.D.	Univ. of Florida Coll. of Med.	
2010-13	Michael Sturek, Ph.D.	Indiana Univ.	
2010-14	Bishr Omary, M.D., Ph.D.	Univ. of Michigan Med. Sch.	Finishing M. Montrose's term; re-elected to full term
2009-12	Patricia E. Molina, M.D., Ph.D.	Louisiana State Univ. Health Sci. Ctr.	
2009-12	Michael B. Reid, Ph.D.	Univ. of Kentucky	
2008-11	Nicholas A. Delamere, Ph.D.	Univ. of Arizona	
2008-10	Marshall H. Montrose, Ph.D.	Univ. of Cincinnati	Elected President-elect
2008-13	T. Richard Nichols, Ph.D.	Georgia Tech Univ.	Finishing G. Sieck's term; re-elected to full term
2007-10	Steven R. Houser, Ph.D.	Temple Univ. Sch. of Med.	
2007-09	Gary C. Sieck, Ph.D.	Mayo Med. Sch.	Elected President-elect
2006-09	Raymond A. Frizzell, Ph.D.	Univ. of Pittsburgh	
2006-09	Muthu Periasamy, Ph.D.	Ohio State Univ.	
2005-08	Susan L. Hamilton, Ph.D.	Baylor Coll. of Med.	

2005-08	R. Clinton Webb, Ph.D.	Med. Coll. of Georgia	
2004-07	Kenneth D. Philipson, Ph.D.	Univ. of California, Los Angeles	
2004-07	Michael L. Jennings, Ph.D.	Univ. of Arkansas for Med. Science	
2004-05	Meredith Bond, Ph.D.	Univ. of Maryland Sch. of Med.	New Councillor position
2003-06	William S. Spielman, Ph.D.	Michigan State Univ.	
2003-06	Joseph C. Dunbar, Ph.D.	Wayne State Univ. Sch. of Med.	
2002-05	D. Neil Granger, Ph.D.	Louisiana State Univ. Med. Ctr.	
2002-03	Nicola C. Partridge, Ph.D.	UMDNJ-RW Johnson Med. Sch.	Finishing P. Cala's term
2002-04	David C. Dawson, Ph.D.	Oregon Health Sciences Univ.	
2001-02	Peter M. Cala, Ph.D.	Univ. of California, Davis	Elected President-elect
2001-03	Michael L. Jennings, Ph.D.	Univ. of Arkansas for Med. Science	New Councillor position
2001-02	Nicola C. Partridge, Ph.D.	UMDNJ-RW Johnson Med. Sch.	Finishing I. Zucker's term
2001-02	Richard N. Bergman, Ph.D.	Univ. of Southern California	Finishing I. Joshua's term
2000-03	Irving H. Zucker, Ph.D.	Univ. of Nebraska Med. Ctr.	Elected President-elect
1999-2002	Irving G. Joshua, Ph.D.	Univ. of Louisville	Elected President in place of P. Wise
1999-2001	Robert E. Fellows, M.D., Ph.D.	Univ. of Iowa	Finishing D. Bers' term
1998-99	Donald M. Bers, Ph.D.	Loyola Univ.	Elected President-elect
1998-99	Irving G. Joshua, Ph.D.	Univ. of Louisville	Finishing W. Dantzler's term
1997-2000	Phyllis M. Wise, Ph.D.	Univ. of Kentucky	Elected President-elect
1997-98	Donald M. Bers, Ph.D.	Loyola Univ.	Finishing A. Taylor's term
1996-98	William H. Dantzler, M.D., Ph.D.	Univ. of Arizona	Elected President-elect
1995-97	Aubrey E. Taylor, Ph.D.	Univ. of South Alabama	Elected Secretary-Treasurer
1994-97	Kenton M. Sanders, Ph.D.	Univ. of Nevada Sch. of Med.	
1994-95	Sandra Sabatini, M.D., Ph.D.	Texas Tech Univ. Hlth. Sci. Ctr.	Finishing L.G. Navar's term
1993-96	James G. Townsel, Ph.D.	Meharry Med. Coll.	
1993-94	Paul De Weer, M.D., Ph.D.	Univ. of Pennsylvania	Finishing A. Scarpa's term
1992-94	L. Gabriel Navar, Ph.D.	Tulane Univ.	Elected President-elect
1991-93	Antonio Scarpa, M.D., Ph.D.	Case Western Reserve Univ.	Elected President-elect
1992-93	James G. Townsel, Ph.D.	Meharry Med. Coll.	Finishing R. Foreman/W. Crill's term
1991-92	Wayne E. Crill, M.D.	Univ. of Washington	Finishing R. Foreman's term; elected President-elect
1990-91	Robert D. Foreman, Ph.D.	Univ. of Oklahoma	Elected Secretary-Treasurer
1989-91	Harel Weinstein, D.Sc.	Mount Sinai Sch. of Med.	Elected President-elect
1988-91	Robert E. Thurber, Ph.D.	East Carolina Univ.	
1988-89	Benjamin Kaminer, M.D.	Boston Univ. Sch. of Med.	Finishing R. Gunn's term
1987-90	Donald J. Marsh, M.D.	Brown Univ.	
1986-88	Robert B. Gunn, M.D.	Emory Univ.	Elected President-elect
1985-88	John J. Spitzer, M.D.	Louisiana State Univ. Health Sci. Ctr.	
1985-87	Allen W. Cowley, Jr., Ph.D.	Med. Coll. of Wisconsin	Finishing D. Frazier's term
1984-85	Donald T. Frazier, Ph.D.	Univ. of Kentucky	Elected Secretary-Treasurer
1983-86	M. Ian Phillips, Ph.D., D.Sc.	Univ. of Florida	
1984-85	Allen W. Cowley, Jr., Ph.D.	Med. Coll. of Wisconsin	Finishing S. Schultz's term
1982-84	Stanley G. Schultz, M.D.	Univ. of Texas, Houston Med. Sch.	Elected President-elect

1981-84	Jimmy D. Neill, Ph.D.	Univ. of Alabama, Birmingham	
1982-83	Stephen H. White, Ph.D.	Univ. of California, Irvine	Finishing E. Masoro's term
1980-82	Edward J. Masoro, Ph.D.	Univ. of Texas HSC at San Antonio	Elected President-elect
1979-82	Joseph P. Gilmore, Ph.D.	Univ. of Nebraska Med. Ctr.	
1978-81	Paul Horowicz, Ph.D.	Univ. of Rochester Med. Sch.	
1977-80	William Van der Kloot, Ph.D.	SUNY Stony Brook	
1976-79	Paul C. Johnson, Ph.D.	Univ. of Arizona	
1975-78	Jack L. Kostyo, Ph.D.	Univ. of Michigan Med. Sch.	
1974-75	W. Francis Ganong, M.D.	Univ. of California, San Francisco	Finishing H. Patton's term
1974-77	Harold G. Hempling, Ph.D.	Med. Univ. of South Carolina	
1973-76	Charles R. Park, M.D.	Vanderbilt Univ. Sch. of Med.	Elected President-elect
1972-74	Harry D. Patton, M.D., Ph.D.	Univ. of Washington	
1973-74	Norman R. Alpert, Ph.D.	Univ. of Vermont Coll. of Med.	Finishing J. Davis' term
1971-73	James O. Davis, M.D., Ph.D.	Missouri Univ.	Elected President-elect
1970-73	Gerhard H. Giebisch, M.D.	Yale Univ.	
1969-72	James B. Preston, M.D.	SUNY Upstate Med. Ctr.	
1968-71	Howard E. Morgan, M.D.	Pennsylvania State Univ.	

Council of Faculty and Academic Societies (CFAS) (formerly Council of Academic Societies)

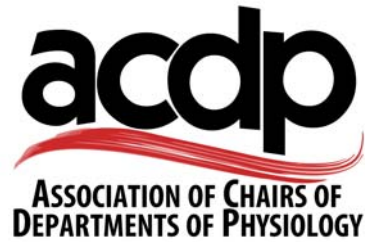
3-yr term; 2 Representatives; renewable terms

Year	Name	Institution	Early Term Ending
2021-24	Patricia E. Molina, M.D., Ph.D.	Louisiana State Univ. Hlth. Sci. Ctr.	
2018-21	Santiago Schnell, D.Phil	Univ. of Michigan Sch. Med.	Finishing C. Webb's term; resigned 8/21 as accepted Deanship
2015-25	Nicholas A. Delamere, Ph.D.	Univ. of Arizona	Term extended due to Covid
2014-15	Elsa I. Mangiarua, Ph.D.	Marshall Univ. Sch. of Med.	Finishing M. Montrose's term
2012-15	Marshall H. Montrose, Ph.D.	Univ. of Cincinnati	Resigned, became Dean
2011-18	R. Clinton Webb, Ph.D.	Georgia Regents Univ.	Resigned
2010-11	Meredith Bond, Ph.D.	Univ. of Maryland Sch. of Med.	Became Dean
2007-10	William S. Spielman, Ph.D.	Michigan State Univ.	
2006-07	Meredith Bond, Ph.D	Univ. of Maryland Sch. of Med.	Elected President-elect
1997-2012	L. Gabriel Navar, Ph.D.	Tulane Univ.	
1995-2005	Antonio Scarpa, M.D., Ph.D.	Case Western Reserve Univ.	Finishing A. Cowley's term
1991-97	M. Ian Phillips, Ph.D., D.Sc.	Univ. of Florida	
1992-95	Allen W. Cowley, Jr., Ph.D.	Med. Coll. of Wisconsin	Finishing D. Frazier's term plus additional term
1989-92	Donald T. Frazier, Ph.D.	Univ. of Kentucky	
1988-89	Stanley G. Schultz, M.D.	Univ. of Texas, Houston Med. Sch.	Finishing L. Share's term
1987-91	Mordecai P. Blaustein, M.D.	Univ. of Maryland	
1985-87	Leonard Share, Ph.D.	Univ. of Tennessee Coll. of Med.	
1982-85	Howard E. Morgan, M.D.	Pennsylvania State Univ.	
1980-87	W. Francis Ganong, M.D.	Univ. of California, San Francisco	
1980-82	Stephen H. White, Ph.D.	Univ. of California, Irvine	
1980-81	H. Maurice Goodman, Ph.D.	Univ. of Massachusetts Med. Sch.	
1970-71	Daniel C. Tosteson, M.D.	Harvard Med. Sch.	

Public Affairs

3-yr term; renewable terms

Year	Name	Institution	Early Term Ending
1994-96	Mordecai P. Blaustein, M.D.	Univ. of Maryland	
1993-94	Leonard S. Jefferson, Ph.D.	Pennsylvania State Univ. Hershey Med. Ctr.	
1989-93	Charles D. Barnes, Ph.D.	Washington State Univ.	
1981-89	Norman R. Alpert, Ph.D.	Univ. of Vermont Coll. of Med	



ASSOCIATION OF CHAIRS OF DEPARTMENTS OF PHYSIOLOGY

CONSTITUTION

(As amended December 01, 2018)

ARTICLE I

The name of this organization shall be the Association of Chairs of Departments of Physiology (ACDP)

ARTICLE II

MISSION

The mission of this Association shall be to promote discussion of problems of interest and concern to chairs* and those associated with promoting the research and teaching missions of departments of physiology.

*The term "chairs" will herein be defined as inclusive of chairs of departments and leaders of academic units responsible for the research and teaching in the discipline of physiology.

ARTICLE III

MEMBERSHIP

- Section 1. The membership of the Association shall include the chairs of departments and programs promoting the discipline of physiology in accredited schools of higher education.
- Section 2. Membership will also be open to individuals in other types of institutions who have similar responsibilities as those indicated in Section 1.
- Section 3. In colleges lacking a Department of Physiology, the administrative officer of an academic unit responsible for the discipline of physiology can be admitted to membership.

ARTICLE IV

OFFICERS AND COUNCIL

- Section 1. The officers of the Association shall consist of a President, a President-Elect and a Secretary-Treasurer. The President and President-Elect shall serve for terms of one year. The Secretary-Treasurer shall serve for three years.
- Section 2. The council shall consist of Officers, three Councilors and the past President. Each Councilor shall ordinarily serve a term of three years. One new Councilor shall be elected each year.

ARTICLE V

MEETINGS

- Section 1. The time and place of the annual meeting and all called meetings shall be determined by the Council.
- Section 2. Notice of time and place of all meetings shall be mailed to all members at least thirty days prior to such meeting.

ARTICLE VI

QUORUM

A quorum for any regular or called meeting shall consist of 20% of the members.

ARTICLE VII

CHARTER MEMBERS

All of those present at the first meeting, August 25, 1967, or who qualify under Article III, Section 1 are automatically charter members, unless they decline.

ARTICLE VIII

AMENDMENTS

Amendments to this Constitution may be effected by two-thirds of the voting members at a regular or called meeting provided that such an amendment has been submitted in writing to all members at least thirty days prior to such meeting.

ASSOCIATION OF CHAIRS OF DEPARTMENTS OF PHYSIOLOGY, INC.

BY-LAWS

ARTICLE I

Office

SECTION 1. Principal Office. The principal office of the Corporation shall be at the American Physiological Society, 6120 Executive Boulevard, Suite #600, Rockville, MD 20852-4906.

SECTION 2. Other Offices. The Corporation may also have an office or offices in such other places as the business of the Corporation may require and the Board of Directors may from time to time appoint.

ARTICLE II

Members

SECTION 1. Applications for Membership. Membership shall include the chairs of Departments of Physiology in accredited schools. Upon approval of the Board of Directors, membership will also be open to:

- a. individuals in other types of institutions who have similar responsibilities, \
- b. the administrative officer or program leader of an academic unit responsible for the discipline of physiology in colleges lacking a department of physiology, and
- c. chairs of physiology at undergraduate institutions

Emeritus Membership status is granted to former chairs that have held membership in ACDP for a total of 5 or more years. Emeritus members are invited to attend the annual meeting. Emeritus members can neither vote on Association business nor hold office.

SECTION 2. Procedure. Membership eligibility shall be automatic upon appointment to a chair of a Department of Physiology, notification of the Secretary/Treasurer by the new member and payment of dues by the member.

SECTION 3. Dues. The Board of Directors shall determine the annual dues for the members.

SECTION 4. Attendance. Attendance at ACDP meetings shall be limited to members (or their designees) or guests invited with the approval of the Board of Directors.

SECTION 5. Annual Meeting. The annual meeting of the members of the Corporation shall be held on a day duly designated by the Board of Directors either within or without the United States if not a legal holiday, and if a legal holiday then the next succeeding day not a legal holiday, for the transaction of such corporate business as may come before the meeting.

SECTION 6. Special Meetings. Special meetings of the members may be called at any time for any purpose or purposes by the Chair of the Board, by the President, by the President-elect, or by a majority of the Board of Directors, and shall be called forthwith by the Chair of the Board, the President, the President-elect, the Secretary-Treasurer or any director of the Corporation upon the request in writing of a majority of all the members entitled to vote on the business to be transacted at such meeting. Such request shall state the purpose or purposes of the meeting. Business transacted at all special meetings of members shall be confined to the purpose or purposes stated in the notice of the meeting.

SECTION 7. Place of Holding Meetings. All meetings of members shall be held within or outside the United States at a place designated by the Board of Directors.

SECTION 8. Notice of Meetings. Written notice of each meeting of the members shall be mailed, postage prepaid by the Secretary/Treasurer, or sent by e-mail over the Internet or similar electronic communications equipment by the Secretary/Treasurer, to each member of record entitled to vote thereat at his/her post office address or e-mail address, as it appears upon the books of the Corporation, at least thirty (30) days before the meeting. Each such notice shall state the place, day, and hour at which the meeting is to be held. In the case of any special meeting, the notice shall state briefly the purpose or purposes thereof.

SECTION 9. Quorum. The presence in person or by proxy of twenty percent (20%) of the members of the Corporation shall constitute a quorum at all meetings of the members except as otherwise provided by law, by the Articles of Incorporation or by these By-Laws. If less than a quorum shall be in attendance at the time for which the meeting shall have been called, the meeting may be adjourned from time to time by a majority vote of the members present or represented, without any notice other than by announcement at the meeting, until a quorum shall attend. At any rescheduled meeting at which a quorum shall attend, any business may be transacted which might have been transacted if the meeting had been held as originally called.

SECTION 10. Conduct of Meetings. Meetings of members shall be presided over by the President of the Corporation or, if the President is not present, by the President-elect, or, if none of said officers is present, by a chair to be elected at the meeting. The Secretary/Treasurer of the Corporation shall act as secretary of such meetings. In the absence of the Secretary-Treasurer the presiding officer may appoint a person to act as Secretary of the meeting.

SECTION 11. Voting. At all meetings of members, every member entitled to vote thereat shall have one (1) vote. Such vote may be either in person or by proxy appointed by an instrument in writing subscribed by such member or the member's duly authorized attorney, bearing a date not more than three (3) months prior to said meeting, unless said instrument provides for a longer period. Such proxy shall be dated, but need not be sealed, witnessed or acknowledged. All elections shall be held and all questions shall be decided by a majority of the votes cast at a duly constituted meeting, except as otherwise provided by law, in the Certificate of Incorporation or by these By-Laws. If the chair of the meeting shall so determine, a vote by ballot may be taken upon any election or matter, and the vote shall be so taken upon the request of ten percent (10%) or more of all the members entitled to vote on such election or matter. In either of such events,

the proxies and ballots shall be received and be taken in charge and all questions touching the qualification of voters and the validity of proxies and the acceptance or rejection of votes, shall be decided by members appointed by the chair of the said meeting.

ARTICLE III

Board of Directors

SECTION 1. General Powers. The property and business of the Corporation shall be managed under the direction of the Board of Directors of the Corporation. The Board shall be the policy making and administrative body of the corporation during the interval between the regular annual meetings and shall be empowered to enter into contracts and to authorize such expenditures as may be necessary to carry on the affairs of the Corporation.

SECTION 2. Number and Term of Office. The number of Directors shall be either (8) or such other number, but not less than three (3) nor more than nine (9), as may be designated from time to time by resolution of a majority of the entire board of Directors. Directors shall be members of the Corporation.

SECTION 3. Filling of Vacancies. In the case of any vacancy in the Board of Directors through death, resignation, disqualification, removal, or other cause, the office shall be left vacant unless filled by a vote of the members at a special meeting.

SECTION 4. Place of Meeting. The Board of Directors may hold their meetings and have one or more offices, and keep the books of the Corporation, either within or outside the State of Maryland, at such place or places as they may from time to time determine by resolution or by, written consent of all the directors. The Board of Directors may hold their meetings by conference telephone, e-mail over the Internet or other similar electronic communications equipment if everyone can hear everyone else in accordance with the provisions of the General Corporation Law of the State of Maryland.

SECTION 5. Regular Meetings. Regular meetings of the Board of Directors may be held without notice at such time and place as shall from time to time be determined by resolution of the Board, provided that written notice of each meeting of the Board of Directors shall be mailed, postage prepaid by the Secretary or sent by e-mail over the Internet or similar electronic communications equipment by the Secretary, to each member of record entitled to vote thereat at his/her post office address or e-mail address, as it appears upon the books of the Corporation, at least ten (10) days before the meeting. The annual meeting of the Board of Directors shall be held immediately following the annual meeting of members. Any business may be transacted at any regular meeting of the Board.

SECTION 6. Special Meetings. Special meetings of the Board of Directors shall be held whenever called by any member of the Board of Directors. The Secretary shall give notice of each special meeting of the Board of Directors, by mailing the same at least three (3) days prior to the meeting or by e-mailing over the Internet the same at least two (2) days before the

meeting, to each Director, but such notice may be waived by any Director. Unless otherwise indicated in the notice thereof, any and all business may be transacted at any special meetings. At any meeting at which every Director shall be present, even though without notice, any business may be transacted and any Director may in writing waive notice of the time, place and objectives of any special meeting.

SECTION 7. Quorum. A majority of the whole number of Directors shall constitute a quorum for the transaction of business at all meetings of the Board of Directors. If at any meeting less than a quorum shall be present, a majority of those present may adjourn the meeting from time to time. The act of a majority of the Directors present at any meeting at which there is a quorum shall be the act of the Board of Directors, except as may be specifically provided, by law, or by the Articles of Incorporation or by these By-Laws.

SECTION 8. Required Vote. An affirmative vote of a majority of those present shall be necessary for the passage of any resolution. All proceedings at the meeting of the Board of Directors or of any committee appointed by the Board shall be governed by Roberts Rules of Order, Revised, except where otherwise provided in these By-Laws.

SECTION 9. Compensation of Directors. Directors shall not receive any stated salary for their services as such. Each director shall be entitled to receive from the Corporation reimbursement of the expenses incurred by the Director attending any regular or special meeting of the Board, and, by resolution of the Board of Directors a fixed sum may also be allowed for attendance at each regular or special meeting of the Board and such reimbursement and compensation shall be payable whether or not a meeting is adjourned because of the absence of a quorum. Nothing herein contained shall be construed to preclude any Director from serving the Corporation in any other capacity, and receiving compensation there for.

SECTION 10. Standing Committees. The Board of Directors shall:

- a. Elect two members of the Corporation to represent the corporation at the Council of Faculty and Academic Societies ("CFAS") of the Association of American Medical colleges ("AAMC"). The CFAS representatives shall attend Board meetings and make periodic reports to the Board and to the members of the Corporation. The term of appointment shall be for three (3) years.

SECTION 11. Other Committees. The Board of Directors may, by resolution passed by a majority of the whole Board, designate one or more other committees. Each committee shall consist of two or more of the directors of the Corporation, which, to the extent provided in the resolution, shall have and may exercise the powers of the Board of Directors, and may authorize the seal of the Corporation to be affixed to all papers which may require it. Such committee or committees shall have such names as may be determined from time to time by resolution adopted by the Board of Directors.

SECTION 12. The Board of Directors shall allow Chairs in good standing to designate a member of the faculty of her or his Department to attend annual meetings in their absence as a

non-voting representative of the Department. Non-voting representatives shall not count toward the number of members needed to constitute a quorum.

ARTICLE IV

Officers

SECTION 1. Election, Tenure and Compensation. The officers of the Corporation shall be a President, a President-elect, and a Secretary/Treasurer. Other officers including a Chair of the Board may be appointed by the Board of Directors from time to time as necessary for the proper conduct of the business of the Corporation. The President and President-elect shall be elected annually by the ACDP members at the annual meeting of the members. The Secretary/Treasurer shall be elected every three years by the members at the annual member's meeting. All officers of the Corporation shall be directors. The Secretary and Treasurer offices may be held by the same person, but no officer shall execute, acknowledge or verify any instrument in more than one capacity if such instrument is required by law or by these By-Laws to be executed, acknowledged or verified by any two or more officers.

The procedures for nominating and balloting will be determined at the time of the meeting of members. A majority of the members voting at a duly authorized meeting shall be necessary to elect the nominees.

In the event that any office other than an office required by law, shall not be filled by the members, or, once filled, subsequently becomes vacant, then such office and all references thereto in these By-Laws shall be deemed inoperative unless and until such office is filled in accordance with the provisions of these By-Laws.

All officers and agents of the Corporation shall be subject to removal at any time by the affirmative vote of a majority of the members voting at a duly authorized meeting of members, and any officers, agents, and employees, shall hold office at the discretion of the members.

SECTION 2. Powers and Duties of the Chair of the Board. The Chair of the Board shall preside at all meetings of the Board of Directors unless the Board of Directors shall by a majority vote of a quorum thereof elect a chair other than the Chair of the Board to preside at meetings of the Board of Directors. The Chair of the Board may sign and execute all authorized bonds, contracts, or other obligations in the name of the Corporation, and he/she shall be ex-officio a member of all standing committees.

SECTION 3. Powers and Duties of the President. The President shall be the chief executive officer of the Corporation and shall have general charge and control of all its business affairs and properties. The President shall preside at all meetings of the members.

The President may sign and execute all authorized bonds, contracts or other obligations in the name of the Corporation. The President shall have signature power to sign checks under his/her signature in amounts below \$1,000. The President shall have the general powers and

duties of supervision and management usually vested in the office of president of a corporation. The President shall be ex-officio a member of all the standing committees. The President shall do and perform such other duties as may, from time to time, be assigned to him/her by the Board of Directors.

In the event that the Board of Directors does not take affirmative action to fill the office of Chair of the Board, the President shall assume and perform all powers and duties given to the Chair of the Board by these By-Laws.

SECTION 4. Powers and Duties of the President-elect. The Board of Directors shall appoint a President-elect and the Board of Directors may appoint a Vice President. The President-elect (unless otherwise provided by resolution of the Board of Directors) may sign and execute all authorized bonds, contracts, or other obligations in the name of the Corporation. The President-elect shall have such other powers and shall perform such other duties as may be assigned to him/her by the Board of Directors or by the President. In case of the absence or disability of the President, the duties of that office shall be performed by the President-elect, and the taking of any action by the President-elect in place of the President shall be conclusive evidence of the absence or disability of the President.

SECTION 5. Secretary/Treasurer.

- a. The Secretary shall handle all voting matters, whether at actual meetings, telephonic meetings or meetings held on the Internet or other electronic media. He/she shall give, or cause to be given, notice of all meetings of members and directors and all other notices required by law or by these By-Laws. In case of her/his absence or refusal or neglect to do so, any such notice may be given by any person thereunto directed by the President, or by the directors or members upon whose written request the meeting is called as provided in these By-Laws. The Secretary shall record all proceedings of the meetings of the members and of the directors in books provided for that purpose, and shall perform such other duties as may be assigned to him/her by the directors or the President. The Secretary shall have custody of the seal of the Corporation and shall affix the same to all instruments requiring it, when authorized by the Board of Directors or the President, and attest the same. In general, the Secretary shall perform all the duties generally incident to the office of Secretary, subject to the control of the Board of Directors and the President.
- b. Treasurer. The Treasurer shall have custody of all the funds and securities of the Corporation, and he/she shall keep full and accurate account of receipts and disbursements in books belonging to the Corporation. The Treasurer shall deposit all moneys and other valuables in the name and to the credit of the Corporation in such depository or depositories as may be designated by the Board of Directors. The Treasurer shall have the power to sign checks under his/her signature in amounts up to \$1,000. All checks for amounts over \$1,000 shall require the signatures of two officers.

The Treasurer shall disburse the funds of the Corporation as may be ordered by the Board of Directors, taking proper vouchers for such disbursements. He/she shall render to the President and the Board of Directors, whenever either of them so requests, an account of all his/her transactions as Treasurer and of the financial condition of the Corporation.

The Treasurer shall give the Corporation a bond, if required by the Board of Directors, in a sum, and with one or more sureties, satisfactory to the Board of Directors, for the faithful performance of the duties of his/her office and for the restoration to the Corporation in case of his/her death, resignation, retirement, or removal from office of all books, papers, vouchers, moneys, and other properties of whatever kind in his/her possession or under his/her control belonging to the Corporation.

The Treasurer shall perform all the duties generally incident to the office of the Treasurer, subject to the control of the Board of Directors and the President.

SECTION 6. Assistant Secretary. The Board of Directors may appoint an Assistant Secretary or more than one Assistant Secretary. Each Assistant Secretary shall (except as otherwise provided by resolution of the Board of Directors) have power to perform all duties of the Secretary in the absence or disability of the Secretary and shall have such other powers and shall perform such other duties as may be assigned to him/her by the Board of Directors or the President. In case of the absence or disability of the Secretary, the duties of the office shall be performed by any such Assistant Secretary, and the taking of any action by any such Assistant Secretary in place of the Secretary shall be conclusive evidence of the absence or disability of the Secretary.

SECTION 7. Assistant Treasurer. The Board of Directors may appoint an Assistant Treasurer or more than one Assistant Treasurer. Each Assistant Treasurer shall (except as otherwise provided by resolution of the Board of Directors) have power to perform all duties of the Treasurer in the absence or disability of the Treasurer and shall have such other powers and shall perform such other duties as may be assigned to him/her by the Board of Directors or the President. In case of the absence or disability of the Treasurer, the duties of the office shall be performed by any Assistant Treasurer, and the taking of any action by any such Assistant Treasurer in place of the Treasurer shall be conclusive evidence of the absence or disability of the Treasurer.

ARTICLE V

Corporate Seal

SECTION 1. Seal. In the event that the President shall direct the Secretary to obtain a corporate seal, the corporate seal shall be circular in form and shall have inscribed thereon the name of the Corporation, the year of its organization and the word "Maryland". Duplicate copies of the corporate seal may be provided for use in the different offices of the Corporation but each copy thereof shall be in the custody of the Secretary of the Corporation or of an Assistant Secretary of the Corporation nominated by the Secretary.

ARTICLE VI

Bank Accounts and Loans

SECTION 1. Bank Accounts. Such officers or agents of the Corporation as from time to time shall be designated by the Board of Directors shall have authority to deposit any funds of the Corporation in such banks or trust companies as shall from time to time be designated by the Board of Directors. Such officers or agents as from time to time shall be authorized by the Board of Directors may withdraw any or all of the funds of the Corporation so deposited in any such bank or trust company, upon checks, drafts, or other instruments or orders for the payment of money, drawn against the account or in the name or behalf of this Corporation, and made or signed by such officers or agents. Each bank or trust company with which funds of the Corporation are so deposited is authorized to accept, honor, cash and pay, without limit as to amount, all checks, drafts or other instruments or orders for the payment of money, when drawn, made or signed by officers or agents so designated by the Board of Directors until written notice of the revocation of the authority of such officers or agents by the Board of Directors shall have been received by such bank or trust company. There shall from time to time be certified to the banks or trust companies in which funds of the Corporation are deposited, the signature of the officers or agents of the Corporation so authorized to draw against the same. In the event that the Board of Directors shall fail to designate the persons by whom checks, drafts and other instruments or orders for the payment of money shall be signed, as hereinabove provided in this Section, all of such checks, drafts and other instruments or orders for the payment of money shall be signed by the President or President-elect and countersigned by the Secretary/Treasurer or an Assistant Secretary or an Assistant Treasurer of the Corporation.

SECTION 2. Loans. Such officers or agents of this Corporation as from time to time shall be designated by the Board of Directors shall have authority to effect loans, advances or other forms of credit at any time or times for the Corporation from such banks, trust companies, institutions, corporations, firms or persons as the Board of Directors, shall from time to time designate, and as security for the repayment of such loans, advances, or other forms of credit to assign, transfer, endorse and deliver, either originally or in addition or substitution, any or all stocks, bonds, rights and interests of any kind in or to stocks or bonds, certificates of such rights or interests, deposits, accounts, documents covering merchandise, deposits and accounts receivable and other commercial paper and evidences of debt at any time held by the Corporation, and for such loans, advances or other forms of credit to make, execute and deliver one or more notes, acceptances or written obligations of the Corporation on such terms, and with such provisions as to the security or sale or disposition thereof as such officers or agents shall deem proper; and also to sell to, or discount or rediscount with, such banks, trust companies, institutions, corporations, firms or persons any and all commercial paper, bills receivable, acceptances and other instruments and evidences of debt at any time held by the Corporation, and to that end to endorse, transfer and deliver the same. There shall from time to time be certified to each bank, trust company, institution, corporation, firm or person so designated, the signatures of the officers or agents so authorized; and each such bank, trust company, institution, corporation, firm or person is authorized to reply upon such certification until written notice of the revocation by the Board of Directors of the authority of such officers or agents shall be delivered to such bank, trust company, institution, corporation, firm or person.

ARTICLE VII

Reimbursements

SECTION 1. Reimbursements. Any payments made to an officer or other employee of the Corporation, such as salary, commission, interest or rent, or entertainment expense incurred by him/her, which shall be disallowed in whole or in part as a deductible expense by the Internal Revenue Service, shall be reimbursed by such officer or other employee of the Corporation to the full extent of such disallowance. It shall be the duty of the Directors, as a Board, to enforce payment of each such amount disallowed. In lieu of payment by the officer or other employee, subject to the determination of the Board of Directors, proportionate amounts may be withheld from his/her future compensation payments until the amount owed to the Corporation has been recovered.

ARTICLE VIII

Miscellaneous Provisions

SECTION 1. Fiscal Year. The fiscal year of the Corporation shall end on the last day of December.

SECTION 2. Notices. Whenever, under the provisions of these By-Laws, notice is required to be given to any Director, officer or member it shall not be construed to mean personal notice, but such notice shall be given in writing, by email over the Internet, by mail by depositing the same in a post office or letter box in a postpaid sealed wrapper, addressed to each member officer or director at such address as appears on the books of the Corporation, or in default of any other address, to such director, officer or member at the general post office in the City of Rockville, Maryland, and such notice shall be deemed to be given at the time the same shall be thus mailed. Any member, Director or officer may waive any notice required to be given under these By-Laws.

SECTION 3. Waiver, Consent. Any notice required to be given under these By-Laws or otherwise may be waived by the Director, officer or member to whom such notice is required to be given and the presence of any person at a meeting shall constitute waiver of notice thereof as to such person. Any action which may be taken at a meeting of the Directors, officers or members may be taken without a meeting if a consent in writing, setting forth the action so taken, shall be signed by all of the Directors, officers or members entitled to vote with respect to the subject matter thereof. Such consent shall have the same force and effect as a unanimous vote of the Directors, officers or members, as the case may be.

ARTICLE IX

Amendments

SECTION 1. Amendment of By-Laws. Any member can propose an amendment of the By-Laws by submitting the change to the President. If a majority of the Members adopt the amendment it shall be adopted provided that such amendment has been submitted in writing to all Members by mail at least thirty days prior to such meeting. Without prior notification, amendment of the By-Laws may be accomplished by the unanimous consent of the members voting at an annual or special meeting of the members.

ARTICLE X

Indemnification

SECTION 1. Definitions. As used in this Article X, any word or words that are defined in Section 2-418 of the Corporations and Associations Article of the Annotated Code of Maryland, as amended from time to time, (the "Indemnification Section") shall have the same meaning as provided in the Indemnification Section.

SECTION 2. Indemnification of Directors and Officers. The Corporation shall indemnify and advance expenses to a Director or officer of the Corporation in connection with a proceeding to the fullest extent permitted by and in accordance with the Indemnification Section.

SECTION 3. Indemnification of Employees and Agents. With respect to an employee or agent, other than a Director or officer, of the Corporation, the Corporation may, as determined by the Board of Directors of the Corporation, indemnify and advance expenses to such employee or agent in connection with a proceeding to the extent permitted by and in accordance with the Indemnification Section.

Amended 12/2018