Executive Committee
Following the 5th Annual MPS Meeting at Michigan Technological University in June 2018, the MPS Executive Committee (EC) for the 2018-2019 year was composed of the following individuals:

President – John Durocher, Michigan Technological University
Past-President – Karen Ball, Alma College
President-Elect – Naveen Sharma, Central Michigan University
Secretary* – Jennifer Vranish, Alma College
Membership & Fundraising – Harold Bell, Central Michigan University
Awards Committee – Beth Zimmer, Ferris State University
K-12 Outreach – Sue Spiers, Grosse Pointe North HS
Trainee Committee – Ian Greenlund, Michigan Technological University
Treasurer* – Brianna Harfmann, Alma College
Web Coordinator – Kevin Gordish, Henry Ford Health System

*Valerie Vanryn from Michigan State University was in the dual role of Secretary/Treasurer previously until she had to vacate these duties due to a career change that took her out of state in April 2019. Jennifer Vranish and Brianna Harfmann were nominated by Karen Ball to their respective positions and were unanimously approved by the EC.

Planning for the 6th Annual MPS Meeting

It was previously determined that the 6th Annual MPS Meeting would be held in Mount Pleasant on the campus of Central Michigan University. Co-meeting chairs Harold Bell and Naveen Sharma, would be responsible for development of a planning committee and coordination of on-site logistics. After deliberation with the EC in the Fall, it was decided that the meeting would be held from June 27th & 28th. The goal was to host a meeting for approximately 125 members, featuring trainee-based research via poster and oral abstracts. Additionally, breakout sessions would be designed based on input from the membership, and will include opportunities for a keynote speaker to interact directly with participants.

Dr. William Milsom, currently Emeritus Professor from the University of British Columbia, a distinguished comparative physiologist, was invited and accepted our invitation to be the keynote speaker at the meeting. He has over 200 publications based on research involving several different species, and has worked to uncover mechanisms of adaptation and tolerance to challenging environments. Dr. Milsom’s lab has been continuously supported by the National Sciences and Research Council of Canada (NSERC) for nearly 40 years, and he has earned several accolades over his career including the August Krogh Distinguished Lectureship of the APS Comparative and Evolutionary Physiology Section, the highest honor presented by that section of the American Physiological Society.
Also, we planned to slightly alter the structure of the Michigan Physiology Quiz Bowl (MIPQ), which is conducted at the MPS under the direction of quiz master Dr. Sue Barman of Michigan State University. Previously, the MIPQ has been held on Thursday morning, prior to the official commencement of the main program. In an effort to increase the profile of the MIPQ, it was decided that it would split into a preliminary round, which took place on Thursday morning, and a Final round, featuring the top 3 teams competing after dinner on Thursday.

Early bird registration would start on February 4th, with abstract submission opening on April 1st with an initial abstract deadline on April 26. Late abstracts would be considered through parts of May with a hard deadline for consideration of oral abstracts on May 3rd. Housing for the meeting would be off-campus with hotel blocks reserved until May 27th. A final number for meeting registrants would have to be presented to catering services at CMU on the Monday prior to the meeting. Fundraising for the meeting would commence in January, as EC members would contact their home institutions to solicit donations.

6th Annual Meeting – Day 1

The meeting was held at the Bovee University Center at CMU. The MIPQ preliminary rounds commenced on Thursday morning with a record 7 teams: Alma College, Central Michigan University, Ferris State University, Michigan State University, Michigan Technological University, Oakland University, and Wayne State University. Following the early session of the MIPQ, a campus/medical school tour was offered for those interested simultaneous to the noontime registration period. The meeting officially got underway at 2:30PM with a “State of the Society” introduction from John Durocher, and greetings from the meeting co-chairs and Dr. George Kikano, Vice-President for Health Affairs and Dean of the College of Medicine at CMU. Dr. Milsom then delivered his keynote address titled “Living high: Multiple strategies for obtaining oxygen at high altitudes in birds.”

Later in the afternoon, the first set of oral abstracts were presented during Oral Session #1: Heart and Circulatory Physiology, with moderators Emily Cook (Michigan Tech) and Tang-Dong Liao (Henry Ford Health System). Presenters, affiliations, and abstract titles are listed:

Lyndsey Matus, Wayne State University, “Sex-Related Differences in Sympathetic Nerve Activity Following Activation of the Rostral Ventrolateral Medulla”

Ian Greenlund, Michigan Technological University, “Alpha Intrusion during Rapid Eye Movement (REM) and K Complexes in Stage Two Sleep Increases Blood Pressure”

Laura Chambers, Michigan State University, “Sex Differences in the Response to Angiotensin II-Induced Hypertension”

Joseph Mannozzi, Wayne State University, “Control of Ventricular-Vascular Coupling During Exercise in Heart Failure by the Muscle Metaboreflex and Arterial Baroreflex”
The evening commenced with dinner and simultaneous poster viewing with “Poster Session A” in a neighboring room, allowing for members and judges to interact with trainee presenters.

The anticipated final round of the MIPQ occurred during primetime and featured the teams from Ferris State, Michigan State, and Wayne State, who was going for an unprecedented “3-peat”. The teams battled through a series of challenging questions, but when the dust settled Ferris State emerged victorious. The team from Ferris State received a commemorative certificate and each member took home a cash prize. Also, new this year, in recognition of Dr. Sue Barman’s leadership to make the MIPQ a regular event at the MPS meeting, Ferris State was also awarded the inaugural “Barman Cup” to display at their campus until the subsequent meeting.
The awards ceremony for the MIPQ marked the official end of programming for Day 1 of the MPS meeting. Some attendees then moved onto to a social gathering at a local establishment, Hunter’s Ale House for music and late night refreshments, while others turned in early in anticipation of Day 2.

6th Annual Meeting – Day 2

Shortly after 8AM, life sciences instructors were encouraged to join Dr. Bill Saltarelli in the human anatomy lab in the Health Professions Building to participate in his workshop titled “Structured cooperative learning in an anatomy lab”. During this session, instructors were informed of his application of teaching techniques used in the anatomy lab (including the Jigsaw Method), and how it could be applied to a physiology setting.

Afterwards, scientific sessions continued with Oral Session #2: Neurophysiology, with moderators Tomas Barrett (Central Michigan University) and Maggie Patterson (Alma College). Presenters, affiliations, and abstract titles are listed:

Stephanie Morgan, Wayne State University, “Effects of Genetic Variation in the PACAPergic System on Functional Organization in the Limbic System of Youth”

Ryan Welchko, Central Michigan University, “Liraglutide Reduces High Fat/High Sucrose Diet-Induced Brain Inflammation”
Jeremy Bigalke, Michigan Technological University, “The Orexin System in DOCA-Salt Hypertension: Regulation of Vasopressin”


Following these oral presentations, it was time for concurrent breakout sessions featuring topics and speakers that were in high demand based on previous membership feedback.

Breakout Session A: Graduate School Admissions Panel, included Rob Hassen - Manager, Graduate Recruiting, Central Michigan University, Steven Elmer - Faculty, Department of Kinesiology and Integrative Physiology, Michigan Tech, and Jeremy Bigalke - Graduate Student, Michigan Tech. Speakers walked students through the application process to graduate programs of several varieties ranging from research-intensive to professional programs.

Breakout Session B: Post-Doc/New Faculty Panel, included Brianna Harfmann – Faculty, Alma College, Micah Zuhl – Faculty, Central Michigan University, and Ian Greenlund – Graduate Student, Michigan Tech. The speakers shared their fresh perspectives for early career scientists.

Breakout Session C: Financial Aid for Graduate and Professional Schools, featured Kelsey Stewart - Assistant Director of Scholarships and Financial Aid, Central Michigan University. Students were informed of the availability of financial resources that are available to pay for future schooling.

Also at this time, Dr. Bill Milson held a smaller keynote session to further elaborate on his teaching and research experiences throughout his career.

After these breakout sessions, Oral Session #3 – Lung, Cellular, and Molecular Physiology was moderated by Guodong Pan (Henry Ford Health System) and Mikaela Gabler (Central Michigan University). Presenters, affiliations, and abstract titles are listed:

Joshua Gonzalez, Michigan Technological University, “Acute Effects of Vaporized Nicotine on Hemodynamics and Autonomic Regulation”

Tanwir Hashem, Michigan State University, “CD2 Regulates Pathogenesis of Asthma Induced by House Dust Mite Extract”

Joseph Reed, Central Michigan University, “Absence of Gasping Breaths and Failure of Respiratory Autoresuscitation in Neonatal Rats Studied Under Ethyl Carbamate (Urethane) Anesthesia”

Olesya Didyuk, Wayne State, University, “Sex-Specific Metabolic Imbalance and Hypothalamic Inflammation Triggered by Low-Grade Benzene Exposure”

Following lunch and “Poster Session B”, Oral Session #4 – Regulatory, integrative, and comparative physiology was moderated by John Andraka (Central Michigan University) and Hannah Cunningham (Michigan Technological University). Presenters, affiliations, and abstract titles are listed:
Keeler Steele, Michigan State University, “Student’s Perceptions of professional Skill Competencies Improved by Participating in PSL 475L Capstone Laboratory in Physiology”

Samernder Nagam Hanumantharao, Michigan Technological University, “Design and Fabrication of Customized Wound Healing Patches for Tissues”

Annika Lintvedt, Michigan State University, “Pannexin Channels and Their Role in Gut Physiology and Pathophysiology”

Cesar Barrabi, Wayne State University, “Glucotoxicity Causes Downregulation of Bip’s Co-Chaperone Sil1 in INS1 Beta Cells”

This marked the end of the formal scientific program at the meeting. While judges were tallying the votes for abstract awards, we had the opportunity for a group photo that featured our attendees from all over Michigan including 10 post-secondary intuitions including: Alma College, Ferris State University, Henry Ford Health Systems, Wayne State University, Oakland University, Michigan State University, Michigan Technological University, University of Michigan, Grand Valley State University, and Central Michigan University.
During the subsequent business meeting and leadership transition, MPS President John Durocher acknowledged the commitment and service of MPS past-President Karen Ball and presented her a token of appreciation as she rotated off her role on the MPS Executive Committee. He also announced the incoming MPS President Naveen Sharma would be starting his term as the meeting ended. Naveen then announced the winners of the abstract competitions:

**Oral Presentation Winners**
Cesar Barrabi (Wayne State University)
Jeremy Bigalke (Michigan Technological University)
Laura Chambers (Michigan State University)

**Poster Presentation Winners**
Christine Dharshika (Michigan State University)
Sarah LewAllen (Michigan Technological University)
Alexandra Matus (Wayne State University)

In conclusion the 2019 MPS Annual Meeting was a great success with 48 poster presentations and 16 oral presentations given by trainees across all levels of education. This meeting only takes place due to the volunteerism and participation of our membership and the generous contributions from institutions and individual sponsors.
We were able to secure financial support from the following organizations and individuals:

**Diamond Level ($2000)**

Michigan Technological University (College of Sciences and Arts, Department of Kinesiology & Integrative Physiology, MTU Graduate School, Department of Biological Sciences, and the Department of Biomedical Engineering)

Central Michigan University, Office of the Vice President for Research and Dean of the College of Medicine (Dr. David Ash)

Wayne State University, Office of the Vice President for Research (Dr. Stephen Lanier)

**Platinum Level ($1000)**

Henry Ford Health System, Office of the Vice President for Research (Dr. Margot LaPointe)

Central Michigan University, College of Medicine (Dr. George Kikano)

Central Michigan University, Herbert H. & Grace A. Dow College of Health Professions (Dr. Thomas Masterson)

Ferris State University, College of Arts and Sciences (Dr. Kristi Haik)

**Gold Level ($500-$999)**

Michigan State University, Graduate School (Dr. Thomas D. Jeitschko)

Wayne State University, Department of Biological Sciences (Dr. Victoria Meller)

Wayne State University School of Medicine, Office of Graduate Programs (Dr. Daniel Walz)

Wayne State University School of Medicine, Office of Research (Dr. Linda Hazlett)

Wayne State University School of Medicine, Department of Physiology (Dr. Charles Lee Cox)

Wayne State University, College of Natural Sciences
Bronze Level ($200-$499)

Ferris State University, Department of Biological Sciences
(Dr. Beth Zimmer)

Wayne State University Graduate School
(Dr. Ingrid Guerra-Lopez)

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MIPQ Sponsors

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Beth Zimmer, PhD – Ferris State University
Gregory Fink, PhD – Michigan State University
John Williams, PhD – University of Michigan
Linda Samuelson, PhD – University of Michigan
Jason Carter, PhD – Michigan Technological University

Contributors to the meeting include,

Onsite Meeting Volunteers
Mikalya Schmidt, Taylor Robertson, Fallon Koenig, Bill Saltarelli, Rachael Nelson, Micah Zuhl, Rob Brown

Abstract Reviewers
Harold Bell, Qinghui Chen, John Durocher, Greg Fink, Ankita Jaykumar, David Pieper, Pat Mueller, Chris Westerkamp, Beth Zimmer

MIPQ Event
Quizmaster – Sue Barman
Judges – Jamie Alan, Adele Denison, Laura Chambers, Ted Towse
Scorekeepers – Patrick Mueller, Jennie Vranish, Beth Zimmer
Timekeepers – Brianna Harfmann, Erica Wehrwein
Thanks once again for making the 6th Annual MPS Meeting a success, we look forward to seeing you all once again at Ferris State University in June 2020!