MEETING REPORTS AND ANNOUNCEMENTS

2nd Pan American Congress of Physiological Sciences, Havana, Cuba, May 27–31, 2019

© Robert G. Carroll,1 © Patricia A. Halpin,2 and © Dee U. Silverthorn3
1Department of Physiology, Brody School of Medicine at East Carolina University, Greenville, North Carolina; 2Department of Life Sciences, University of New Hampshire at Manchester, Manchester, New Hampshire; and 3Department of Medical Education, Dell Medical School, University of Texas at Austin, Austin Texas

Submitted 27 June 2019; accepted in final form 2 July 2019

Carroll RG, Halpin PA, Silverthorn DU. 2nd Pan American Congress of Physiological Sciences, Havana, Cuba, May 27–31, 2019. Adv Physiol Educ 43: 441–442, 2019. First published July 3, 2019; doi:10.1152/advan.00084.2019.—Physiology education was well represented at the 2nd Pan American Congress of Physiological Sciences in Havana, Cuba, with two symposia, a workshop, and a poster session.

international collaboration; PanAm19; physiology education

INTRODUCTION

The 2nd Pan American Congress of Physiological Sciences was held May 27–31, 2019, at the Havana (Cuba) International Conference Center. It was attended by 413 physiologists from 25 countries across the Americas and spanning the globe. The scientific program began with a plenary each day, followed by morning symposia and workshops, a midday poster session, afternoon symposia/workshops, and ending with a series of concurrent keynote talks. Physiology education was well represented, with two symposia, a workshop, and a poster session.

On Tuesday afternoon, May 28, Dee Silverthorn (USA) and Robert Carroll (USA) conducted a workshop on “Evaluating and sharing best practices in physiology education.” Dr. Carroll began the workshop with a short talk on “Educational scholarship: evaluating your teaching” that introduced the participants to the scholarship of teaching and learning (SoTL) and how it might be applied to physiology education. Opportunities for evaluating the best practices in physiology education begin with descriptive summaries (what are we doing now); planning, executing, and evaluating educational activities; and, finally, outcomes assessment. Dr. Silverthorn followed with practical “Strategies for sharing your work” that included resources for learning to do SoTL and advice on disseminating educational research through publication. The 30+ participants then split into small groups to discuss their teaching challenges and their ideas for educational research projects. Representatives from the small groups reported back at the end of the session. The themes that emerged underscored the universality of teaching challenges around the world, ranging from loss of time for teaching physiology as curricula change to unmotivated students who are reluctant to take responsibility for their own learning. The animated discussions in the small groups brought together participants from different countries and provided an opportunity for valuable networking.

The lunchtime Wednesday poster session attracted 25 educationally themed presentations from faculty teaching a wide variety of students, including physiotherapy, undergraduate students, graduate students, public health students, dental students, and medical students. Several presentations shared innovative laboratory activities, such as postexercise ischemia, or innovative teaching methods, such as dramatization, role play using a mock trial, and using clinical cases and analogies to enhance student learning. Other posters focused on the educational methods, showing a role for collaborative teaching, service learning, and brief review videos as alternatives to a passive lecture, and approaches that enhance cognitive and intellectual development and the ability to thoughtfully consume primary literature. The broad reach of physiology was highlighted in posters dealing with transfusion medicine, genetic medicine, and environmental medicine, important topics as the expected skills of our trainees are continuing to evolve. As appropriate for a Pan American meeting, conversations rapidly shifted among Spanish, English, and Portuguese, with sometimes amusing outcomes.

Wednesday afternoon, Alicia Mattiazzi (Argentina) chaired the symposium “Teaching Physiology: The challenge of motivating students.” This session opened with a presentation from Claudia Caldiz (Argentina), “Let’s make the most of the study of physiology.” She spoke about how a development program initiated by the new Chair of Physiology for the students of Biological Sciences teaching training course promoted greater interaction and cohesion, and, as a consequence, learning became meaningful for the students. The conclusion was that teachers have to be flexible in how they teach, and they have to teach in a different way, by creating innovative educational settings. This was followed by Robert Carroll (USA), “Approaches to encourage students to study physiology.” This presentation emphasized that medical students highly value physiology as a preparation for success in their clinical studies. Consequently, ensuring that the physiology instruction emphasizes clinical relevance to build a bridge between the foundational and clinical sciences is key to enhancing student satisfaction. The final presentation was by Matilde Said (Argentina), “Encouraging experimental teaching of science as a way to improve scientific education in physi-
This talk stressed that the laboratory has a central role in physiology teaching and learning. Real laboratory experiences are crucial for students’ academic motivation and learning. When students interpret the experiments performed, their learning becomes significant. Each of the presentations generated a lively discussion from the 40 participants in the audience.

Friday morning, May 31, Patricia Halpin (USA) chaired a session on “Innovations in physiology education” that was well attended by more than 35 registrants (Fig. 1). The first speaker, Agustín Vicedo (Cuba), spoke on “Teaching the physiological sciences: old debts and new challenges.” He reinforced the importance of establishing a firm scientific foundation in physiology as prerequisite knowledge for health professionals, and pointed out the importance of using physiology to help students develop appropriate thinking models. On the challenge side, he mentioned how growth in the depth and breadth of knowledge has created physiological subspecialists who may have lost the big-picture approach to physiology due to lack of communication with each other. Camilo Lellis-Santos (Brazil) then presented “Using trans-customized learning for personalized learning in physiology classrooms.” He defined personalized learning and explained how he overcomes the challenge of customizing learning for a large class by using role playing. His students each take on the identity of a different body cell and use their cell roles to make emotional connections to the physiological content as the course progresses. Next, Chaya Gopalan (USA) spoke on “Using the flipped classroom technique in teaching physiology.” She described how the flipped classroom model works and how it can be used to take advantage of retrieval practice, a formal instructional method that requires students to recall prior learning and relate it to the current topic. The final speaker, Maria José Alves da Rocha (Brazil) described “Using clinical cases and peer instruction to increase the responsibility of the students in their teaching process.” Her dental students become more active in the classroom through the use of peer instruction and questioning with response systems (clickers) as they work through clinical case studies related to the physiology topic of the day.

The 2nd Pan American Congress of Physiological Sciences provided a wonderful opportunity for physiologists from across the Americas, and especially those from Cuba, to come together to talk about the state of physiology education and to learn about the innovative ways physiology is being taught around the world. We hope you will start making plans to attend the 3rd Pan American Congress of Physiological Sciences, to be held in Chile in 2023.

GRANTS

D. U. Silverthorn and P. A. Halpin were supported by travel grants from the American Physiological Society.

DISCLOSURES

No conflicts of interest, financial or otherwise, are declared by the authors.

AUTHOR CONTRIBUTIONS

R.G.C., P.H., and D.U.S. conceived and designed research; R.G.C. and D.U.S. drafted manuscript; R.G.C., P.H., and D.U.S. edited and revised manuscript; R.G.C., P.H., and D.U.S. approved final version of manuscript.