A Joy for (the Science of) Life!

Just a few weeks ago (at the time of writing), two of us (Kim and Patricia) participated in the first-ever Pan American Congress of Physiological Sciences, “Physiology Without Borders,” which was held in Iguassu Falls, Brazil, from August 2 to 6, 2014. Iguassu Falls is a very special place, being of astounding natural beauty and located at the point where three countries (Brazil, Argentina, and Paraguay) come together—the physiology may have been without borders, but there were ample international borders to choose from! In fact, physiologists from an amazing 30 different countries in total participated in the meeting, the majority of whom were early stage investigators. The science was outstanding, and so were the opportunities to foster new networks and friendships, explore new ventures, and learn of new approaches to both research and teaching. It was especially exciting to visit and serve as judges in the poster sessions, where the presenters were mostly students, and mostly from Brazil. Even the undergraduate authors worked hard to describe their findings in English, and for the most part they were very successful. From the standpoint of physiologists working in the United States, we also had the unique opportunity to interact with Alberto Dorta, President of the Cuban Physiological Society, and explore ways in which our societies can interact. Our goal is to foster communication that will surely enrich scientific discourse and teaching for the very large community of students, both Cubans and foreign nationals, in that country. There are more than 12 medical schools in Havana alone, for example. We are hopeful that these discussions are the first steps toward a visit to Cuba in the near future by a delegation of U.S. physiologists to promote scientific exchange.

In keeping with our strategic plan, the American Physiological Society has greatly expanded its focus on international collaborations in recent years, and this emphasis is paying dividends. For many years, the Society sponsored its Latin American Initiative, which provided support to individuals planning meetings and other opportunities for scientific exchange that were centered on that region. Last year, the APS Council decided to broaden the emphasis of this program by increasing the resources invested and extending an opportunity for funding for activities in all regions of the globe. The newly launched International Opportunities Program is already supporting conferences and workshops in Africa and Vietnam as well as with our traditional partners in South and Central America. All physiologists are familiar with the concept of potentiation or synergism. We are making investments in our international programs because we believe that, by working together with colleagues in different countries, synergism can be achieved by harnessing the resulting diversity of outlooks and research approaches, and our discipline thereby can be made stronger.

Many of us working in the U.S. have in fact worried about the state, and status, of physiology in recent years. The loss of traditional departments with “physiology” in their name through closures, mergers, and acquisitions, and the changing format of preclinical curricula in medical schools, has led some to sound an alarm that physiology may be losing its position as the central basic science underpinning medical practice and advances in treatments and cures. In fact, APS has been working with The Physiological Society of the UK and Ireland (Physoc), where similar trends are occurring, on their initiative on the “Health of Physiology.” This seeks, among other goals, to develop a census of the physiologists who are active in the UK yet hidden under the banner of other disciplines. Discussions during our own spring Council meeting reinforced that this is a general phenomenon affecting many of our members as well, dispersed in clinical departments, centers, and the like. In fact, our own current president and past-president are at two of the country’s most prominent medical schools, but neither of their institutions has a Department of Physiology. Strong interest has therefore evolved in creating mechanisms to keep physiologists connected. During its summer meeting, the APS Council discussed emulating the Physoc initiative to bring physiologists from a single institution or city together as a “virtual” department, or local physiology network, for seminars, scientific exchange, educational initiatives, and other means of strengthening local ties. This could, in the absence of a formal departmental structure, be a way for like-minded scientists to find opportunities for collaboration, to develop a critical mass to invite speakers, to provide a venue for trainees to share their work, gain feedback, and identify mentors, and generally to build a sense of community and mutual support. The idea generated so much enthusiasm that even universities with strong physiology departments, such as the Medical College of Wisconsin, are planning ways to build bridges with physiologists outside the home department, as well as in other local area institutions. The APS will seek ways to incentivize and accelerate the development of these important networks.

It is nevertheless heartening to note that there are places where physiology remains front-and-center in the panoply of biomedical sciences. Brazil is a case in point. Immediately before the PanAm meeting, we were invited by President-Elect of the

1 With apologies to Morena Baccarin (Brazilian-American actress, 1979-) who said, “They have a joy for life in Brazil unlike any country I have ever seen.”
Brazilian Physiological Society (SBFis) Vagner Antunes to offer the APS Professional Skills Training Course on Writing and Reviewing for Scientific Journals to trainees at the University of Sao Paulo Institute of Biomedical Sciences. As has been the case when we ran the course last year in Rio de Janeiro, we were greeted by an extremely energetic and talented group of graduate students and post-docs, who were all clearly excited about their studies in physiology and their potential to make an impact in their future careers in Brazil or beyond. It was likewise an honor to work with our Brazilian colleagues, who hope thereby to be in a position to mount similar courses themselves in the future. In all cases, the enthusiasm was infectious, and our team of instructors came away with a far more positive feeling about the future of physiology.

The 1st Pan American Congress of Physiological Sciences that followed this workshop was an audacious undertaking. Many worried about attendance, particularly from countries such as the U.S. where research support, and resources for travel, have become increasingly difficult to secure. But it is obvious that the vibrancy of physiology in Brazil made the country an inspired choice, and in fact one that drew almost 1,000 registrants. The meeting was supported by a coalition of seven national physiological societies (Argentina, Brazil, Canada, Chile, Cuba, Mexico, and the U.S.), as well as the Latin American Association for Physiological Sciences and the International Union of Physiological Sciences. There was also partnership from Physoc, the Scandinavian Physiological Society, the South Asian Association of Physiologists, the Turkish Physiological Society, the Physiological Society of India, and the Chinese Association of Physiological Sciences. As noted above, the scientific program was outstanding, for which much credit is due to the Chair of the Local Organizing Committee, SBFis President Benedito Machado, as well the Scientific Programming Committee, which was co-chaired by Bene and APS member Jane Reckelhoff. Truly, all concerned ensured a magnificent synergy where the sum of the meeting was so much greater than its parts.

From the APS perspective, we plan to build on and expand these international collaborations as a way to ensure that our science remains relevant and vibrant. We look to learn from our international colleagues, and perhaps to take inspiration from the fact that physiology retains its rightful status as a central discipline among the life sciences in so many places around the world. We also look forward to a planned joint meeting with Physoc, on the books for Dublin in the summer of 2016, as well as the IUPS meeting scheduled for Rio de Janeiro in 2017 and a second Pan American Congress, at a location to be announced soon, 2 years later in 2019. The Scandinavian Physiological Society has also reached out to APS as a potential partner in hosting a future conference, as was done many years ago.

Although we spend a lot of time in the U.S. griping about the funding situation, the regulatory creep, the rise of reductionism, and the difficulties of attracting graduate students to our labs, we should also remember that, as a Society, we are blessed with very considerable resources, as well as the numerous programs we have developed to further education, outreach, and career development. These resources, coupled with the energy and dedication of our members, are the envy of the vast majority of other national physiological societies worldwide. We therefore believe we have an obligation to share them with colleagues to the greatest extent possible. Events like the Pan American Congress, as well as the PST courses held in Brazil, remind us how fortunate we are to have these resources. They also underscore the returns, both tangible and emotional, that we can gain when we use them to make such exciting investments in international collaborations.

We thank APS Executive Director Martin Frank for helpful suggestions during the writing of this editorial.

No conflicts of interest, financial or otherwise, are declared by the author(s).

Author contributions: K.E.B. drafted manuscript; K.E.B., P.E.M., and D.M.P. edited and revised manuscript; K.E.B., P.E.M., and D.M.P. approved final version of manuscript.

PHYSIOLOGY • Volume 29 • November 2014 • www.physiologyonline.org 383