Brokerage of Global Physiology

As we are preparing for the 2021 IUPS Congress in Beijing, it may be worth our while to pause for a moment to ponder on why IUPS was founded in 1953. We were not able to trace from the archives the original thoughts of the founders, and most of them are no longer with us. We realized, however, that the academic world during that era was divided into big blocks that allowed little interaction or exchange of ideas. To inaugurate a global institution such as IUPS, allowing physiologists from each block to join force in a group effort to promote physiology, therefore makes perfect sense. In particular, the Second World War that just ended taught them and teaches us that focusing solely on national issues and solutions can only end in disaster. It follows that academic organizations that transcend national borders would hold strong promise for the future of science.

Sixty-seven years after the establishment of IUPS, it seems in many respects that the global trend in the scientific world is one that reverts back to national structures, which shrinks the integrative influence of international organizations. One case in point is with the discipline of physiology. Physiology as a modern and basic medical science needs to be put into the conscience of an international audience. There is an ongoing necessity to win over our fellow citizens for our science in general and for physiology in particular. We as scientific organizations are in the best position to translate our findings into realistic positive perspectives for society, and we can do this while conveying the excitement and benefits of our research. Only then will governments make research and education top budget priorities. This task cannot be left to national physiological societies alone, although many of them are very active and professional on these matters. On the other hand, as a platform organization, IUPS can bundle individual national efforts and lobby more effectively in public on a more global scale. This function as international ambassadors for physiology to the general public is an important way to improve the confidence of our younger colleagues and their perspectives for the future.

Compared with many large national physiological societies, IUPS is meager in terms of its financial and staff resources. On the other hand, because of its vast web of membership and befitting its motto of “Physiology without borders,” IUPS is in the best position to broker international interactions and projects for the benefit of physiology, which are otherwise more difficult to articulate by national societies. Under this new-found role, the activities that are currently executed and must be further intensified by IUPS include:

- Serving as an international hub for exchange of information between national societies.
- Supporting scientific developments that require huge input and big data not just from national sources; for example, mathematical modeling in physiological sciences.
- Representing and showcasing physiology in international scientific organizations.
- Encouraging networking of physiologists from underdeveloped regions or countries; for example, assisting with organization of meetings.
- Promoting international scientific interactions by sustaining exchange and congress travel of young physiologists.

We are fully aware that some of the above activities are already undertaken by several national societies. Indeed, successful implementation of the brokerage role of IUPS for global physiology necessitates the conscientious support of its member societies. We are delighted to report that, during the last 2 years, several national physiological societies and regional federations have broadened their outreach programs to become IUPS initiatives. These included “Physiology Education Techniques Workshops 2018: IUPS Initiative” (November, 2018) in Jodhpur, Shillong and Kozhikode, India; “Fourth Physiology Education Workshop” (December, 2018) in Kigali, Rwanda; “IUPS-BRICS Symposium on Stress” (September, 2019) in Saint Petersburg, Russia; and “Russian Conference on Integrative Physiology” (September, 2019) in Saint Petersburg, Russia. In addition, “Federation of European Physiological Societies-IUPS Workshop” and panel discussion on “Africa-Europe Collaborations: Challenges, Successes and Strategies” will be held at the upcoming Europhysiology 2020 in Berlin, Germany. With enthusiastic and continuous support by our member societies and regional federations on the IUPS initiatives, we are confident that our Union will flourish in cementing collaborations in global physiology.

When IUPS was originally established, biochemistry and pharmacology were part of our Union. However, both disciplines have since left to start their own unions. Nonetheless, over the years, physiology has evolved to embrace myriad disciplines in contemporary biomedicine, including molecular and cellular biology, biochemistry, pharmacology, and immunology, into its realm. More importantly, as stated in a 2018 editorial in Physiology (1), it is imminent that “physiologists across the globe should communicate with a broader group of scientists to build multidisciplinary and multiregional collaborations, and to bring integrative physiology to the forefront in biomedical research and education.” Another new forefront beyond its role as a broker of global physiology for implementation by the IUPS is therefore to leverage physiology with other international unions to broker global collaboration in biomedicine.

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Reference