

## EDITORIAL

## Bringing European physiologists together

The modern science of physiology began in Europe. Deciding on exactly who the first physiologist was is not easy but excellent candidates include Claude Bernard and Carl Ludwig. The Nobel Prize in Physiology or Medicine was inaugurated in 1901 with the first award mentioning the word “physiology” being made to Ivan Pavlov (Russia) in 1904. Physiology developed rapidly in the last quarter of the nineteenth and first half of the twentieth century in particular in Germany and then the United Kingdom. The success of physiology led to the development of strong, national societies in the UK and Ireland (1876), Germany (1904) and Scandinavia (1925).

It has long been realized that there would be great advantages in the various national societies interacting more. Given that the population of Europe is comparable to that of the USA, there is no reason that a European physiology meeting could not be as successful as those held for many years in the USA. There have been many joint meetings between pairs of societies. The Federation of European Physiological Societies (FEPS) was founded in 1991 and stimulated the meeting of groups of societies. However, these meetings have had to compete with the meetings of the richer large national societies, and it was felt that, to be successful, a European-wide meeting would have to include the meetings of these large societies. Over the years, several attempts have been made to do this but foundered due to problems of timetabling. In September 2015, representatives of the three largest societies (German, Scandinavian and The Physiological Society), together with FEPS met in Aarhus, Denmark, to revisit this issue and agreed on a series of three *Europhysiology* meetings to be held in London (2018), Berlin (2020) and Copenhagen (2022). Importantly, these meetings would replace the main national meetings of all these societies in these years. They are not, however, designed to be restricted to these societies. While it was felt to be impracticable to involve all the 30 or so European national societies in the organization and finance of the initial meetings, it is important to note that the intention is that *Europhysiology* will provide a framework for future regular meetings of European physiologists not limited to the present organizers.

The aim of the *Europhysiology* meetings was to bring together the broader European physiology community and promote collaboration among scientists. In the last two decades, physiology meetings have been challenged by evolving interdisciplinary and thematic meetings. In this exciting

initiative, it is hoped that participation of large numbers of physiologists across Europe will enable organizers to hold specific sessions and thematic symposia to represent all aspects of physiology. In addition, specialized meetings can be held immediately before or after the main meeting as will be the case in London.

The meeting promises to deliver physiology of interest to all, with a packed 3-day programme of keynote and plenary lectures, symposia and oral communication slots for each themed area. We have 4 plenary lectures to inspire, given by some of our top physiologists. Frances Ashcroft has pioneered research into the role of the ATP-sensitive potassium channel  $K_{ATP}$  in insulin secretion in both health and disease with a focus on how mutations in these genes cause human disease. Maiken Nedergaard will bring to light the importance of glial cells in the CNS and their role in neurological conditions such as motoneuron disease, stroke and epilepsy. She will talk about defining new strategies to treat these conditions by targeting astrocytic dysfunction. Peter Ratcliffe will talk about his extensive work on the mechanisms underlying how cells respond to and signal hypoxic changes. With research crossing structural biology, systems physiology, epigenetics through to translational programmes, his talk will be of interest to many. The final plenary is the Annual Review Lecture, which this year will be delivered by Professor Juleen Zierath, who is a world-renowned expert on the cellular mechanisms underlying the development of insulin resistance in type 2 diabetes. Her research incorporates use of cell-based systems, genetically modified animal models, and clinical material from type 2 diabetic patients, and she is particularly interested in the timing of exercise and interventions with respect to circadian rhythms. Our keynote speakers will cover a wide range of subjects, with talks on such research areas as redox regulation in health and disease (Katrin Schröder), tuning of the heartbeat through the cytoskeleton (Benjamin Prosser), the translational potential of vascular growth factors (Kari Alitalo), the physiology of temperature and pain sensation (Jan Erik Siemsen) and the role of the leucine-rich repeat kinase family in neurodegenerative diseases (Patrick Lewis). We will hear “whispered secrets and public announcements” about the diversity of oxytocin signaling from Mike Ludwig and learn about the “ins and outs” of protein trafficking from Robert Fenton. We are also delighted to host the Otto Hutter Teaching Prize lecture, given by Louise Robson. Our symposia were

chosen to reflect the interests of the themes, ensuring excellence of science, diversity of gender and geographical representation, but especially to include early career speakers for each symposium. Some symposia cut beautifully across themes and will be of interest to many attending the meeting so we are sure that you will be spoiled for choice in where to enjoy learning about cross-discipline, cutting-edge research.

There are over 100 oral communication slots and 3 poster sessions scheduled for physiologists of all career stages to showcase their research. These poster sessions, the informal welcome reception and conference dinner will then enable the important mingling and fostering of new collaborative ventures. With so many physiologists from across Europe and further afield, this is a superb opportunity for scientists at all levels of their career to consider new techniques, interactions, ideas and even careers.

Since *Europhysiology* 2018 in London will also bring together Europe's next generation of physiologists, the young physiologists of the partner societies are organizing their own symposium on the Thursday morning before the main meeting. The best abstracts from early career physiologists will be selected for oral presentations and compete for the *Europhysiology* Young Investigator Award 2018. This symposium provides an exceptional opportunity to make first contacts and establish new networks and cooperations across Europe. Likewise, senior colleagues are invited to join the session to identify potential future young group leaders bringing fresh blood into their departments and physiology. In addition, undergraduates and PhD students are encouraged to participate in the entire *Europhysiology* 2018 meeting at a significantly reduced registration fee. Opportunities for travel fellowships for early career members are available at the organizing partner societies and should be addressed to the respective home society. Following this Early Career meeting, on Thursday afternoon, various Special Interest Groups will hold their meetings.

For more information, please visit our website: <https://www.europhysiology2018.org>.

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