

Nominations for the August Krogh and the Knut Schmidt-Nielsen lectures at IUPS 2017 in Rio de Janeiro

The next world-conference of Physiology arranged by the *International Union of Physiological Sciences* (IUPS) and the *Brazilian Society of Physiology* (SBFis) will be held in Rio de Janeiro under the motto “*Rhythms of Life*” from August 1-5 in 2017. The International Scientific Programming Committee will have their first face-to-face meeting in July this year to decide on named lecturers and key note speakers. The overall conference program will also be outlined and will be followed by a separate call for symposia to appear later in 2015.

The IUPS meetings have two lectures with direct relation to Scandinavian physiology: the August Krogh and the Knut Schmidt-Nielsen lectures. The Krogh lecture has been funded by SPS since 1986 and speakers have been selected to honor August Krogh’s seminal contributions to comparative physiology and exercise physiology, as well as his introduction of insulin to Scandinavia. The Knut Schmidt-Nielsen lecture was established for IUPS in Kyoto (2009) through generous private donations, and should be given to a researcher that that seeks to understand “how animals function under natural conditions”.



August Krogh (1874-1949) who was awarded the Nobel Prize in 1920 for his description of capillary function is arguably the most famous physiologist in Scandinavia. He remains known and celebrated for his crafty ability to pursue basic physiological mechanisms often based on ingenious development of novel techniques achieving hitherto unparalleled precision in measurements. As a student of Christian Bohr, August Krogh was trained by one of Europe’s finest physiologists, and he quickly embraced quantitative approaches in the study of organ functions. In addition to demonstrating capillary recruitment in the peripheral circulation, August Krogh clarified that pulmonary gas exchange takes place by diffusion, and together with the physician Chr. Hagedorn in 1922

he introduced insulin production in Scandinavia¹. In the latter half of his career, Krogh was instrumental in the introduction of radioactive tracers in physiological sciences. His numerous books (“*Anatomy and Physiology of Capillaries*”, “*Osmotic Regulation in Aquatic Animals*” as well as “*The Comparative Physiology of Respiratory Mechanisms*”) provide a convincing testimony of an all-embracing physiologist with a cunning eye for the fundamental functions dictating animal function. His life and many contributions to physiology are vividly described in the biography “August and Marie Krogh” written by his daughter Bodil Schmidt Nielsen in 1995.



Knut Schmidt-Nielsen (1915-2007), former president of the International Union of Physiological Sciences and founding Editor of *News in Physiological Sciences* (now renamed to *Physiology*), was a true pioneer in ecophysiology. Through a number of seminal studies, he unraveled basic physiological mechanisms, particularly salt & water-balance as well temperature regulation. Based on laboratory

¹ http://www.novonordisk.com/about_us/history/novo-nordisk-history.asp

studies, the functional benefits of the physiological mechanisms were revealed through measurements of animals in the field. As such he was an early and truly outstanding proponent for integrative biology, demonstrating the importance of studying animal function in the natural environment. In addition to his numerous primary papers in many fields of comparative physiology, Schmidt-Nielsen became renowned for his seminal textbook *“Animal Physiology”* and his other influential books (*e.g. Desert Animals, Scaling: Why is animal size so Important, and How Animals Work*) remain classics in the field of comparative and environmental physiology, and he published an autobiography *“The Camel’s Nose”* shortly before he died. Knut Schmidt-Nielsen was elected member of the Royal Society and the National Academy of Sciences, and awarded the Hirohito International prize for Biology in 1992.

Nominations for both lectures at IUPS 2017 should be made before May 15th. For both lectures, the nominator is encouraged to provide a motivated nomination explaining how the proposed speaker fits the profile of the lecture series. The selected speakers will be announced in August 2015.

Nominations for the August Krogh lecture should be made to SPS by sending an email to Hanna Taylor and Bryndis Birnir (hanna.taylor@neuro.uu.se and bryndis.birnir@neuro.uu.se).

Nominations for the Knut Schmidt-Nielsen lecture must be made at the IUPS congress website (www.iups2017.com). Please note that the site does not open until March 2, 2015.

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IUPS 38TH WORLD CONGRESS
Rhythms of Life
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