A glance at “PPTR 2014” – the 5th International Symposium on the Physiology and Pharmacology of Temperature Regulation

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The International Symposium on the Physiology and Pharmacology of Temperature Regulation (PPTR) was held, for the first time in Africa, in September 2014 when 163 delegates (including 41 students) from 30 countries met in the Skukuza Rest Camp of the Kruger National Park, South Africa (see Fig. 1).

Andrea Fuller chaired the Local Organizing Committee; its members were drawn from the Brain Function Research Group in the School of Physiology at the University of the Witwatersrand, Johannesburg (http://www.wits.ac.za/bfrg/9015/bfrg.html). The Symposium hosted 11 invited speakers, comprising both established and early-career researchers, 12 symposia, a workshop, and a debate, as well as free oral communications and posters.

The biennial PPTR symposia coalesced from satellite symposia of the International Union of Physiological Sciences (IUPS) and the International Union of Basic and Clinical Pharmacology, devoted separately to thermal physiology and thermal (mainly fever) pharmacology. Comparative physiologists, including the late Knut Schmidt-Nielsen and C. Richard Taylor, contributed fully to early thermal satellite symposia of the IUPS, but recent PPTR Symposia have drifted toward human and medically-oriented thermal physiology. Aggressive marketing to comparative thermal physiologists restored the balance at PPTR 2014.

The restoration of comparative thermal physiology was not at the expense of human physiology (for example there was a symposium on exercise and hydration), nor of fundamental mechanisms (e.g., there was a symposium on neural control of temperature regulation). Medically-oriented thermal physiology still featured strongly too, and, indeed, recapitulated its historic links with thermal pharmacology. Three experts debated whether fever is “friend or foe,” discussing the survival value of fever, the appropriateness of antipyretic therapy in pregnancy and infancy, the disputed benefit of paracetamol (acetaminophen) use in critically-ill patients, and the consequences of a friend or foe decision for the pharmaceutical industry.

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physiologists, so creating a unique interdisciplinary experience.

A new theme at the conference emphasized the importance of thermal physiology research for industrial advancement of human well-being. Indoor climate can be manipulated to improve human health; mild cold exposure can help combat obesity. New software also can aid developers to design city open spaces to improve outdoor thermal comfort, thereby ensuring that the spaces become well used, inherently sustainable and financially viable, while also encouraging healthy outdoor lifestyles.

A young scientist’s competition has become a highlight of PPTR symposia. The PPTR 2014 competitions, sponsored by Sable Systems International, included 10 finalists for the student oral competition and 19 finalists for the poster competition. Grace Goh (Fig. 3) from the University of Western Australia won the first prize in the oral competition (second prize Shaun D’Araujo, University of Pretoria; joint third prize Tanusha Dukhan, University of the Witwatersrand and Kate Thomas, University of Otago) and Rachael Dangarembizi (Fig. 4) from the University of the Witwatersrand,
Figure 3. Grace Goh, with Andrew Swanepoel, Peter Kamerman and Andrea Fuller, receiving first prize for her oral presentation.

Figure 4. Rachael Dangarembizi at her winning poster.
Figure 5. Andrej Romanovsky, Eyup Akarsu and Domenico Tupone at the “Around the World” welcome dinner.

Figure 6. Nigel Taylor and Andrea Fuller addressing the Delegates at the “Around the World” welcome dinner.
Johannesburg, South Africa was awarded first prize for best poster presentation (second prize Nora Weyer, University of the Witwatersrand; third prize Lindy Thomson, University of KwaZulu-Natal).

Around the intense scientific program, delegates were hard-pressed to keep up with a packed social schedule. Early morning game drives, a bird walk, and golf among the hippos, crocodiles, warthogs and guinea fowl gave everyone a memorable experience of the bush, and the wild animals for which the Kruger National Park is so famous. During an “Around the World” welcome dinner, delegates were invited to show off their home country by wearing a national piece of clothing (Figs. 5, 6) and sharing a drink, or food item, brought from their home. A new addition to the social events at PPTR, which may become a tradition, was the “Mug of the day” award, which was given each day to the delegate showing the “most inappropriate, but memorable” behavior.

All dinners were set at the picturesque (and unfenced) Skukuza golf club, where hippos, playing in the dam, contributed to the entertainment. At the gala dinner on the final evening, lions made a surprise visit and a traditional marimba band had most delegates swinging and dancing to the African beat (Fig. 7).

The 6th International Symposium on Physiology and Pharmacology of Temperature Regulation will be held in Slovenia in December 2016. For more information on the next symposium visit http://www.pptr2016.org/.

Disclosure of Potential Conflicts of Interest
The authors declare that they were members of the PPTR 2014 organizing committee.