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PSSA News

Newsletter of the Physiology Society of Southern Africa (PSSA)

Highlights:

- *Focus on:* Physiology at North-West University.

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Editors' words

We would like to wish you all a very productive and prosperous new year.

We look forward to your submissions in the new year.

Alta, Andrea & Kennedy

FOCUS ON: Physiology at North-West University (NWU)

Background

The Department of Physiology at the previous Potchefstroom University for Christian Higher Education was formed in 1949. From this department the department of Biochemistry (early 1970's) and the subject group Nutrition (1980's) was formed. The previous head of the department, Prof. PJ Pretorius, was – together with a few others – one of the “leading lights” of the first 15 years of the PSSA's history (<http://academic.sun.ac.za/medphys/history.htm>). With the establishment of Schools at the previous PU for CHE, Physiology was grouped together with Nutrition, Dietetics and Consumer sciences to form the current School for Physiology, Nutrition and Consumer Sciences. It is one of the five schools in the Faculty of Health Sciences at the University.



Prof. Nico Malan
Director: School for Physiology, Nutrition and Consumer Sciences

Education

The Subject Group Physiology, headed by Prof. Nico Malan, is responsible for the teaching of about 750 full-time students each year and it is also in the unique position to be responsible for teaching Physiology in the Life Sciences programme of UNISA. In this program another 120 students are involved. These duties are performed by 12 full-time academic personnel and one part-time lecturer. Currently we have 15 post graduate students as well as 8 honours students.

(cont. overleaf)

FOCUS ON: Physiology at NWU (continued from page 1)

Research

One of the major fields of research interest in the subject group is cardiovascular research with the focus on normal vascular function as well as under conditions such as hypertension, obesity, the metabolic syndrome and urbanization. The Cardiovascular Physiology Research group benefits from longstanding relationships with other research groups in the Faculty, such as Nutrition, enabling us to collaborate on intensive interdisciplinary research programs. Another field of research is Occupational Hygiene (Industrial Physiology) which focuses on health-related issues in the work environment. Most of our postgraduate students hold managerial positions in industry. Our Research Groups receive funding from the University, South African funding bodies (National Research Foundation (NRF), Medical Research Council (MRC), via international collaborations (South

African Netherlands Research Programme on Alternatives in Development (SANPAD), European Union and Canadian Collaborators) and by the mining and other industries. Currently we have one NRF rated scientist, Prof. Johannes van Rooyen, and we are in the process to increase this number. We have a member on the Council of the PSSA, Dr. Alta Schutte, who also serves on the Commission of the South African National Committee of the International Union of Physiological Sciences (IUPS).

The School welcomes applications for honours, higher degree and postdoctoral study. We also welcome any interest regarding our research and other activities. Contact details are:

Email: flgrs@puk.ac.za

Tel/Fax: (018) 299 2433

Or visit our webpage for more information:

<http://www.puk.ac.za/fakulteite/gesond/fvv/fisiologie/index.html>

Positions available

POSTGRADUATE POSITIONS

The Dept of Physiological Sciences, Stellenbosch University Main Campus has an open invitation for potential postgraduate students to apply for positions.

Contact Prof. Kathy Myburgh for further details (khm@sun.ac.za).

Where are they now?

A NEW SERIES ON SOUTHERN AFRICAN PHYSIOLOGISTS AROUND THE GLOBE

Prof Graham Mitchell

After many productive years at Wits University, in the positions of Head of the Department of Physiology, and Vice Dean of the Faculty of Health Sciences, Graham was appointed as Visiting Professor in the Physiology Department at the University of Bristol, UK, after spending 2001 there on sabbatical leave. While there, he used his wealth of experience to introduce several new teaching innovations, and continued to carry out collaborative research with teams back in South Africa. In 2003, Graham was asked to take on the position of Head of the Department of Zoology and Physiology at the University of Wyoming. In September 2003 Graham and his wife Jeanette (formerly from the Department of Anatomical Sciences at Wits), relocated to the prairies of Laramie, Wyoming. There Graham is heading up the Department, while Jeanette is enjoying a postdoctoral position in Neurosciences. Most impressively, they have now safely negotiated two winters, with freezing air temperatures and howling winds.

It is that very feature of life in Laramie that has spurred Graham's latest research interest on thermoregulation in the pronghorn, the most characteristic large artiodactyl of the mid-west plains of America. Little is known about how the pronghorn, renowned for its athletic endurance, survives temperature extremes. So, in collaboration with researchers at Wits and the University of Western Australia, Graham and two MSc students are recording abdominal, hypothalamic, carotid arterial and jugular venous blood temperatures in free-living pronghorns at a research station outside Laramie. One of his students will present some of the early results at the 2005 IUPS meeting in San Diego, and other results will be presented at the first annual meeting of the UK Physiological Society in Bristol in July 2005 by another student.

Not surprisingly, however, Graham continues to reserve most of his enthusiasm for an African mammal, the giraffe. Recent collaborative research with Prof John Skinner and two MSc students at Onderstepoort has been on the biology of their skeletons with the purpose of understanding calcium and phosphate needs and how the bones generate the strength needed to support their necks and body mass. This work has so far resulted in two publications in the Journal of Zoology (London). Graham has maintained links with South Africa through his appointment as Honorary Professor in the Veterinary Wildlife Unit at Onderstepoort. If you'd like to catch up with Graham, contact him at MitchG@uwyo.edu



Graham in Wyoming, with research collaborators, Duncan Mitchell (left) and Shane Maloney (right).

Dr Fiona Baker

Fiona Baker completed her undergraduate studies and PhD at Wits, and worked in the School of Physiology as a lecturer and a research officer in the Sleep Laboratory. As a result of several publications in top physiology journals, Fiona quickly established herself as a leading international expert on sleep in women. Indeed, Fiona was invited to contribute a chapter on this topic for the 2005 edition of "Principles & Practices of Sleep Medicine", the leading textbook of sleep. Some of you may remember hearing Fiona talk on her research interests at annual PSSA meetings, and give an invited plenary lecture at the 2001 PSSA congress in Sun City.

After completing her PhD work on human subjects, Fiona recognized the need to investigate mechanisms of sleep regulation in animals, so she took up a postdoctoral position in the Sleep Laboratory at the Department of Psychology, University of California, Los Angeles, under the inspirational mentorship of Dr Dennis McGinty. During her time in LA, she investigated the relationship between sleep and body temperature in rats, independent of circadian time, and the effects of interleukin 1 β on sleep and sleep-regulatory sites in the brain. If you're interested in learning more, see Fiona's latest paper in the *American Journal of Physiology (Am J Physiol Reg Int Comp Physiol*, Apr 2005; 288: R998 - R1005). Of course, it wasn't all work in LA – Fiona enjoyed getting to know the city and its people, and even entertained a few visiting physiologists from South Africa!

Fiona has recently taken up a new position at the Stanford Research Institute International, which is based in Palo Alto, near San Francisco. She and her husband, Ali, have relocated to a lovely flat in San Francisco and are looking forward to an exciting and challenging change. Fiona has the privilege to be employed as a "Sleep Physiologist", and will work mainly with human subjects, extending her previous research about sleep in women. Fiona is still associated with the [Wits Dial-a-bed Sleep Laboratory](#) in the School of Physiology at Wits University, where she is an Honorary Research Associate. She is keen to stay in touch and establish collaborative research with South Africans. If you'd like to catch up with Fiona, contact her at fiona.baker@sri.com

Editors' note: we would like to make this a regular column so please send us articles on Southern African Physiologists beyond our borders.



Fiona meets Shrek,
on the Hollywood
Walk of Fame,
Los Angeles.

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PSSA on the Web!

Visit:

[http://academic.sun.ac.za/
medphys/pssa.htm](http://academic.sun.ac.za/medphys/pssa.htm)

Physiologists in the news

PROMOTIONS/RECENT APPOINTMENTS

Mr Harold Majane has joined the school of Physiology at Wits as an associate lecturer. He was previously at Medunsa.

RESEARCH

Dr Peter Kamerman was awarded the 2005 Friedel Sellschop prize, the University of the Witwatersrand's premier award for outstanding young researchers.

Forthcoming conferences: PSSA 2005

The dates for the next PSSA meeting are from **the 6th-9th September 2005**, and the Venue is the Sports Science Institute of South Africa, in Cape Town.

Tuesday 6th September (late afternoon) will be registration and cocktail party, with Wednesday (morning) 7th to Friday (lunchtime) 9th September allocated for the main conference proceedings.

The PSSA AGM will be held on Wednesday evening (7th), while the conference dinner and awards ceremony will be on Thursday evening (8th).

Wyndham student presentations will be held during the day on Thursday 8th.

Deadline for abstracts is 30 June 2005. Contact Marta Collins (mcollin@curie.uct.ac.za) for more information.

Who said marking was not a joke?

From a student report:

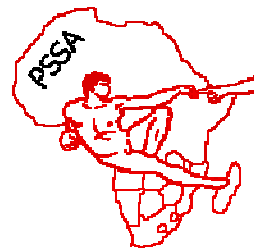
"Although rats do drink nicotine in aqueous, it does not seem the best way of administering

nicotine since it does not guarantee the administration of the admired dose"

Q. Why did the subject not collapse after running the

marathon on a hot day?

A. *The subject did not faint during the marathon because he was getting energy from the sunshine"*



PHYSIOLOGY SOCIETY OF SOUTHERN AFRICA