

## PHYSIOLOGY IN THE WINELANDS - WE'RE ALMOST THERE!!

This time of the year as the end of winter approaches in



Stefan du Plessis (Head of the hosts, the Division of Medical Physiology) and Hans Strijdom (Chair of the organising committee)

Southern Africa, physiologists start getting that feeling! What feeling, you ask? That Spring is in the air? Well, yes that too, but remember, in the Cape spring often tends not to arrive on the 1<sup>st</sup> of September... So, let's rather focus on that other feeling physi-

ologists are getting. Yes! It's PSSA time again! Here's hoping that 2009 will be an exception and that delegates attending the 37<sup>th</sup> annual congress of our beloved society will be welcomed by brilliant spring sunshine! Sunshine or not, this year's PSSA congress promises to be as interesting and exciting as any of its predecessors. With 150 registered delegates representing 11 universities, 68 oral presentations, 45 poster presentations, 3 international keynote speakers and 3 top local keynote speakers this will be a congress filled to the brim. And lest we forget the splendid environment in which we all will congregate

in little more than a week's time! This year's hosts, the Division of Medical Physiology of Stellenbosch University's Health Sciences Faculty has been working hard since November 2008 to make the congress a reality. We are not a big department, and had to call in the help of Nelda, Suné and Mari from Consultus, the conference organisers in our Faculty. STIAS is a state-of-the-art conference venue situated on the Jonkershoek side of Stellenbosch. We trust that delegates will experience this venue positively! The conference dinner will be superb, and those of you who have been to the historical Neethlingshof Wine Estate will certainly agree. But, let's not forget that PSSA congresses are actually about science, research and networking.... and of course the young researcher competitions!

To those of you who have to travel from outside the Western Cape or the country: have a safe journey! To all delegates: We look forward to seeing you in the Winelands soon!

**Hans Strijdom, Chair of the organising committee**

Ps: remember to register, load your presentations and mount your posters between 07h00 and 09h00 on Monday 7<sup>th</sup> September!!

## Benjamin Loos: IUPS conference in Japan (Winner of the Wyndham competition, 2008)

What an experience... I had a most interesting time at the IUPS 2009 in Kyoto. Academically, I was absolutely surprised how many key people from various fields were present at the conference. In total, about 3800 guests were gathered at the historically famous Kyoto conference centre. A fantastic scientific program was put together by the IUPS organizing team. I met leading experts in the field of energy sensing (AMPK), fluorescence constructs (Cameleon

dyes) and mitochondrial stress. Interesting and something new for me was the presented session on the "physiome concept", a broader systems approach to physiology. I also experienced a very engaging and well organized poster presentation time, where I presented my results on *Cell death dynamics in ischaemic injury*. One additional highlight for me was a visit of the Mizushima lab in Tokyo. Prof Mizushima is one of the key players in the research field of autophagy.

Culturally, Kyoto is a beautiful place with a rich history. Many old temples are found in the city, as well as ancient market places. The Japanese diet was a challenge for me, but must be fantastic for those who love seafood and raw fish. I therefore decided to do a selfstudy of nutrient depletion-induced upregulation of autophagy in the living human organism. I am thankful to all PSSA members and the NRF for making the attendance of this unique conference possible.



## Medical Research Trek to Everest Base Camp : James Justus Meiring



In the middle is Apa Sherpa record holder for most ascends to the summit ( 19<sup>th</sup> in May 2009)

"I found it fascinating that there exist a Medical Research Trek that simulate my research project in real live".

I had the opportunity to form part of the Caudwell Xtreme

nies and individuals in order to be able to carry this research. The volunteers participating in the Trek are required to contribute a fraction of the cost for the research in addition to the cost of the trek.

Being involved in myocardial metabolism research as well as studying hypoxia induced left ventricular hypertro-

[www.case.ucl.ac.uk](http://www.case.ucl.ac.uk).

The Trek duration was roughly 23 days. We walked for roughly between 5-7 hours per day. The group gathered in Kathmandu and then flew to Lukha. Places we stayed on our way up were Phakding, Namche, Dingbosche, Lobuche and Base Camp. Daily testing consists of Heart Rate, Blood pressure, Breathing rate monitoring, Blood gas analyzes and Urine

Everest Medical Research Trek to Everest Base Camp in May this year. This project is coordinated by the University College London Centre for Altitude, Space and Extreme Environment Medicine. The main objective of this project is that doctors and scientists studying human systems stretched to breaking point in extreme environments. This will help them increase their understanding of critically ill patients. Hypoxic conditions are quite frequent observe in critical ill patients. Due to the shortage of oxygen at high altitudes, the body reacts different to this hypoxia condition. The Caudwell Xtreme

Everest Medical Research Trek to Everest Base Camp expedition started in 2007 and various publications resulted from this research. After data was analyze from 2007 research trek, new questions arise. This prompted them to initiate a follow up research trek to answer some of the questions. One of the observations was that with MRI scans after the trek suggested that the heart changes with difference in altitude. This phenomenon as well as other burning questions was high on list for the further elucidation on the 2009 treks.

This Medical Research Trek depends on raising funds from grant giving charities, compa-

phy here at University of Stellenbosch, I found it fascinating that there exist a Medical Research Trek that simulate my research project in real live. For me to participate in the Medical Trek to Everest would benefit my research as well as deeper my understanding of my research work. This year the project invites

roughly 142 volunteers to participate in the project. I was eager to participate as a volunteer (guinea pig) and as an observer in a scientific capacity. For anymore information regarding the Caudwell Xtreme Everest project please consult [www.caudwell-extreme-everest.co.uk](http://www.caudwell-extreme-everest.co.uk). Additional information regarding this project can also be seen at

testing. It was very interesting to see how the previous mentioned parameters changed with increase in altitude. This expeditions max altitude was set at 5760 (Kala Patthar) meters. The group I form part off, consist mainly of anesthetists and engineers. The anesthetists earned credits for participating in this research program. Although the area we walk through was rough and lack basic infrastructures,



The Sherpa's. I never seen such hard working people in my life.

people from all over the world verge onto this area yearly..I

I had the honor of meeting Apa Sherpa who reached the summit this May for the 19<sup>th</sup> time. It was truly a great experience to be part of a great scientific expedition. I believe that just as last time my visit to the Utah in the Mars Simulation project, South African Physiologist can form part and play a crucial role in research expedition project that are currently underway. My desire is that South African physiologist should undertake similar projects in South Africa.



My team mates

### Japan - A truly wonderful experience: Dr Siyanda Makaula

One of the most challenging aspects of the trip was the language barrier. I found Japanese people to be very receptive and polite but communication was often wrecked due to their limited understanding of English. In many instances, even basic English language

skills were lacking. The most striking thing though is that they would go ahead and talk to you in Japanese even though it's clear that you don't understand each other. The use of computer was another challenge, the keyboard is slightly different from ours (here in SA)

it has Japanese letters all over and the computer instructions were in Japanese. Sometimes you would press a button and everything you're writing is suddenly changed to Japanese. Despite all these challenges I found Japanese people very polite and respectful

"The food is expensive, tastes Japanese (I guess) and comes in small package".

toward other people whether you looked similar (local) or different (foreign). Food and transport are very expensive, this is one thing I don't envy about Japan. The food is expensive, tastes Japanese (I guess) and comes in small packages. On my way back, I ordered chicken curry at Kansai Airport, it cost me 850 yen (about R90), goodness I never saw even a small piece of

chicken, just hot gravy, not to mention that I was still hungry afterwards (small portions!!). Even though transportation (subway) was expensive (R30 for a 14min ride, one way) I quite enjoyed the 'subway experience', travelling underground, seeing very little of anything else but a train full of 'lookalikes', no traffic and no driving for a week, what a relief from Johannesburg traffic.





**Newsletter of the Physiology Society of Southern Africa  
(PSSA)**

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The name of my subway station was Karasuma Oike, 14min away from the Kokusaikaikan (conference centre station). For some reason, I found the names of the subway stations fascinating. Kyoto City is safe, I managed to walk throughout the night with no hassles but I had to get used to duck and diving from the cyclists. This mode of transport (cycling) is like a hobby in Japan, young and old, smartly dressed and casually dressed, boys and girls all riding their bicycles with ease and enthusiasm. Conference: The conference was an eye-opener, it offered me more than just an opportunity to present my work but a chance to interact with both local (South African) and international researchers, hold fruitful scientific discussions, receive valuable feedback on my work and asking probing scientific questions. High quality research was presented in various theme sessions. I particularly enjoyed the following sessions; exercise and (lactate) metabolism, diabetes and insulin resistance, cardiovascular (heart failure and hypertension) sessions and the session on ethics and research misconduct presented by representatives from the American Journal of Physiology and others. Just to elaborate more, research misconduct includes "cooking of data", 'cleaning' western blots using computer programs, authorship conflicts, publication of already published work with minor modifications, etc.

**We are on the web:**

**<http://>**

**[www.physiolsoc.org.za/](http://www.physiolsoc.org.za/)**

The downside of the conference for me was; 1) huge diversity of topics 2) a few talks undeserving of



Dr Siyanda Makaula and  
Prof Cephas Musabayane

an oral presentation status and 3) a lousy conference dinner.

Not to mention that I also had an opportunity to hold a meeting with the current president of IUPS (Prof Dennis Noble) and the secretary (Sue) to discuss

some pertinent issues regarding physiology research in Africa. He voiced his commitment to an 'African cause' and he hopes to see more African representatives in the next IUPS2013 in Birmingham. More and more young and upcoming physiologists should be given a chance to attend this "physiology world cup", they can certainly benefit from it, the same way I did.

Many thank to NRF, IUPS SA and PSSA for affording the opportunity.

