



OP News

Volume 8 • No 1 • Winter 2008 • Official newsletter of the Faculty of Veterinary Science, University of Pretoria

State-of-the-art diagnostic imaging at vet hospital

On Thursday, 27 March 2008, the Onderstepoort Veterinary Academic Hospital (OVAH) celebrated the commissioning of a computed radiography system, CT scanner and gamma camera.

To mark the occasion, Prof Paul Bland-van den Berg, Head of the OVAH, cut a festive red ribbon tied around the CT scanner to the applause of 60 guests. The official opening ceremony was attended by Prof Gerry Swan, Dean of the Faculty of Veterinary Science, Prof Ramaranka Mogotlane, Vice-Principal, as well as representatives of the faculty, the University's Department of Information Technology and Siemens, Axim and the Nuclear Energy Corporation of South Africa at Pelindaba.

The computed radiography system replaces the conventional hard-copy films. All X-ray, ultrasound, CT and scintigraphy images generated at the OVAH are now in digital format, with the exception of those required for teaching manual processing. The images are stored on a picture archiving and communication system from where they can be accessed and evaluated by radiologists on high-resolution monitors. Both images and reports are immediately available to clinical staff and students via the faculty network.

The Siemens Emotion Dual slice scanner utilises the latest spiral CT technology. The scanner is unusual in that it is the first sliding gantry table in South Africa (the circular gantry, which contains the rotating X-ray tube, slides over the patient, rather than the patient

sliding into the gantry). This special design was commissioned to enable the scanning of the heads and limbs of horse patients.

The new gamma camera, which arrived from Germany in early March 2008, replaces the ageing nuclear medicine equipment previously in use. A small dedicated nuclear medicine facility has been created. Current scintigraphy technology is a marked improvement on the old equipment utilised at Onderstepoort, and is of particular benefit in horses, where Paralyser software eliminates motion during scanning.

With the latest diagnostic imaging equipment at its disposal, the OVAH will be able to provide highly accurate and sophisticated diagnoses across the broad range of domestic and production animals, as well as exotics and wildlife. The CT and scintigraphy equipment have numerous research applications.



Prof Rob Kirberger, Prof Ramaranka Mogotlane, Prof Paul Bland-van den Berg and Prof Gerry Swan in front of the CT scanner.

100
1908 - 2008



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA
Faculty of Veterinary Science

A lifetime commitment to science

Prof John Skinner of the Centre for Veterinary Wildlife Studies was honoured on 26 March 2008 by the University at a ceremony on the Hatfield Campus, where centenary medals were presented to the 100 leading minds who had contributed to the development of a research ethos at the University. A protégé of Prof Jan Bonsma, one of the agricultural research pioneers of South Africa, John went on to obtain his PhD in Animal Physiology at Cambridge University, UK. After some years in government service, John was appointed Director of the University's Mammal Research Institute in January 1972, a post he occupied for 26 years, during which time he was also Head of the Department of Zoology for a decade. On retirement, the Dean, Prof Brough Coubrough, invited John to join the then Veterinary Wildlife Unit in the faculty where he has worked on a full-time basis ever since. His research has focused on ecology, environmental physiology, mammalogy, endocrinology, ethology and taphonomy – fields in which he has authored or co-authored 350 scientific articles, 38 books or chapters in books and more than 100 articles, and given numerous public lectures and radio interviews. In addition, he has supervised 91 postgraduates, many of whom have subsequently excelled in South Africa and foreign countries, including 19 professors and four deans of science, as well as 16 leaders in conservation organisations. John serves on many local and international editorial boards, as well as on many professional bodies, and is the current president of



Prof John Skinner of the Centre for Veterinary Wildlife Studies in a relaxed mood as photographed by Prof Rudi van Aarde.

the Royal Society of South Africa and a member of a number of international research bodies. He has received numerous accolades for his achievements, including UP's AM Bosman gold medal, the Thruston medal at Cambridge, the silver medal (research) from the SA Society of Animal Production, one of four Outstanding Young South African awards for the year 1972 from the Junior Chamber of Commerce, the Senior Captain Scott medal of the SA Biological Society, a gold medal from the SA Zoological Society, a 90th anniversary commemorative medal from the National Zoological Gardens, a UP medal and

award as one of the top 30 achievers, a silver medal at the launch of *Mammals of the SA Subregion*, and a merit award for science by the SA Association for the Advancement of Science.

This year John Skinner is also being honoured by his old school, St John's College, and the old Johannian Association in Johannesburg with an Eagle Award. The award recognises Old Johannians who have left the school 'well trained in body, mind and character to serve Thee well in Church and Stale'. The award is for a lifetime commitment to science and mention is made latterly to veterinary science.

Publication information

OP News is issued by:
Faculty of Veterinary Science
University of Pretoria

Editor:
Prof Ken Pettey
E-mail: ken.pettey@up.ac.za

Consulting editor:
Janine Smit
Tel: 012 349 2059

Layout:
Janine Smit Editorial Services
www.jses.co.za

Printing:
Remata iNathi Communications
and Printers (Pty) Ltd

***Contributions to OP News
are welcomed. Please submit
any material electronically
to the editor in MS Word.***

*The new design of the OP News reflects the new corporate
identity of the University of Pretoria.*



From the Desk of the Dean



In the blink of an eye the year has reached its halfway mark. Yet, so much has been accomplished during the past several months. As usual, we were faced with more than just one or two challenges. Some developments will also play a fundamental role in the future path this faculty will be taking. We also had our share of the extraordinary. It has turned out to be a very exciting and important year for the faculty.

The faculty excelled at the Exceptional Achievers Awards, where three of our staff members were honoured in each of the three categories. They are Prof Koos Coetzer, Head of the Department of Veterinary Tropical Diseases (Chancellor's Award in the category Teaching and Learning), Prof Robert Kirberger, Head of the Diagnostic Imaging Section in the Department of Companion Animal Clinical Studies (Exceptional Achiever), and Prof Johan Schoeman, Department of Companion Animal Clinical Studies (Exceptional Young Researcher).

One of the University of Pretoria's key driving forces is its commitment to delivering quality research outputs. The achievements of the faculty's staff members not only underline this commitment, but also subscribe to the notion of the faculty to make research a primary thrust, aiming to stimulate and focus research on unique problems that will give us a leading edge.

The faculty recently also conferred a DVSc (honoris causa) on Dr Rudolph Daniël Bigalke for his significant contribution to veterinary science as researcher, research manager and senior manager at top level in the Department of Agriculture. Another noteworthy achievement was that of Dr Vinny Naidoo, Department of Paraclinical Sciences, who became the youngest person in the history of this faculty to obtain a PhD degree. Dr Montague Saulez, Department of Companion Animal Studies (another one of our younger staff members), received his PhD at the same graduation ceremony. The fact that there was an increase in 2007 in the number of postgraduate degrees conferred (41, compared

to 32 in 2006), bodes well for the future. In 2007, 78 BVSc degrees and 40 diplomas in Veterinary Nursing were awarded.

The research programme of the faculty again showed steady growth over the past year. It represents the highest research output this faculty has ever had. The subsidy units earned from the Department of Education for publications increased from 46.13 in 2006 to 55.71 in 2007 and 65.31 in 2008. Over the past year it represents a growth of 18%, and the subsidy per academic staff member of 0.65 is getting closer to the UP goal of 1.0. Noteworthy is the fact that again all the faculty's publications were in the higher category of ISI-accredited journals. In terms of funding, the increase in subsidy earned translated into an increase in the research allocation from R553 560 in 2006 to R1 044 960 in 2008 (growth of almost 100%). There was a substantial increase in the number of postgraduate students from 168 in 2006 to 250 in 2008, accompanied by an increase in the funding available for postgraduate bursaries from R254 454 in 2007 to R367 422 in 2008. The number of rated academic staff members increased from 14 in 2006 to 16 in 2007.

The process of reviewing our existing academic programmes and curricula is aimed at progressive development, local relevance, optimisation of the degree structure, introduction of defined veterinary competencies, continued excellence in training and learning, and the global accreditation of the faculty. We have made significant progress in developing our new curriculum and are in the process of developing generic outcomes and curricular models. Similarly, the development of a degree programme in veterinary nursing is on course.

It is of the utmost importance that we position ourselves as an internationally accredited seat of veterinary excellence. This can be done through the effective internationalisation of the faculty, continuing extensive networking and partnerships and ensuring the quality of our training programmes, research and facilities. This will increase our global competitiveness and create an environment conducive to distinction and excellence. Our envisaged community engage-

ment programmes also place us in a position that is very attractive to our international partners.

Recently visits were undertaken to, among others, the USA. I met with the deans and faculty staff of the veterinary schools of Madison, Wisconsin, Kansas State University, US Davis, Texas A&M, Louisiana State University and Virginia Tech. Visits to these veterinary training institutions have reemphasised the fact that our facilities not only compare favourably to theirs, but can also be mentioned on equal terms. It was very encouraging to experience how enthusiastic these institutions are to collaborate with us and to create staff and student exchange opportunities.

The faculty is extensively involved in a wide range of community engagement programmes. This is in line with the University's view to become more responsive to the needs of South Africans through community programmes and projects.

To formalise and make community involvement part of the formal undergraduate and postgraduate training of the faculty, a long-term programme has been developed over the last two years. This programme involved the Mnisi Traditional Authority, the Directorate of Veterinary Services of the Mpumalanga Department of Agriculture and Land Affairs, and the Institute for Tropical Medicine, Antwerp, Belgium, and will officially commence in October 2008.

We still have a lot to do during this year and it will bring new ideas, new challenges and perhaps even some real testing times. I believe, however, that we, as staff members and students of this faculty, have what it takes to face every challenge and successfully reach that next level of distinction and excellence. Our strengths, facilities, intellectual resources and unique environment will enable us to continue to extend our abilities to be globally competitive, regionally pre-eminent, sustainable and internationally and locally relevant.

**Prof Gerry Swan
Dean**

Ecosystem health

David Waltner-Toews
& Jan Myburgh

and the future of veterinary science



David and Kathy Waltner-Toews recently visited the Faculty of Veterinary Science at the University of Pretoria. David is a veterinarian and Kathy a clinical psychotherapist with a master's degree in health sciences. They were visiting Jan Myburgh and other members of the Department of Paraclinical Sciences to share ideas about research programmes and teaching on ecosystem health.

David and Kathy had just returned from southeast Asia where they had participated in workshops on ecosystem approaches to health on behalf of Veterinarians without Borders/Vétérinaires sans Frontières in Canada (of which David is president). Pertinent questions that might arise at this point include exactly what is ecosystem health, and why would a veterinarian and a psychologist work together on questions about backyard chickens and bird flu.

When David was in veterinary practice in rural Canada, he was constantly being called in to treat individual sick animals. Over time, he began to wonder not just why a particular animal was sick, but also whether there are some flocks or herds that are healthier than others. He left his practice to study epidemiology – the study of disease

patterns in populations. His first studies were on Canadian dairy farms, examining diseases in dairy calves. He and his family then spent two years in Indonesia, where he began to consider even bigger questions, such as whether there were such things as healthy farms, and even healthy landscapes.

When he returned to the Ontario Veterinary College at the University of Guelph as a new faculty member in 1987, David was kept very busy teaching courses on the epidemiology of zoonoses and food-borne diseases. He got buried in the pile of bugs and poisons that could make people sick by living with or eating animals. Then, several opportunities arose that changed his view of veterinary science and health. In the 1990s, the Canadian government announced a 'green plan', which included money for research. The research funds were administered by a joint council from the medical, natural and

social sciences. To secure funding, his research proposal had to integrate at least two areas of study. Many traditional researchers were not sure how to approach this, so David put together a team that included geographers, entomologists, economists, health scientists, veterinarians and philosophers to determine whether there is such a thing as agro-ecosystem health (which would include animals, people and landscapes). And if there was, what did it look like and how could one measure it?

At about the same time the agro-ecosystem health study began, David was approached by a Canadian veterinarian and a Nepalese veterinarian who invited him to Nepal to study hydatid disease, a tapeworm in dogs (*Echinococcus granulosus*). This tapeworm doesn't cause problems in dogs, but produces tumour-like cysts in livestock and people. He arrived in Nepal to find animals being slaughtered along the muddy riverbank in the open

Onderstepoort co-hosts

Pan-African Veterinary Conference

In a joint initiative, the Agricultural Research Council (ARC), Onderstepoort Veterinary Institute (OVI), Onderstepoort Biological Products (OBP), the University of Pretoria (the Faculty of Veterinary Science at Onderstepoort), the Department of Agriculture and the South African Veterinary Association (SAVA) have organised the Pan-African Veterinary Conference to coincide with the University's centenary celebrations to mark 100 years of veterinary excellence. The event will be held at Onderstepoort from 6 to 9 October 2008.

Attendance is open to all persons with an interest in animal health and trade, as it relates to the livestock and wildlife industry. Small-scale

and subsistence farmers are likely to reap the most vital benefits of research and cutting-edge thinking on vaccines, more appropriate veterinary practices, marketing and trade policies for the developing world. Cross-border transport and trade stand to receive invaluable policy and process directions.

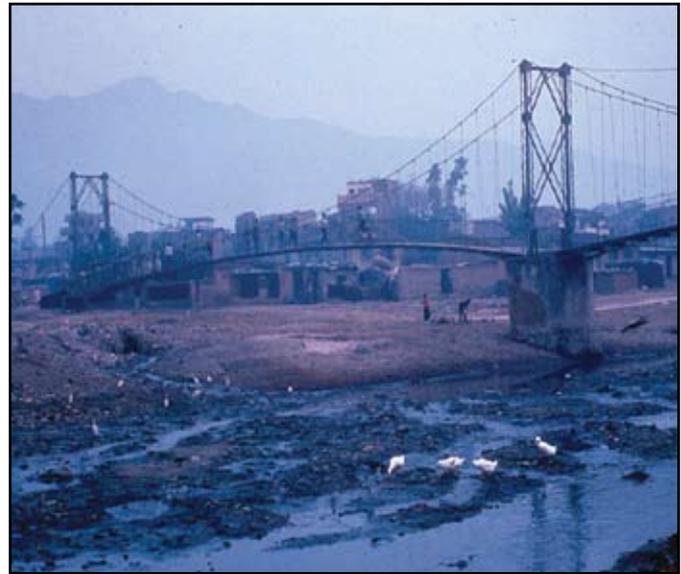
The theme of the conference is *A centenary celebration of the founding of Onderstepoort, focusing on the impact of animal diseases on food security and the economic development of Africa*. The event, which features a Pan-African meeting of those involved in combating animal diseases on the continent, will undoubtedly celebrate accomplishments since the inauguration

of the Onderstepoort Veterinary Laboratory in 1908. It will lay particular emphasis on future challenges concerning training institutions, and the role of technological developments such as the design and production of vaccines and diagnostic methods. It will also engage with profound issues around trade and transboundary diseases. This conference will be enhanced by various informal and formal social activities.

Registration and other information can be found at www.onderstepoort100.co.za or by calling Petrie Vogel at + 27 12 346 1150, e-mail Petrie@sava.co.za or Dr Johan Grobbelaar at +27 12 529 9101, e-mail GrobbelaarJ@arc.agric.za.



Before – a muddy, polluted riverbank in Nepal.



After – the same riverbank after the communities living there had created a healthier ecosystem.

air, with garbage, dogs and vultures all around. After three intensive years of epidemiological studies and surveys, a lot of information was obtained about the disease, but the problems along the riverbank were just as bad as ever.

It was time for a new approach, but what? The International Development Research Centre in Ottawa, which was funding this research, had just introduced a new ecohealth programme, in which it wanted to link social and economic problems with problems of health and the challenges of sustainable development. David and his colleagues decided to give this a try. Working with social action groups, local businesses, butchers, veterinarians, anthropologists, doctors and politicians in a combination of participatory action and systems thinking, the two communities in which they worked decided to transform the entire ecosystem in which they lived. They built small abattoirs and public toilets, composted waste, created urban gardens, recycled garbage and planted green shrubs and grasses on the riverbank. In short, they created a healthier ecosystem, so that the people and animals who lived there would also be healthier.

While David was launching his research projects on ecosystem health in Nepal (and later in Kenya and Peru), his colleagues, Dr Bruce Hunter, a wildlife pathologist at Guelph, and Dr Ole Nielsen, the 'green dean', were starting a new course for

veterinary students called ecosystem health. Dr Nielsen argued that ecosystem health was the next logical step after herd health, flock health or kennel health, and that veterinarians should be right at the forefront of these activities. Each year, the course is held in a different part of the country. It is problem-based and students do everything from basic pathology to epidemiology and social group interaction. They work with veterinarians, farmers, public health officials, wildlife biologists, indigenous peoples and philosophers. They are always pushed to ask questions that will help them not only understand why diseases occur in certain places, but also to pursue the reasons why some ecosystems are healthier than others.

Based on the success of that course, and on insights gained from research around the world, David, Dr Hunter and others have created new courses, linking veterinary students with those in the medicine and environmental sciences. In 2008, a new graduate course is being offered jointly by the Faculty of Health Disciplines at the University of British Columbia, the Ontario Veterinary College at the University of Guelph, and the Centre for Interdisciplinary Research on Biology, Health, Society and the Environment at the University of Quebec in Montreal.

In a shrinking, overcrowded world, with people and products travelling everywhere, ecosystem health represents the future of veterinary

medicine. "If we don't understand and promote the health of the ecosystems that sustain us", says David, "then treating sick dogs, cows, horses and elephants will be like curing the sick on the deck of the titanic". Veterinarians are not always the main players in solving ecosystem health problems, but they have a lot to offer. It is a dangerous and exciting time for the profession. Southern Africa, specifically, is in desperate need of transdisciplinary groups that address human, animal and environmental health issues. Aquatic pollution, cyanobacterial blooms, infectious diseases and the unsustainable management of the environment are the most important factors that will influence the future of our continent and its people. Veterinarians and veterinary students should get involved – a positive difference is guaranteed!

For more information on some of these topics, go to the following websites:

- Network for Ecosystem Sustainability and Health: www.nesh.ca
- International Society for Ecology and Health: www.ecohealth.net
- Communities of Practice for Ecosystem Approaches to Health (CoPEH-Can): www.copeh-canada.org
- International Development Research Centre (IDRC): www.idrc.ca/ecohealth
- Veterinarians without Borders/Vétérinaires sans Frontières: Canada: www.vwb-vsf.ca

This edition of **OP News** does not contain the regular article dealing with the classes of 1936 and 1937. Photos of the following graduates of the class of 1937 are needed: J Badenhorst, J M de Wet, J L Doré, T H Sandrock and L J F von Maltitz. If anyone can assist with the any of these photos, please contact Dr Bigalke at rbigalke@lantic.net. Instead, this edition features an article on the honorary doctorate that Dr Bigalke recently received from the University of Pretoria. Congratulations Rudolph and thanks for your contributions to **OP News**. Ed.

Dr Bigalke receives an honorary doctorate

The DVSc (honoris causa) was awarded to Dr Rudolph Daniël Bigalke at the autumn graduation ceremony on 24 April 2008. The following is an abridged extract from his acceptance address.

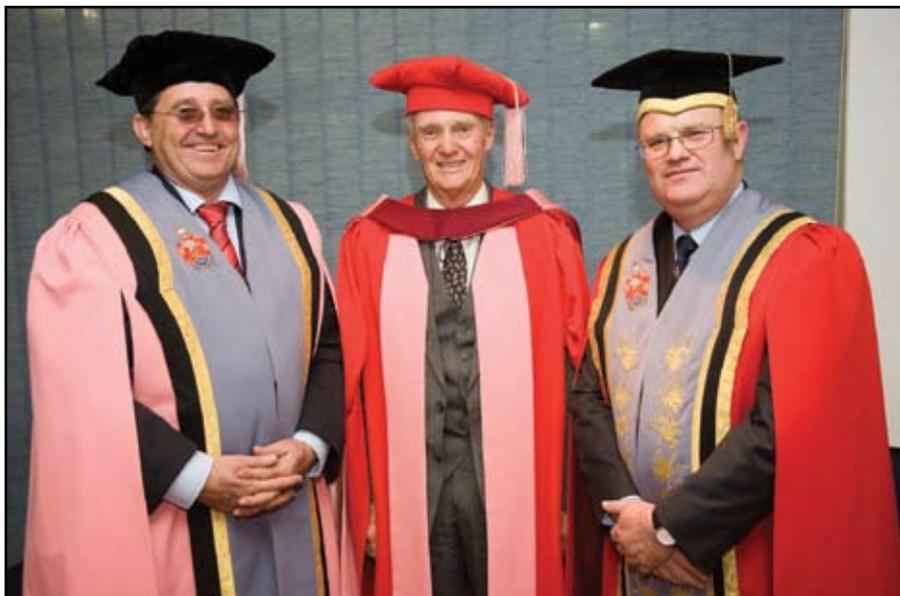
"The degrees being conferred this evening are called scientific degrees. In my dictionary, 'science' is defined as systematised knowledge obtained by observation, study and experimentation. In other words: science is based on research. How does the Faculty of Veterinary Science rate research-wise?"

"The Faculty of Veterinary Science is regularly evaluated by its peers. One such body is the Royal College of Veterinary Surgeons (RCVS) based in London. Two of its main criticisms during its last visitation were the overtraining of aspiring veterinarians and inadequate research output. Although the RCVS also made complimentary remarks about the faculty, the writing is on the wall. The symptom of inadequate research requires urgent medication, if not drastic surgery. Yes, steps have already been taken, but what is actually required is a quantum curricular leap.

"In my opinion, two radical steps are essential. The first is that the faculty should concentrate on teaching basic principles – as are contained in the basic relevant sciences – thereby empowering the gifted students, of which Onderstepoort has an oversupply, to work out the details for themselves.

"A few examples of the basic subjects are genetics and evolution (a mother subject is zoology), ecology and epidemiology, molecular biology, physiology (one of the mother subjects is physics), pharmacology, immunology (instead of immunity) and pathogenesis (instead of detailed pathology).

"The second radical step is exposure of undergraduates to research through involvement in active research projects. Students will not only be doing research themselves, but will be exposed to many more role models (one of the strongest incentives for following a research career).



Dr Rudolph Daniël Bigalke (middle), joined by Prof Gerry Swan (left), Dean of the Faculty of Veterinary Science, and Prof Calie Pistorius, Vice-Chancellor and Principal.

"Let me give you a few practical examples of the importance of basic subjects by concentrating on genetics and evolution.

"It is well known that our indigenous ungulates have a high level of genetically determined resistance to a wide variety of parasites and African infectious diseases. 'Easy care animals' (those not requiring medication) have been presented to us on a plate. Yet, it is standard procedure on commercial game farms in this country to routinely dip and deworm the animals, on the advice of veterinarians. Two cardinal sins are being committed by this practice: millions of years of ungulate evolution is being forced into reverse, and ideal conditions are being created for the development of resistance by these parasites to the chemicals being used to control them.

"The second example is a positive one. Many merino sheep have a genetically determined resistance against one of their worst enemies – the wireworm – an intestinal, blood-feeding nematode. The FAMACHA technique (an elegant, crush-side technique that can be used by the farmer once he/she has been trained) was recently developed to detect anaemia in sheep

suffering from severe infection with wireworms. This technique enables the farmer to identify his/her non-resistant sheep so that they can be culled, thereby slowly building up a flock that is highly resistant to wireworm. Pots of money can be saved because the farmer now does not need to dose the entire flock for wireworm any more.

"The third example involves palaeontology and palaeo-anthropology. Many basic subjects are involved, such as geology, zoology, chemistry, evolution and molecular biology. When studying fossils and related objects, it is necessary to determine their age. Several chemical tests have been developed to assist the scientists concerned. Some, like uranium-lead decay, are used for very old objects, whereas radio-carbon dating is applied to much younger specimens. Mitochondrial DNA, which is only inherited via the female line, has come into use in recent years to study human evolution.

"Finally, to give some perspective to tonight's proceedings: Prof Phillip Tobias, I hesitate to say it loudly, had 17 honorary doctorates by 2005. Perhaps we should all decide to make him our benchmark!"

Small animal clinicians make a major contribution at congress in Budapest

Eran Dvir, Department of Companion Animal Clinical Studies

The Small Animal Medicine section at Onderstepoort was well represented at the 2007 annual congress of the European College of Veterinary Internal Medicine (ECVIM) and the European College of Veterinary Clinical Pathology (ECVCP) in Budapest. New information on all the faculty's research themes (babesiosis, spirocercosis and parvovirus infection) was presented in different sessions.

In endocrinology, Prof Johan Schoeman presented new insights into the endocrine responses in canine critical care. Studies in dogs suffering from babesiosis and parvovirus infection have shown that high cortisol levels, especially together with a poor response to ACTH stimulation (relative adrenal insufficiency) is associated with poor survival rate. Low basal T4 and free T4 levels were also associated with poor survival.

Dr Phil Rees presented the research from his master's project to identify a possible mechanism for the life-threatening hypoglycaemia previously



Dr Anthony Zambelli (ex-OP lecturer), Dr Paul Mellor (a UK colleague) and Dr Eran Dvir (OP lecturer) in a serious professional discussion in front of Budapest's opera house.



The inside of the Budapest opera house, clearly displaying the cultural atmosphere that we miss so much in Pretoria.

described in canine babesiosis by measuring insulin levels in those dogs. No significant differences were found in the insulin levels between hypoglycaemic, normoglycaemic and hyperglycaemic babesia patients, indicating that the mechanism of hypoglycaemia is non-insulin-dependent.

In a poster presented by Prof Johan Schoeman, a surprisingly high incidence of hyperglycaemia was described in bite wound cases, demonstrating an association with younger age and lower body weight.

Spirocercosis was discussed in two oral presentations from South Africa. Dr Eran Dvir discussed the clinical, radiological and clinicopathological differences between malignant and non-malignant cases. The most dramatic finding is that hypertrophic osteopathy is a complication exclusively presented in the malignant group, albeit only in 40% of this group of cases. Signalment-wise, older dogs and spayed females were more common among malignant cases. Clinicopathologically, anaemia, leukocytosis, eosinopaenia and thrombocytosis were significantly more prevalent in the malignant group. Radiologically, the malignant oesophageal masses were wider and higher in size and associated with a higher prevalence

of spondylitis and bronchial displacement. All of the above parameters should raise the level of suspicion for malignant transformation in diagnosed spirocercosis cases.

Dr Liesel van der Merwe discussed mandibular salivary gland sialoadenosis in dogs infected with *Spirocerca lupi*, showing that this complication is not infrequent and occurs in 8.5% of patients. It occurs more commonly in terrier breeds. Retching, coughing and hypersialosis are the most common clinical signs and the condition can easily be managed with phenobarbital treatment (2 mg/kg twice daily).

Dr Mirinda van Schoor presented a poster on serial daily lactate concentration in puppies with parvoviral diarrhoea and its association with mortality rate. Surprisingly, blood lactate levels in the parvo puppies were generally lower compared to previously described levels in critical care, and the subject awaits further study in larger groups.

Dr Elrien Scheepers presented a poster on the results of her master's project on the haematological kinetics of canine babesiosis in South Africa (measured over six days). The most important findings were that anaemia in canine babesiosis is only mildly to moderately regenerative,

continued on page 9

Croatian visit

a rewarding experience for students

by Paul Burden

After months of planning and organising, eleven South African veterinary students arrived in Zagreb, Croatia, on Saturday, 15 March, at about 11:30 Croatian time. They were welcomed by an excited and rowdy group of Croatian vet students, chanting a rehashed version of *Nkosi Sikelele* at the Zagreb bus station. After the six-hour bus trip and a hectic preceding three days in Austria, the students were all surprisingly infected with the enthusiasm and jubilation of the Croatians.

They kicked off the exchange in true IVSA style: straight to the pub for a drink and a good time! The following days were filled with visits, faculty tours, lectures on pertinent veterinary issues and diseases in Croatia, surgery observations and veterinary fieldwork. Most memorable was the observation of the cranial cruciate ligament repair that the students were allowed to stand in on. It was a privilege for the students from South Africa to see and take part in all the veterinary-related activities.

The students were impressed by the standard of veterinary practice and education in Croatia. It shared notable similarities and striking differences with the standards of practice, academic system and animal husbandry in South Africa. It was refreshing for the students to see how lucky they are in South Africa with a good veterinary system, and also to learn from certain advancements

made in Croatia ahead of South Africa. They also visited various museums and farms, such as the entomology museum in Varaždin and the Lipizzaner and dairy farms.

The UP students learnt about the history, heritage and culture of Croatia and its people. They travelled north to visit Jastrebarsko and Varaždin, experienced the beautiful countryside, drank good wines, ate true Croatian food and walked around prestigious castles. They travelled to the province of Slavonia in the east, while visiting Dakovo, Dalj, Osijek and Vukovar. They also visited the country's beautiful national parks, went on a tranquil boat cruise in Kopački rit, experienced the unforgettable beauty of the Plitvička jezera lakes and walkways, undertook a ferry ride through the Kornati Islands and visited the falconry centre where they watched a beak repair on a peregrine falcon. An honour for the students was the fact that the Croatians were willing to share the terrible atrocities of the early 1990s with them.

Upon arrival in Croatia, all the students could think of was how different these two countries and their people are. However, after spending two valuable weeks together, they formed a strong bond of friendship that has set the stage for future interactions. On their return to South Africa, the students concluded that Croatian hospitality is unrivalled, and that it will be hard to match their performance when the Croatians come to South Africa in March 2009, but the OP students will strive to achieve the same standards.



OP students in this picture: Paul Burden, Robert Swartz, Samantha Howarth, Ryan Friedlein, Tiffany Harries, Lise Rossouw, Drew Aitken, Riette van Zyl, Sarah Louw and Kylene Kelbe.

Farewell from Bruce Gummow

Sadly, Bruce Gummow left the Faculty of Veterinary Science at Onderstepoort at the end of April after 18 years of service at the University of Pretoria. He will be moving to Australia, where he has accepted a position at James Cook University in Townsville, North Eastern Queensland, Australia. It is along the Barrier reef, about 400 km south of Cairns.

"I would like to say thank you to all of you that have supported me over the years. I know I will miss many of you and thought I would tell you a bit about where I will be going, with the hope that you maintain contact with me," says Bruce.

James Cook University is known for its focus on tropical medicine and has recently added to its veterinary postgraduate programme by creating an undergraduate faculty, which is currently in its third year. Bruce will be taking up an associate professorship to get the epidemiology programme up and running in much the same way as he did at Onderstepoort. He intends maintaining ties with the University of Pretoria through his appointment as an extraordinary professor and will probably be returning a few times a year to assist with postgraduate teaching and other matters.

The university's School of Veterinary and Biomedical Sciences is part of the Faculty of Medicine, Health and Molecular Sciences. The school has two successful research institutes: the Australian Institute of Tropical Veterinary and Animal Sciences (AITVAS) and the Institute of Medical Laboratory Science.

It is Bruce's sincere hope that future collaboration can be fostered with the University of Pretoria and he looks forward to lots of future contact with friends and colleagues in the faculty.

Neuro-anatomy ‘cyber’ practical

March 2008 saw the launch of an exciting, innovative way to teach anatomy at the faculty. For the first time in the presentation of the course, students were given the opportunity of studying anatomy through computer images. The neuro-anatomy practical was presented using both wet specimens in the Anatomy Hall and the anatomy CD-ROM in the computer laboratory.

The Canine Anatomy CD-ROM is currently being developed by the Department of Anatomy and Physiology, in collaboration with the Department for Education Innovation. This project aims to document canine anatomy via professional digital photographs and present it in a user-friendly manner that encourages student self-learning and acts as a quick reference source for the more seasoned professional. This invaluable tool will allow students to learn coursework in the home environment and act as a self-help guide to correct identification.



Veterinary students study canine anatomy with the help of computer images on CD-ROM.

For the practical, the class was divided into two groups, which rotated between the Anatomy Hall and the computer laboratory in the Arnold Theiler Building. Even though the network was slow, the practical was extremely well received by students. Very few questions were directed on the work itself, providing a good indication that the material was self-explanatory and encouraged self-learning.

Obviously nothing can replace the hands-on practical, which is essential for building a mental 3D picture, but the computer-based learning greatly enhances the understanding and recall of knowledge. In future, this material will be supplied as part of the student notes, providing a quality product that will greatly enhance and improve the anatomy learning experience.

continued from page 7

Small animal clinicians make a major contribution at congress in Budapest

and there was a high occurrence of degenerative left shift neutrophilia and quick resolution of the severe thrombocytopaenia (within one week).

Dr Liza Köster presented a poster on the assessment of adrenal function in cheetahs, using an ACTH stimulation test. The peak cortisol response was between 120 to 180 minutes post intravenous ACTH administration to a level of approximately 700 nmol/l, which is considerably higher than the response seen in the domestic cat.

The sum total of eight presentations made the Faculty of Veterinary Science at Onderstepoort one of the best represented veterinary schools at the congress. The department is proud of staff members and postgraduate students alike and wish to continue this trend of striving for international competitiveness using locally relevant models of disease pathogenesis.

The ECVIM congresses always combine the scientific programme with a splendid social

programme introducing the local culture, and Budapest did not disappoint on this impressive occasion. The highlight was the gala dinner held in the museum of fine art, an inspiring venue just opposite the monumental Heroes Square with its spectacular lighted statues. It was during the gala dinner that Onderstepoort's MMedVet graduate, Dr Marlies Bohm, who successfully passed the European examination, received her European diplomate degree.

Ram certification

On 2 April 2008, a group of veterinarians involved in small-stock practice met at the Faculty of Veterinary Science to discuss certification of rams under the chairmanship of Roland Larson from Graaff-Reinet. This meeting followed many Livestock Health and Production Group meetings, telephone calls and e-mails between interested parties during which certification was discussed. The months of preparation and informal discussion preceding this meeting assisted the group with decisions regarding the examination procedure and format of the certificate. The certificate and documentation will be released soon.



Sitting from left: Roland Larson, Danie Odendaal, Ariena Shepherd, Jaco Pienaar, Alan Fisher and Piet Schoeman. Standing from left: Ian Herbst, Gareth Bath, Henry Annandale, Ken Pettey, Rhoda Anderson and Johan van Rooyen.

Royal Society and NRF sponsor medicinal plant research workshop

by Lyndy McGaw

For two days in March, the Phytomedicine Programme played host to 50 delegates from surrounding universities for a two-day workshop funded by the Royal Society of the United Kingdom and the National Research Foundation. The guest of honour was a world leader in the field of phytochemistry, Prof Peter Houghton from King's College, London.

The workshop began with the introduction of the lecturers, followed by a general discussion of how research into medicinal plants can benefit South Africa. A number of postgraduate students then presented short addresses on their research projects, with topics ranging from plant constituents effective against fungal phytopathogens to the selective induction of apoptosis by antimycobacterial plant-derived compounds.

Prof Houghton, Prof Kobus Eloff and two postdoctoral members of the Phytomedicine Programme, Lyndy McGaw and Esam Elgorashi, delivered several in-depth lectures on pertinent themes of interest. The topics covered practical techniques, such as the fractionation of plant extracts, partition chromatography and plant chemistry, leading to theoretical lectures concerning the anti-inflammatory, anti-cancer and toxic effects of plants.

Further enlightening presentations focused on the 'uses and abuses' of in vitro tests and commercialisation aspects relating to medicinal plant explorations. Opportunities provided for general discussion on various issues encountered during research on bioactive properties of plants were highly valued by the participants. The social facet included a dinner enlivened by a Marimba band and much animated conversation and interaction between students and staff from various universities, united by a strong interest in the potential of medicinal plants.

Right: Guest speaker Prof Houghton (King's College, London), with Prof Botha (Head, Department of Paraclinical Sciences) and Gabriele Würger (MSc student in the Phytomedicine Programme).



Above: Master of ceremonies, Antoinette Labuschagne, introducing the next speaker.



The Anatomy Horse

Elsa de Jager, the widow of the world-famous sculptor Danie de Jager, invited a delegation from the University of Pretoria to the studio at Hartbeespoort to view the Anatomy Horse.

In 1968, following a five-month study of horse anatomy and movement at Onderstepoort, Danie was able to sculpt this magnificent work of art. Prior to his death in 2003, Danie expressed the wish to have the Anatomy Horse positioned at the faculty to acknowledge the contribution the faculty had made, resulting in the magnificent horse statues positioned throughout the world.

A visit to Danie's studio is an awe-inspiring experience. Besides horses (including the Anatomy Horse), there are also sculptures of Shawu the elephant (one of the magnificent seven) – probably the most famous of his sculptures – as well as camels, cheetahs in full flight and many more. All the sculptures are life-size or larger. Miniatures (limited editions) of various sizes are also produced for collectors. For more information on this and other sculptures, visit www.sculpturesa.com.

Right: The Anatomy Horse



Veld fires

present a safety hazard

by Ken Pettey

I had driven through smoke previously where, with careful slow driving, looking down and following road markings I eventually emerged unscathed. I thought that I had experienced the worst.

Last August, while on the way to the Kruger National Park, smoke engulfed a section of the N4 near Belfast where the four-lane road carries traffic in both directions. Within seconds, there was zero visibility. Not being able to see further than the windscreen was one of the most frightening experiences I have ever had!

The cars, buses, taxis and trucks on the road were instantaneously replaced by whirling patterns of thick smoke that I will never forget. My daughter opened the back window hoping to increase visibility. Instantaneously the vehicle filled with smoke. We realised that we were not prepared for such an event. Miraculously, within the next few seconds, the thick smoke curled upwards and visibility slowly increased and we were able to continue our journey. Later we learnt that there had been a number of accidents resulting in the closure of the N4 for a few hours.

A few days later, my daughter spoke to Crause Steyl, a pilot and owner of Aerocare, who supplied her with the following suggestions:

Background information

Left unchecked, veld and forest fires can cause widespread destruction to property. More serious, however, is the risk posed to the lives of those traversing areas prone to veld and forest fires. These risks do not only include the fire itself, but also the road safety risks of poor visibility caused by smoke and the health risks of smoke inhalation.

Safe driving tips

- When planning a trip during the fire season, check to see what the weather conditions will be like in the area and listen to local radio stations for news on any fires in the area.
- Keep maps of your route and frequent travel destinations in your car, and know at least two ways of getting anywhere. If an emergency occurs and your primary route of travel is closed, you'll already know another way to get where

you're going, or you'll only need to pull over and read the map to plan an alternative route.

- There will be limited visibility due to smoke and there may be large volumes of slow-moving traffic – drastically reduce speed, drive carefully and be on full alert.
- If visibility becomes very poor, don't attempt to drive through thick smoke or flames – many accidents occur when drivers attempt this, only to find that they run off the road, collide with stationary obstacles such as other vehicles, or are involved in head-on collisions with other vehicles attempting to drive through from the opposite direction.
- Put your headlights and hazards on so that you are as visible as possible to other vehicles, particularly fire tankers/emergency workers.
- If you are caught in your vehicle during a veld fire, your vehicle will provide a good degree of protection. Look for a clear area, preferably off the road (areas clear of grass or bush will not sustain fires of high intensity).
- Do not leave the vehicle – people have lost their lives by exiting the vehicle, only to be trapped on foot in the open. Your vehicle will help to protect you from radiant heat, which is the main hazard. Close all windows and vents. Switch the ignition off; it is unlikely that the fuel tank will explode from the heat of a passing veld or grass fire.
- Stay in the vehicle, as low down as you can get, until the fire front has passed, then exit and inspect the vehicle for damage before proceeding.
- If you are in the veld, away from your vehicle, and you see that a fire has started, move away from the fire immediately.
- Never ignore the fire, even if it seems far away, as it can rapidly become large and engulf you! The most dangerous situation to be in is when a veld fire is moving up a steep slope, and you are above it with bush and grass between you and the fire. It is estimated that every 10% increase in the gradient of the slope doubles the rate of the spread of the fire.
- If you feel threatened and you don't think you can outrun the fire, or if you are surrounded, then find a 'safe zone'. This can be an area that has already been burnt, or is completely clear of any fuel that can burn, such as a wide road or an old homestead. The clear area should be as large as possible.

- Do not panic and run at the last minute!
- Remember that what will affect you is the heat from the fire, and the lack of oxygen, which makes breathing difficult.
- Lie down on the ground, cover your head, breathe deeply before the smoke gets too close, and hold your breath when the fire passes over and around you. If you have blankets or extra clothing with you, try to cover any exposed parts of your body.

Emergency operations

The police, traffic officials and firefighters do their best to avert the dangers from veld fires and to protect the public and motorists from these dangers. They also control crowds near the emergency scenes and will provide the most convenient detour for traffic when roads are closed. It is important that motorists obey and pay close attention to these officials. The following should be kept in mind:

- Move over when you see flashing lights at the side of the road or the presence of emergency vehicles or fire engines!
- Try to stay at least 200 metres from the emergency vehicle.
- If an emergency exists ahead, it may be dangerous to the public to drive through the area.
- People who drive into an emergency scene may collide with a fire engine, or worse, a firefighter.
- Slow down when approaching an emergency scene.
- Be patient and keep in mind that fire and emergency personnel did not create the emergency, they did not cause the accident and they did not start the fire.
- Be patient when traffic is diverted through a detour – at least progress is being made.

The golden guidelines

- If you cannot see, don't drive!
- Try to move away from the vicinity of veld and forest fires.
- Respect and obey the guidance of fire, emergency and traffic officials.
- Do not be the cause of this life-threatening danger – do not discard burning cigarette ends.
- Do not leave an open fire unattended.
- If you see someone playing carelessly with fire, stop them!

An evening that truly razzle-dazzled

by Susan Hill

The annual Dean's Cultural Evening of 2008 was bigger than ever this year. Enthusiasm among the students was massive, with 50 performers entering this year in a total of 24 acts that kept the packed hall entertained throughout the evening. Ticket sales were phenomenal, and all tickets were sold out three days before the event.

Thanks must go to the Dean, Prof Gerry Swan, and Vice-Principal, Prof Ramaranka Mogollane, for making the evening possible with their great support and sponsorship. It was also excellent to see many of the lecturers enjoying some out-of-the-classroom student talent. The talent showcased was truly fantastic and included performances on the violin, flute, piano, guitar, saxophone, trombone and clarinet, as well as some amazing drumming talent. The variety of dance acts was also a treat, with Indian dancing, tap-dancing and some alternative UV light dancing getting the audience excited for more. Lovely singing was the forte of some of the students who serenaded the audience. Others entertained with soliloquies and the bands were wonderfully enjoyable. Congratulations to all the performers who made the evening so enjoyable!



Students and performers at the Dean's Cultural Evening of 2008. The event was even better this year and all truly enjoyed themselves.

All in all, the entire event was a great success and everyone thoroughly enjoyed themselves. We really look forward to another huge response next year as the cultural evening grows from strength to strength.

Just in case • Emergency numbers

• Security Services (main campus)	6911	012 420 2310
• Flying Squad 6022	10111	
• Police Pretoria North	6022	10111
• Ambulance: - Rosslyn	6003	012 541 3421/6
- Pretoria	6002	012 326 0111
• Fire Brigade (Wonderboom)	6024	012 543 0335
• Tygerberg Poison Centre	6179	021 931 6129
• Emergency Medical Help: OP		
- Sr Amanda Hamman (VAH)	8064	083 269 8874
- Sr Riani de Kock (VAH)	8149	082 802 3329
- Ms Anne-Marie Human (VAH)	8216	082 540 4833
- Prof Frik Stegman (VAH)	8279	8148 (operating theatre)
- Mr Chris Neetling (Feed Store)	8004	8004 (roving phone)
- Prof Ken Pettey (Ethology/Physiology)	8449	082 882 7356
- Mrs Daléne Meyer (Anatomy/Physiology)	8212	082 374 1583
- Psychologist at OP (Wednesday), Voula Samouris	8243	083 754 5427
- Psychologist - Main Campus, Rina Buys	6127/6151	082 908 3688
• 24-hour University crisis line		0800 00 64 28
• Head of OP Residence:		
- Dr Jan Myburgh	8350	082 392 2534
- Mrs Susan Myburgh		083 235 6778

In the case of an emergency, just dial the four-digit number given above.