

HONOUR for  
Biochemistry  
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YOUR MONTHLY CAMPUS NEWSPAPER • VOLUME 8 • NUMBER 9 • SEPTEMBER 2011

## NRF Award for Vice-Chancellor

UKZN Vice-Chancellor Professor Malegapuru Makgoba has been awarded the prestigious National Research Foundation (NRF) President's Lifetime Achievement Award for his 'extraordinary contribution to the development of science...'

The award was announced at a special function held in Pretoria on September 1. Mr Mac Mia Chair of UKZN's Council said: 'It is with pride that Council congratulates Professor Makgoba as the recipient of the 2011 NRF President's Lifetime Achievement Award.'

Makgoba began his career at the Nelson R Mandela School of Medicine where he registered for a medical degree. His outstanding academic performance earned him a scholarship to Oxford where as the first African Nuffield Dominion Fellow he obtained a Doctor of Philosophy in Human Immunogenetics from Oxford University. His brilliant career led to several groundbreaking discoveries in immunology with perhaps, the most notable being seminal discoveries in four distinct but complementary areas in 1988 that led to greater understanding of the human immune responses.

Working with Drs Martin Sanders and Stephen Shaw and others at the National Cancer Institute, they were among the first to appreciate the importance of lymphocyte adhesion and their pioneering discoveries profoundly influenced the disciplines of immunology and cell biology. Makgoba was instrumental in demonstrating the importance of adhesion molecules in T-cell function through a series of what are now regarded as classic publications. These discoveries resulted in the expansion of knowledge of leukocyte adhesion, immunologic memory, direct intercellular interactions, and direct intercellular signaling in health and many disease states. These findings have impacted and continue to shape the approach and understanding of the pathophysiology, diagnosis and targeted therapy of a wide variety of disorders that include



Vice-Chancellor Professor Malegapuru Makgoba (centre) who received the National Research Foundation (NRF)'s Lifetime Achiever Award with (left) Dr Albert van Jaarsveld, NRF Chief Executive Officer and (right) the honourable Minister of Science and Technology Mrs Naledi Pandor. PHOTO: ANAND GOVENDER

the major infectious diseases afflicting the African continent, namely HIV/AIDS, malaria and tuberculosis.

This work, considered to be his most significant scientific contribution to molecular immunology, continues to inform basic research, diagnosis and treatment and is still highly cited. The total number of ISI citations for his 10 classic publications stands at 4 502.

His achievements have been

lauded in South Africa and internationally. His awards include the Science-for-Society Gold Medal of the Academy of Science of South Africa; Gold Medal for Outstanding Leadership in Medical Research; the National Science and Technology Forum's Award for "Outstanding Contribution to Science, Engineering and Technology in South Africa"; and a permanent display in the British National Museum

of Science and Industry for "popularizing state-of-the-art science in the 20<sup>th</sup> Century".

He was elected Fellow of the Royal College of Physicians of London, the Royal Society of South Africa and Foreign Associate Member of the US National Academy of Sciences' Institute of Medicine; and selected in 2006 as one of 65 Caring Physicians of the World by the World Medical Association in recognition for

upholding "the fundamental and enduring traditions of the medical profession of care, ethics and science".

Makgoba served as co-Chair of the Nelson Mandela/Chissano Foundation's 2031 Hyper-endemic AIDS Project and is the founding member of the Council of the Global HIV Vaccine Enterprise. Under his leadership as Vice-Chancellor the University has forged a groundbreaking partnership with the Howard Hughes Medical Institute in the United States to establish a world-class research institute at UKZN to address the HIV/TB epidemic globally.

Well known for his vociferous appeal in 2000 as President of the Medical Research Council for the provision of antiretrovirals to the poor and vulnerable in South Africa, and for his fierce criticism of 'AIDS denialism and AIDS denialists', Makgoba has a deep commitment to the development of African scientists and indeed the development of South Africa as a nation. He returned to South Africa and was the first Black South African appointed as the President of the Medical Research Council of South Africa and subsequently, the Vice-Chancellor of the University of Natal. He is currently a member of the President's National Planning Commission and Special Advisor (Science) to the Honourable Minister NGM Pandor.

According to the NRF: 'The Lifetime Achiever Award, introduced in 2004, is awarded to a deserving South African individual who is considered to have made outstanding extraordinary contribution(s) to the development of science, in and for South Africa, over an extended period of time. The contributions must be considered to be of international standard and impact.'

# UKZN Women Science

Six women scientists at UKZN scooped several national awards in various categories at the prestigious annual Department of Science and Technology's (DST) National Women in Science Awards.



Professor Quarraisha Abdool Karim.



Associate Professor Deevia Bhana.



Associate Professor Pearl Sithole.

- **Professor Quarraisha Abdool Karim** received the Distinguished Women in Science: Life, Natural and Engineering Sciences Award.
- Associate **Professor Deevia Bhana** was the second runner-up in the Distinguished Women in Science: Social Sciences and Humanities category.
- The Distinguished Young Women in Science: Social Sciences and Humanities Award was awarded to Associate **Professor Pearl Sithole**.
- Doctoral Fellowships were awarded to: **Ms Tricia Naicker** and **Ms Karen Pillay**.
- **Ms Anna Zawiliska** received the Masters Fellowship.

The awards are aimed at profiling women scientists and researchers as role models for younger scientists and researchers; and encourage and reward younger women who are starting their careers as emerging researchers and scientists.

UKZN Vice-Chancellor, Professor Malegapuru Makgoba said, 'These awards recognise and inspire exceptional individual scholars for exceptional deeds and achievements. We at UKZN are proud to have such a diversity of talented women scholars. It bodes well for our students and staff. On behalf of the University we salute them.'

## Professor Quarraisha Abdool Karim

Since the discovery last year that a vaginal gel containing the antiretroviral tenofovir can protect women from HIV, scientists have been working around the clock to fast-track the results.

Nobody is more keen to see the

roll-out of the microbicide than Professor Quarraisha Abdool Karim, an Associate Scientific Director of the Centre for the AIDS Programme of Research in South Africa (CAPRISA) and one of the lead researchers.

'Twenty years might not sound a long time,' she said. 'But during those years the team involved has dedicated most of its time and energy into making sure that every avenue – from concept to proof – has been covered. We know now that tenofovir gel reduces the risk of women contracting HIV and we are looking forward to implementing the next step.'

'I feel very honoured to receive this [Women in Science] award,' she said. 'It represents years of perseverance and unstoppable belief by the many people involved in the process.'

As a principal researcher in the CAPRISA 004 scientific research programme, she demonstrated that tenofovir gel prevented both HIV and Herpes Simplex Virus (HSV) Type 2 infection.

It's a finding that is lauded as one of the most significant scientific breakthroughs in the fight against AIDS by WHO, UNAIDS and several leading organisations

'But there is no time to rest on these laurels,' she says. 'There is much work still to do.'

A public-private company has identified a factory site on the KwaZulu-Natal south coast to manufacture tenofovir gel.

Taking the implementation process forward, a second CAPRISA study (008) is testing the roll-out of tenofovir gel through family planning clinics in KwaZulu-Natal.

'We are comparing the monthly testing and follow-up schedule used in the original CAPRISA study with a three-monthly schedule. We need to examine the feasibility and

acceptability of providing a microbicide through existing health services that target sexually active women.'

Two trials, she said, are underway to confirm the first trial, which found that the infection rate among the women who received the tenofovir microbicide was 39 percent lower than those who did not get the gel.

'The VOICE trial is currently underway in a number of African countries,' she said, 'that will compare the efficacy of tenofovir gel with tenofovir tablets, as well as comparing tenofovir with another ARV called Truvada. The FACTS 001 trial under the leadership of Dr Helen Rees will replicate the CAPRISA 004 trial in several other South Africa sites.'

CAPRISA, she explained, also has a study in place to follow-up women who became HIV infected after exposure to Tenofovir gel to monitor drug resistance and also if there are any differences in disease progression and responses to tenofovir containing ARV treatment regimens compared to non-tenofovir exposed HIV infected women.

The first tenofovir-containing microbicide could receive regulatory approval by the end of 2013.

'That will be an historic day,' says Abdool Karim, 'not just for those who have developed the microbicide, but for the thousands of vulnerable women worldwide, who will benefit from it.'

Professor Quarraisha Abdool Karim received her PhD in epidemiology at the former University of Natal in 2000. She is currently an Associate Professor in Epidemiology, Mailman School of Public Health, Columbia University; and Adjunct Professor in Public Health and Family Medicine, Nelson R Mandela School of Medicine.

- Liz Clarke

## Associate Professor Deevia Bhana

Professor Deevia Bhana completed her PhD at the former University of Natal in 2002. Her research interests comprise gender, childhood sexualities, AIDS and schooling. She is a co-author of a book entitled *Towards Equality? Gender in South African schools during the HIV/AIDS pandemic* (UKZN Press, 2009) and a co-editor of the book *Babies and/or Books: Pregnancy and young parents at school* (HSRC, in press). Bhana has made a committed and active contribution to highlighting the importance of childhood sexualities, gender and HIV/AIDS education in South Africa in relation to diverse global cultures.

She has published 40 research articles in peer-reviewed journals, two books and 17 book chapters. She has an excellent record of research grants and involvement nationally and internationally in the field of children, gender and sexualities. She is regarded as a pioneer in the field of South African schooling and childhood sexualities and is an NRF C1-rated researcher.

Bhana is currently an Associate Professor and Deputy Dean in the College of Humanities at UKZN.

- Mail and Guardian

## Associate Professor Pearl Sithole

Professor Pearl Sithole, says she is quite surprised at being so honoured.

'I am critical. I am outspoken,' says this leading South African anthropologist from UKZN. 'My area of discourse is controversial, so one has to expect the detractors. So yes – I was surprised – but delighted to receive the award.'

Sithole's areas of academic research include the dynamics of knowledge production and the understanding of the various aspects that drive mainstream governance and traditional leadership in South Africa.

'More particularly I am interested in how each of these governance processes interact with one another – and perhaps more importantly how myths, prejudice and perception are impacting on service delivery and investment.'

Expanding on that theme, Sithole, says that her research has shown – 'quite clearly' – that contrary to popular thinking, there are few fundamental issues surrounding land tenure in the rural areas.

'Because of the role of the amakhosi and traditional leaders in these areas, people who require land for whatever reason, can apply for land to suit their needs. There's no conveyancing, no legal costs, no red tape. Household research shows that it is a system that works well with rural people having, in general, security of livelihood. So when we hear of investment jitters over land tenure, the reasons put forward for these concerns, are not the reality we are seeing on the ground.'

Suspicion, says Sithole, appears to be a major factor in partnership between traditional leadership and government structures.

'Research has shown that where suspicion and mistrust exist between the two elements, the governing process is not fruitful. In my view the ANC government needs to do far more to bring these two streams together to promote democratisation.'

One misconception, she says, is that traditional leaders are not democratic and are allowed to determine and make their own decisions on a unilateral basis.

# ntists Scoop Awards

(DST) Women in Science Awards (WISA). The announcement was made by Minister of Science and Technology, Naledi Pandor.



Ms Tricia Naicker.



Ms Karen Pillay.



Ms Anna Zawilska.

'This is not true. Today the Traditional Leadership Councils must have 30 percent of their members women and 40 percent have to be elected, as per the Traditional Leadership Governance Framework Act.'

She says she will be watching with interest to see how the new traditional leadership government framework will be translated at government and provincial level.

'Legislation is one thing. Now we need to see how it works in reality.'

Another area of academic interrogation that concerns Sithole is the 'skewed' belief that western-based science is the 'only true science'.

If the world is to benefit from research and development in 'a more holistic' way, she says, then whatever regions where knowledge systems and academic excellence exist need to be recognised and encouraged.

'The need for African science, as opposed to western science, has never been more pressing given the challenges that face the continent. It is not about one sector being better than the other, or more deserving, it is about being holistic, qualitative and forward thinking.'

Sithole obtained her PhD in Social Anthropology at the University of Cambridge in 2001. She is an Associate Professor and Anthropologist based at the Community Development Programme at UKZN.

She has published over 20 research papers in peer-reviewed journals, authored and co-authored three books and contributed eight book chapters. Her intellectual advocacy project is captured in her book *Unequal Peers: The Politics of Discourse Management in the Social Sciences* (2009).

- Liz Clarke

## Ms Tricia Naicker

Ms Tricia Naicker completed her Masters degree in Chemistry *cum laude* in 2008 at UKZN. Naicker is currently finalising her PhD studies within the GGKM research group at UKZN. Her research focuses on the synthesis of novel chiral catalysts, which play a vital role in the synthesis of all new and existing drugs. She already has a remarkable list of publications, including 20 manuscripts published in international peer-reviewed journals, and has written a book chapter with one of her co-supervisors from AstraZeneca in Sweden. Ms Naicker plans to pursue a research based academic career.

- Mail and Guardian

## Ms Karen Pillay

Type II (non-insulin-dependent) diabetes mellitus affects more than 154 million people in South Africa alone. The numbers are rising as obesity, stress and poor eating habits take their toll.

Immersed in this research arena is Ms Karen Pillay, currently a PhD student at the Department of Biochemistry, UKZN.

Her research endeavours centre around the fact that currently there is no therapeutic agent that can slow down or stop the progression of type II diabetes.

'With so many South Africans affected and the estimates of a doubling of the current numbers by 2030, it was not difficult to decide on the line of research that I should follow.'

Research such as Pillay's could play a major role in addressing the economic burden of type II diabetes. Patients with diabetes require at least 2-3 times the health care resources of people who do not have the condition.

Diabetes care also accounts for up to 15 per cent of national healthcare budgets.

Explaining the focus of her research, Pillay says that by using peptide-based inhibitors, she is hoping to develop molecules that will effectively arrest the progression of the disease by slowing down the toxic effect on pancreatic cells

'We need to know the cellular mechanics involved. It could take time, but I believe that the answers are out there.'

Pillay has an impeccable academic record. Having obtained six distinctions in grade 12 (including Mathematics, Biology and Physical Science) she went on to complete her BSc degree in Biomedical Science *cum laude* and her BSc Honours degree *summa cum laude* at UKZN.

Her decision to pursue a MSc and PhD study in the fields of Chemistry and Biochemistry highlights her versatility in scientific research.

Ms Pillay's research interest lies in amyloid diseases, in particular type II diabetes.

Her doctoral study entails the synthesis and evaluation of peptide-based inhibitors of type II diabetes and developing assay systems to assess the inhibitory potential of newly designed anti-diabetic drugs.

- Liz Clarke

## Ms Anna Zawilska

While the world of the code cracker has a mysterious aura more suited to World War II spies and James Bond thrillers, the science that allows secret messages and codes to be sent over distances has applications that could benefit many disciplines, particularly in medicine. Ms Anna Zawilska, who completed her BSc in Electronic Engineering *summa cum laude* at UKZN in 2010, was

honoured for her work in this field at the Women In Science Awards.

But she admits that it is one of those areas of science that by its nature is difficult to explain in simple detail without going into the intricacies of what is involved.

'The first thing is to understand exactly what steganography is. The best way is to look at it in relation to cryptography. Whereas cryptography is about providing privacy of information, steganography is about absolute secrecy of information.'

One of the applications that has cornered her electronic skills is one for embedding sensitive information on an x-ray that would be invisible to a patient, but would allow the medical practitioner to have critical data almost instantly.

'The information could be decoded by the practitioner using a special log on,' explained Zawilska. 'It would eliminate having to include information with the x-ray, the disclosure of which may not be in the patient's interest at the time.'

The research involves using the x-ray digital image pixels, greatly magnified into a gridded block form for the purpose of embedding data. To the naked eye the embedded information contained in the grid would not be visible.

Other examples of applications could be for documents of a highly secretive, sensitive or exclusive nature.

'It could be some state secret, command or blueprint that needs to be kept secret within a company or any other institution, and which needs to be communicated across a public channel,' Zawilska explained.

'My research investigates how to embed data in images generally, irrespective of the content of the image. It opens up opportunities for more meaningful and rapid interaction between parties

working in sensitive areas. The media interaction, for example, on the Internet is sizeable. If images could be loaded on the Internet with information that would not be seen by anyone else but the recipient, it would reduce the risk of exclusive information being used elsewhere.'

There have been times, says Zawilska where steganography has been used in a "darker" way. 'In one instance a network of Russian spies used pictures of animals on the internet to convey messages to their operatives in other countries.'

'But I'm not interested in the darker side of this science,' says Zawilska. 'There are so many benefits to medicine and science. That is what is exciting. Utilising the pixel grid of images for relaying information using new techniques will make cracking these codes more and more difficult.'

Zawilska received the Engineering Council of South Africa Merit Award for being the final year student with the most outstanding results at UKZN in 2010, and second prize in the South African Institute of Electrical Engineers National Student Final Year Design Project Competition for her design project.

She has an outstanding academic record, having obtained eight distinctions in matric coming first among learners at private schools in KwaZulu-Natal and second overall in the district of Umlazi.

She is currently working towards her MSc at UKZN in the field of digital image steganography. Since beginning work in February 2011, Zawilska has already been accepted to make presentations at two conferences.

- Liz Clarke

# Empowering Women in Knowledge Production

Strengthening women's participation in Higher Education is more than just a 'women's issue', writes **Professor Cheryl Potgieter**.

One of the ceremonies that celebrates women's achievement in the academy is the Department of Science and Technology's Women in Science annual awards. Science here is broadly defined to include women academics in natural sciences, the humanities, education and engineering – and the finalists reflect this inclusiveness.

While we need to recognise the achievements of individual women, we also need to understand why it is important to have women who reflect the diversity of South Africa participating in Higher Education. It is not only because we are women – this is much broader than a “women's issue”; essentially, it is a development issue.

The key argument for the importance of women in humanities, law, science, engineering and technology has centred on equity. However, it has been shown all over the world that equity is but one principle – albeit one we should not lose. I am uncomfortable with arguments for women's participation that are purely based on economics, but am equally uncomfortable with those whose arguments are based on qualities such as nurturing and caring, that women are incorrectly assumed to possess by their very nature. These qualities are not inherent in women, so we should be careful about using essentialist understandings of women such as that when we argue for greater numbers of women in the academy.

Despite a supportive legislative framework and various initiatives that include ring-fenced funding from the National Research Foundation, infrastructure support, interventions like writing and leadership workshops, the number of women and more specifically Black women who have doctoral degrees or are climbing the academic ladder remains low and slow.

Although Black women's contribution to knowledge production in journals and other publications is increasing, this increase is not proportional to the time and money invested in redress. Recent national statistics reflect that of the permanent instruction staff at South African universities, 58 percent were men and 42 percent were women. Of the women, 21 percent were African, 5 percent Coloured, 10 percent Indian and 64 percent White. Last year's Academy of Science of South Africa PhD study indicated that in 2007 the majority of those who graduated with doctoral degrees were white men in their 30s.

Universities are not homogenous spaces – the experiences

individual women face differ within a single university. But we know the reasons usually cited for women's under-representation in the sector: they include financial difficulties, sexism in the workplace, heterosexism, the legacies of disadvantage and chilly institutional climates. Given that the reasons are known and that much has been done to transform the situation, why have so many interventionist initiatives not yielded much success?

I believe some factors that affect women's lives have been overlooked and that the programmes intended to address gender equity have not necessarily equipped them with the psychological and ideological tools to challenge the environment. I have previously argued that an inequitable division of labour in the home, violence and the care of family members who are ill are among the factors that have not been interrogated in relation to women's positioning in universities. South Africa does well on international indices in terms of corporate governance but not so well on the issue of women's safety. I often listen to senior male colleagues talking about how late they work at the office or how they arrive at the crack of dawn. I personally know how terrified women are of being alone in the office at those times.

In addition, many of the initiatives to redress the gender and race imbalances provide technical and financial support, but missing from these interventions are aspects that I label “psychological redress”. We could look to the work of Frantz Fanon, Steve Biko, and feminists, such as bell hooks, to assist with the way forward.

Biko's and Fanon's work should be revisited with a gendered or feminist lens. This would assist “women's development programmes” to realise how crucial it is to understand the psyche and its liberation in relation to the contribution of women academics and their participation in universities and knowledge production.

Essentially, I am arguing that a feminist Black Consciousness would be the cornerstone for a nonracial South Africa and provide women with the critical tools to understand the relationship between individual consciousness and hidden institutional practices and to challenge the purveyors of discourses that produce and entrench masculinist academic cultures.

I am concerned that many writing workshops have a technicist, ahistorical, atheoretical approach to intervention. Here again a feminist Black Consciousness is needed to help pro-



**Professor Cheryl Potgieter.**

duce critical scholars and scholarly work and women who are resilient – that is, equipped and armed with a theory and feminist consciousness that will assist their navigation in the corridors of academia.

It remains the case too that interventions have not engaged with how the personal, the professional and the political intersect to make an impact on how women fare as members of the academy. Essentially, do our class, gender, sexual orientation and race histories influence how successful we are in academia?

Although legislation and policies address gender equity in the workplace, implementation is a problem and women report gender discrimination even after policy changes. This is the result of a poor understanding of the complexity of gender discrimination in universities – it is what has been termed the “opaqueness” of the glass ceiling. A key example is the vagueness of the criteria labelled “quality”. If the academic gatekeepers' decisions are based on constructs of race and masculinities this will affect their definitions of “quality”.

Research has engaged with women's challenges in the academy and much is known about how these manifest themselves at the individual, institutional, professional and societal levels. But what is still blurred is how intersections among these variables affect career advancement. Perhaps what we need is more systematic policy research and interventions on factors affecting the retention of women such as masculinities in leadership, institutional and organisational barriers and the influences of society's gendered cultures.

*Professor Cheryl Potgieter is University Dean of Research and Professor in Psychology at UKZN. This article was originally published in the Mail and Guardian, August 19-25, 2011.*

# Biochemistry student to present diabetes research in Dubai

Masters Biochemistry student Ms Rachel Wilson is one of 100 students in the world to receive a prestigious grant from the International Diabetes Federation to present her research results at the 21<sup>st</sup> World Diabetes Congress in Dubai from December 4-8.

WORDS & PHOTO: LUNGA MEMELA



**Ms Rachel Wilson in the laboratory.**

The focus of Wilson's research is Type-2 diabetes. While she notes that ‘diabetes is the fourth major cause of death in South Africa after HIV/AIDS, heart disease and respiratory infections,’ she adds that: ‘the most positive fact about diabetes, is that it is largely controllable and in some cases, fully reversible. Intensive educational campaigning at all levels of society will minimise the crippling effect it would otherwise have on our economy.’

Wilson's parents never insisted that she become a top academic achiever. ‘They did however, insist that I played sport,’ she chuckles. Both she and her supervisor, lecturer in Biochemistry, Dr Shahidul Islam strongly believe that sport and good nutrition are key to the prevention of some of the world's most fatal diseases.

‘My immediate aims are to complete my Masters degree

in Biochemistry and thereafter study medicine to become an Endocrinologist who specialises in Diabetes,’ Wilson said. Whilst completing her medical degree, she also aims complete a PhD in Biochemistry.

‘My future goal is to establish an international company that revolutionises health care and health care policies in South Africa and worldwide. With my biochemical background I aim to develop a range of medicinal products and in conjunction, establish what I would call a “Wellness Centre” that offers consistently high quality services,’ she said.

Wilson has started an online website (<http://nutritionalbiochem.blogspot.com>) – an educational page on well-known social sites that offers free scientific knowledge on nutritional issues in an effort to raise awareness so that people can help themselves.

# Green thinking UNITE shows the way

Green thinking – **Liz Clarke** found it alive and well down a winding road where the trees have rights and students are inspired.

**T**he corridors are crooked, the windows at a jaunty slant and one ceiling is sprouting with a nest of pipes and steel tubes.

But that's not the end of the story. It's a building where the trees have their say and if an old indigenous tree is in the way, then sorry, make a plan to go round it.

Durban Architect, Paul Phillips loved the brief.

Having spent his student years in a building 'with as much aesthetic ambience as a warehouse, high windows, bad light and dreary interiors,' he says it was a chance to turn that old-fashioned campus legacy on its head and do something completely different, all of it green.

The building, known as the UNITE complex, is at the end of a windy road at the back of the UKZN campus, next to the Engineering complex.

It's the overgrown Cinderella side overlooking a nature reserve, the haphazard rooftops of Cato Manor where the afternoon sun has its say.

It has a history. Anglo American were the originators of the UNITE concept, which was about offering disadvantaged students study opportunities through a bridging course to assist them in following a career in engineering science.

This concept is still alive and well.

'It's about investing in human capital,' says the Head of the UNITE Programme, former school teacher, Noel Powell. 'It's about developing the skills of Black learners, who under normal circumstance would not have the opportunity or the money to access higher learning.'

The new building, due for completion in November, is designed not only to show how nature and engineering can interact with each other, but to open the minds of students to ideas that go beyond conservative thinking and add value to the total teaching and learning enterprise at UKZN.

Phillips will tell you that all of that "quirkiness" and more has been incorporated into the building. 'We want students to feel energised and inspired. That is why space and light and views are so important. So too is the feeling that the trees and nature are a part of that inspiration.'

The unusual features are also part of that holistic thinking.

Explains Phillips: 'What we are saying to students is that windows don't necessarily have to be straight, corridors can have interesting bends and twists, ceilings don't have to be covered with board, if the functioning parts, say in a computer facility,

are focally intriguing.' The green energy is critical he says, whether it's using the heat of the sun or the coolness of high ceilings, it is all about thinking differently, looking at ways of developing ideas out of the box and reducing the carbon footprint.

Rudi Kimmie, Deputy Head of the funded UNITE Programme, said that about 50 students a year are accepted for the Programme with their fees and accommodation funded by a number of corporate entities and supported by the Department of Education.

'The idea is to run the UNITE Programme in conjunction with the engineering degree course, so that after two years of added tuition and life skills disadvantaged students can then enter the mainstream degree programme.'

The UNITE team are hoping that their new thoroughly green building will be completed by the time the Cop 17 delegates arrive in November.

'We would like them to see that Durban is making a contribution to green and environmentally acceptable design,' says Powell, 'where Natal Mahoganies and giant figs also have their rights protected and young people are being taught to embrace the idea of a cleaner future.'



Mr Simphiwe Ngwane.

## Did I hear an encore? I stayed for more

Here we are at the precipice of our POST-graduate degrees, what a journey it has been, 2011 here we are!

WORDS: SIMPHIWE NGWANE PHOTO: SUPPLIED

**L**ast year an article of mine was published in *UKZN DABA*, I had written about the class of '08, taking their final bow and venturing out and becoming alumni of UKZN. Well, some of us decided to brave it and pursue post-graduate studies. As the semester wanes to a dramatic and exhausting end, as we polish-up and complete our dissertations, euphoria fills the almost empty fuel tanks which have been depleted after burning the midnight oil on far too many nights. After the many days of threatening to quit and actually calling our parents and asking 'would it be ok if I quit and take a breather?'

It felt surreal mingling with 3<sup>rd</sup> year students in the capacity of a history honours student during the HDSS Honours Open Day. Just last year I myself was in the crowd during the Open Day, listening intently as the Dean, Professor Teer-Tomaselli addressed us, and now, a year later, well seasoned and somewhat wise, post-graduate students attempted to woo 3<sup>rd</sup> year students to postgraduate studies.

After thousands of pages we have read, especially so for history honours students, prominent and perplexing intellectual figures like Shula Marks, E P Thompson, Edward Said, Pierre Bourdieu, Fanon, Michel Foucault and not forgetting the many hours we spent in the archives, with symptoms of archive fever creeping in.

From conversing with fellow Humanities post-graduate students the intensity and rigour of honours have left us perplexed but ever so enlightened. During the early seminars in the year, we spoke in jittery, middle-C staccato patterns, unsure, questioning ourselves. Am I right? Should I have opened my mouth? We are perpetually debauched from what Frank Ankersmit calls intellectual drink, we imbibe intellectual literature in gallons.

Michel Foucault once wrote 'Knowledge is constituted by ruptures in previous ways of thinking'. I believe dear old Foucault summarises post-graduate studies rather sublimely.

I and 'many' other history and classics grad-students are normally asked 'dude, where you gonna get a job?' and I reply with a swagger (after being asked this question since undergrad.) 'It is not the content nor the modules that we study that are of importance, rather it is the skills that are honed, cultivated and employed in deciphering and understanding those modules.' These skills include narrative substance, historical research and historical writing, as we give meaning to historical facts, because left on their own, facts do not speak. As history honours students we produce mammoth dissertations; our tasks is not to find answers in the archives or in the work we produce, but to find understanding, which will equip our contemporaries with more knowledge to make better decisions. We read Ann Stoler's work on the archive critically, shifting our academic gaze from the documents in the archive, to the archive as an epistemological arrangement. As postgraduate students we've tutored and imparted our 'seasoned' knowledge and aided first year students.

We salute our captains, because our fearful trips are almost done, our ships have weathered every rack and the prizes we sought are almost won. After a year of honours you could blind fold us and give us Brahms' Hungarian Dance piece and we'd play it with ease.

As November nears could this be our final penultimate bow? Do we hear encores? Should we stay for MORE? Are MAs knocking at our doors?

*Simphiwe Ngwane is a BA History Honours student.*



(from left) Rudi Kimmie, Paul Phillips and Noel Powell at the new UNITE complex.

# Moot Court Winners

The 40<sup>th</sup> John Milton Moot Court Final hosted by the Faculty of Law was held on August 26 on the Pietermaritzburg campus.

WORDS & PHOTO: GQWESA NYIKANA

UKZN continues to provide students with excellent legal education. This was particularly evident in the manner these students presented their arguments,' said the Honourable Judges Mr Justice Koen and Honourable Mr Justice Seegobin.

Four final year law students, Mr Daniel van Zuydam, Mr Stuart Tarr, Ms Hlengiwe Mkhize and Ms Carmen Schoon argued their cases before the bench. The students were required to submit their heads of argument to the judges prior to the court presentations.

The first case was "Julia Moelman versus Equality for Woman", argued by van Zuydam, representing the appellant and Tarr, representing the respondent. Moelman was accused by a non-governmental organisation, Equality for Women, of hate speech in terms of the Promotion of Equality and the Prevention of Unfair Discrimination Act (No. 4 of 2000). It was alleged that she made a number of inappropriate statements regarding the complainant in the Zuma rape trial.

The second case, "The State



The Honourable Mr Justice Seegobin, Stuart Tarr, Carmen Schoon, The Honourable Mr Justice Koen, Hlengiwe Mkhize, Daniel van Zuydam and the Court Orderly Justice Luthuli.

versus Joe Jacob", was argued by Mkhize, representing the state and Schoon, representing the accused. This case dealt with Philip Jacobs, a 10-year old athletic boy who dislodges his father's handbrake whilst pretending to drive. The car damages the gate. Joe, his father, is furious and punishes his son by hitting him three times on his backside and his legs. Philip's mother decides to lay criminal charges against Joe.

The overall winner was van

Zuydam who according to the judges had impressed them with his intellectual ability to think quickly on his feet and provide sound arguments. The runner-up prize went to Schoon. Mkhize received the best Pietermaritzburg Attorney Award and Tarr won the FB Berchell Award.

Law Lecturers from the Faculty of Law assisted the students with additional preparations for their court presentations.

## IZINDODLA ZEZINCOMO KUMCWANINGI WASEUKZN

USolwazi Mike Perrin ugcotshwe yiNyuvesi njengoSolwazi ogcwele esikoleni sakwaBiological and Conservation Sciences waphinde waqokwa njengelunga leRoyal Society yaseNingizimu Africa.

UPerrin wakhethwa ngengoSihlalo weZoology eNyuvesi endala yaseNatali ngokuphela kwa1981, waphinda wasebenza ngengoSihlalo wakwaZoology iminyaka eminingi. UPerrin wasebenza njengoMphathi womkhakha wezesayensi esikhungweni saseMgungundlovu lapho wayengomunye ababe nomthelela ekusungulweni kweScience Foundation Programme. Njengamanje uyilungu lase-UKZN noMqondisi weResearch Centre for African Parrot Conservation.

Noma ucwaningo lwakhe ngaphambilini lwalubhekisisa impilo yezinhlobonhlobo zamagundane, okwamanje ucwaningo lwakhe lubheka ukuphila nokulondwa kwezinhlobonhlobo zezinyoni. Ucwaningo lwakhe luphinde lubheke isiqiwi sezinyoni iLilian's Lovebirds eMalawi; ukubanjwa kwezinyoni i-Africa Grey Parrots e-Uganda, kanye nocwaningo ngemvelaphi yamaCape Parrot, ebambisene noDokotela uSandi Willows-Munro



USolwazi uMike Perrin eMadagascar nesilwane esibizwa ngeLemur ehlonbe lakhe.

wesikole sakwaBiochemistry, Genetics and Microbiology.

Esebenza noSolwazi Barry Lovegrove kanye noDokotela Mark Brown, Kamuva uPerrin ubheke inyoni engajwayelekile, iVasa Parrot yaseMadagascar. Uzothula imiphumela yalolucwaningo enqunqutheleni i-Australasian Ornithological Congress eCairns, e-Australia ngoMandulo.

Kamuva uPerrin uxoxisana nabeSouth African National Biodiversity Institute (SANBI) neConvention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) ukuvikela ukuthengiswa kwalezi zinyoni zase-Africa okungekho emthethweni. Uphinde wakhethwa njengelinnye

lamalunga eqembu locwaningo elibizwa nge-International Parrot Research Group elibheka kabusha ucwaningo lwe-International Union for Conservation of Nature (IUCN) Parrot Action Plan yonyaka ka2000 asebenza kulona phambilini.

UPerrin usanda kuqeda ukubhala incwadi ebizwa ngokuthi iParrots of Africa, Madagascar and the Mascarene Islands, eshicilelwa iWits University Press. Ngonyaka ozayo, uhlela ukwenza olunye ucwaningo ngamaGrey-headed Lovebird eMadagascar nokuya kobheka inyoni engatholakali kalula iSwindern's Lovebird eWest Africa.

## Living Legends Awards honour UKZN staff and alumni

At the eThekweni Municipality's fourth annual Living Legend Awards Ceremony on September 7, six of the 21 awardees were UKZN staff members and alumni.

WORDS: PHUMELELE MAVANENI PHOTOS: SITHEMBILE SHABANGU

The Awards celebrate and acknowledge individuals who have demonstrated positive and outstanding contributions to the City's legacy in different sectors of society. UKZN Chancellor and KwaZulu-Natal Premier, Dr Zweli Mkhize, attended the Awards Ceremony.



Professor Paulus Zulu.

Deputy Mayor, Councillor Nomvuzo Shabalala, congratulated the awardees. She noted that the Municipality has chosen to recognise the Living Legends as heroes while they are alive, and thank them directly for their contributions to their communities.



Dr Angelo Lambiris.

The Premier called for the continuation of celebrations like these, which acknowledge the good efforts made in our province and eliminate the culture of recognising mostly negatives.



Professor Thandinkosi Madiba.

Specialist Surgeon and Head of the Department of Surgery at UKZN's Nelson R Mandela School of Medicine, Professor Thandinkosi Madiba was one of the awardees. Madiba has received national and international recognition for his research on diseases and cancer of the colon and rectum. He is a member of numerous professional and statutory bodies, boards and councils. Madiba singlehandedly established and pioneered the first Colorectal Unit in KwaZulu-Natal and founded the Colorectal Cancer and Stoma Support Group to enhance the awareness and severity of colorectal cancer.



Judge Sandile Ngcobo.

'It is humbling to receive this award and be recognised for the work which I treat as a calling. I am very happy to help people who suffer from cancer of this nature, as often there are few specialists in the field,' he said. Madiba added, 'As an academic, my mission is to increase students' interest and understanding of surgery as a discipline, and to help them specialise in the field.'



Ms Susan Barry.

Madiba expressed his thanks to his wife, Mrs Puselesto Madiba, and his children for their support over the years.

Professor Paulus Zulu, Director of the Maurice Webb Race Relations Unit, which is based at UKZN, received his Living Legend Award in recognition of his life-long contribution to educating African students and scholars.

Zulu started training African scholars as researchers at the former University of Natal as far back as 1985 in response to the inadequate Black education system. He is currently training six postgraduate students.

From 1987 to 1995 Zulu initiated a Saturday School that grew to host nine classes with

a total of 1 000 students, from grade 10 to matric. He also ran a Winter School for 10 years teaching commerce, humanities, and science to now very successful business people. 'Back then it was freedom first and education later, so I tried to install a culture of learning and teaching in the classes,' he said.

Zulu describes discipline and good example as the philosophies he lives by, 'When I was Pro-Vice-Chancellor for Students from 1995 to 2001, I led the Students' Representative Council with a very strict hand that helped them operate with discipline, responsibility and democracy. And we never had any student strikes during the time.'

School of Music Lecturer Ms Susan Barry, received a Living Legend Award for her musical contributions and community engagement with the City, along with alumni, respected herpetologist (the study of amphibians), Dr Angelo Lambiris; former South African cricketer, Mr Jonty Rhodes; and the former Chief Justice of the Constitutional Court of South Africa, Sandile Ngcobo.

# UKZN professor edits Roy Campbell's daughters' memoirs

*Remembering Roy Campbell: The Memoirs of his Daughters Anna and Tess*, edited by Professor Judith Coullie, UKZN English Studies, was launched recently at Durban High School's Seabrook Coffee Shop.

WORDS & PHOTO: PHUMELELE MAVANENI

Professor Michael Chapman, English Studies Senior Research Associate, who co-edited the *Collected Works of Roy Campbell*, published in 1982, delivered the opening address at the launch. He read positive reviews of the book and an extract from it to audience, and noted that Coullie had captured the essence of the Campbell family that most people were not aware of.

In her speech, Coullie outlined why the memoirs of Campbell's daughters (Teresa and Anna) convey the lives of the Campbell family and their history and why the memoirs are an important corrective to the autobiographical works written by Campbell. 'In many respects in his autobiographies, Campbell misrepresents himself. In some of his misguided attempts to write about himself, his words are too eager to expose an image of extreme masculinity and power.' She noted that in his autobiographies, Campbell also leaves out much that his daughters tell us about his life: Anna and Tess recount some of the consequences for the family of his notorious drinking problem, for instance, and show how this and his rejection of communism were of no help to his reputation.

'While the memoirs by Tess and Anna reveal a very creative, kind and caring father

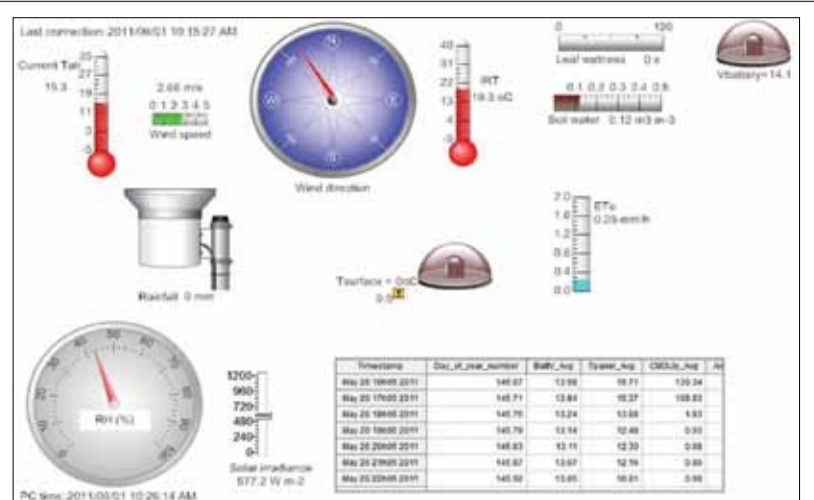


Professor Coullie at the book launch.

and husband to his wife, Mary,' Coullie added, 'they also reveal a childhood of intermittent neglect and struggle for the daughters. Their parents' marriage was, for some years, an open one, which allowed their mother, Mary, to leave them with their grandmother for months on end, and for Roy to slide deeper in alcoholism.' The sisters both suffered from mental breakdowns later in life, which might be attributed in part to the difficulties encountered during childhood.

The book is, however, also filled with intimate moments of Roy as a family man who found it difficult to be without his wife and daughters. These emotions are described in his poems, some of which are reproduced in the *Memoirs*.

Coullie thanked the Killie Campbell Africana Library for providing some of the pictures for the book. *Remembering Roy Campbell* is available at Adams bookstore or through Amazon.



A snap-shot of the web browser of the real-time data screen.

## Agrometeorology system connects students to the environment

UKZN Agrometeorologist on the Pietermaritzburg campus, Professor Michael Savage has developed South Africa's first web-based early-warning system for real-time agricultural, earth and environmental sciences data and information.

WORDS: VICKY CROOKES

With climate change upon us, it is imperative, now more than ever before, for students to understand the environment so they can relate to the problems of our uncertain agricultural and environmental future. Having lectured at the University for 35 years, Savage is cognizant that many students leave with a degree which has not equipped them with a first-hand understanding of the environment.

'Often, this is due to the lack of exposure to the important concepts making up their environment. Students also lack a basic understanding of concepts such as temperature, temperature scales, and the graphical display of information,' said Savage.

Hailed as a dynamic approach to teaching and research, this web system is centred on a field-based weather station located on the Pietermaritzburg campus. However, it is much more than your traditional weather station. It includes a wide range of instrumentation not normally found at automatic weather stations such as: soil-water content and soil-electrical conductivity and soil salinity sensors; infrared sensors for remote sensing; sensors for measuring leaf wetness, systems to compute grass reference evaporation, and a profile of air temperature sensors. The system can also accommodate calculations related to heat index, wind chill, day length, sunrise and sunset times.

An important feature of the project enables students to see a real-time display of the information as well as a display of the historical weather data. Undergraduate and postgraduate students are able to access this information via a LAN connection or through Bluetooth. They can extract data which they can manipulate, thereby

reinforcing their computer literacy, numeracy, statistical and graphical capabilities.

In addition, the system has been designed so that it can alert groups of students, via email, when a significant environmental event occurs, e.g. when the soil-water content is very high, resulting in considerable surface runoff. A television monitor, located in a corridor in the Rabie Saunders Building, offers agriculture students a display of all the information and measurements, which is updated every five minutes.

One of the most powerful aspects of Savage's innovation is its applicability to a vast range of disciplines including: agricultural plant sciences, agricultural engineering, agrometeorology, environmental science, geography, geology, hydrology and soil science. It could even be extended to other important areas such as atmospheric chemistry and water chemistry.

In addition to the system being a valuable data-resource tool for many disciplines, it can also be used as an early-warning system. Floods or flooding conditions could be predicted based on the rainfall conditions, the saturation soil-water content and the soil physical parameters. It may also be possible to predict frost two or three hours before it occurs.

The resource is being funded by the UKZN Teaching and Learning Office through a 2011 Teaching Innovation and Quality Enhancement grant. Although there has been limited exploration of the use of the system outside UKZN, this is a natural progression for the project. Real-time data that encompasses such a vast array of measurements would be invaluable to businesses, municipal planners, agriculturalists, and the general public. It could also play a significant role in high school education.

## Accolades for UKZN Zoologist

WORDS & PHOTO: VICKY CROOKES

Professor Mike Perrin was recently made a Professor Emeritus in the School of Biological and Conservation Sciences, as well as elected a Fellow of the Royal Society of South Africa.

Perrin was appointed to the Chair of Zoology at the former University of Natal at the end of 1981, and served as Head of that department for many years. He also served a term as Dean of the Faculty of Science in Pietermaritzburg and was instrumental in promoting the initiation of the Science Foundation Programme. He is currently a Fellow of UKZN and Director of the Research Centre for African Parrot Conservation.

While his early research focused on the ecology of rodents and elephant-shrews, Perrin's current work focuses on the ecology and conservation

of different bird species. His research continues with a conservation biology study of Lilian's Lovebirds in Malawi; a study of urban colonisation of Africa Grey Parrots in Uganda, and molecular genetics studies of the Cape Parrot with Dr Sandi Willows-Munro from the School of Biochemistry, Genetics and Microbiology.

Together with Professor Barry Lovegrove and Dr Mark Brown, Perrin recently conducted a study on the thermal biology of the bizarre Vasa Parrot from Madagascar. He will present a paper on the results of this study at the Australasian Ornithological Congress in Cairns, Australia in September.

Currently, he is liaising with the South African National Biodiversity Institute (SANBI) and the Convention on International Trade in Endangered Species of

Wild Fauna and Flora (CITES) to better control the illegal trade of African Parrots. He has also been elected to the International Parrot Research Group which is replacing and updating the International Union for Conservation of Nature (IUCN) Parrot Action Plan 2000, to which he was a contributor.

Perrin has just completed a book titled, *Parrots of Africa, Madagascar and the Mascarene Islands*, which is being published by Wits University Press. Next year, he has plans to conduct ecological work on Grey-headed Lovebirds in Madagascar and to embark on an expedition to find the rare Swindern's Lovebird in West Africa.

*This is an English translation of the isiZulu article on Page 6.*

# The UKZN Griot Of Audits and Plaudits



The above was a title suggested to me by a mischievous correspondent. We all know about the CHE debacle, how the CHE discredited itself and how bruised egos reacted to the episode of the non-appearance of the UKZN audit report.

WORDS: KEYAN G TOMASELLI

**H**ere, however, I want to discuss this phrase in a different context.

In the July *Griot* on “Posties and Toasties” I talked about ‘Western’ audit mentality colliding with field practicalities, research procedures and the very idea of Indigenous Knowledge Systems. Well, one of our number discovered on his return from a remote rocky outcrop that his vehicle had been fitted with a tracking system. One of the bureaucrats at the institution where he is employed observed that the vehicle was stationary in a single location for most of each day. To measure productivity and return on investment, the implication seemed to be, the vehicles should MOVE! Constantly! Next time we’ll employ a driver to move the vehicle back and forth as a cover for those who want to get on with real work.

Now, I wonder how Louis and Mary Leakey would have explained to the bureaucrats the fact that they spent 24 years working in a single valley, Olduvai Gorge in Kenya, before they found a fossil. How does one

publish about finding nothing? Then, how does one write about a single find, a jaw. Not only would they have been told to stop their work, but their vehicle would have been impounded, and the origins of mankind would never have been discovered. In fact, the English physicist Arthur Eddington who actually proved Einstein’s theory that space and time is being bent did so in the field, on a West African island, by taking photographs of stars during a solar eclipse. But *he* was NOT moving, so maybe he forfeited his salary? Yet, it was he who proved that space and time are relative. He and Einstein got the plaudits no thanks to the audits.

I thus conclude from audit culture that Darwin would never have visited the Galapagos Islands and the corollary, that the theory of Intelligent Design would not have been necessary. How many scientists and years did it take to develop the atomic bomb, and incredibly, these scientists were not allowed to publish their work. They were all holed up in a single place and except for the Rosenbergs were mum, chum. No movement

there – at least until the big bang. What if Einstein was told that he was wasting his time doing obscure mathematics, instead of MOVING about, giving the impression of being busy, and feeding vehicle tracking data to his disbelieving managers? What if Eddington had been denied his funding application to test the theory of relativity from a site in a different continent? Would auditing culture have emerged in a pre-Einsteinian world? I think not.

The very discoveries that feed audit culture are those used by the auditors to wreck the academic enterprise, the free flow of ideas and even of working in the field. The plaudits are for the audits, not for the raw data. Tell you what, the humanoid robot, Data of *Star Trek*, has more humanity than do those who think that a stationary vehicle in a remote valley is an indication of sloth, goofing off, and idleness. But ask those same auditors to check out what is being done way out in the bush, well, they’ll arrive in their city suits and ask for iced water.

What’s next? We all get fitted with microchips which report when we’re contemplating the

mysteries of the universe while taking a crap; wasting time on a rockface tracing thousand year old engravings, or engaging in discussions with peers *en route* to somewhere else. Moving, that’s the trick when one uses institutional cars. Reminds me of a car manufacturer’s advertising catchphrase “We like to keep you moving”. The same company that then largely produced characterless models then replaced this with “Shift expectations”. Moving, said architect Frank Lloyd Wright is a disease called “mobilitis”. The symptoms of mobilitis are evident in management as they whizz between campuses, dragging behind them long-suffering academics who would rather work in a single place/classroom than appear to be busy by moving all the time. The auditors have shifted expectations. The expectation is no longer that we produce quality work but that we send fast and dirty articles into SAPSE journals. Gotta keep the treadmill moving. How else will we pay the bills?

Forget about the Leakeys with their single-minded lifetime project that changed the

way that people understand their origins. Punish Darwin for delaying publication of the *Origin of the Species* due his fear about the ideological implications of the theory of evolution – which in the current conjuncture places auditors at the top of the evolutionary process. Imprison the doers, those who get their hands dirty in the field by changing the space-time relations now enabled by tracking companies. Reminds me of the stereotypical London’s bobby’s command, “Now then, move along, don’t loiter”. Are we academics not allowed to loiter any more while we contemplate the cosmos?

*Keyan G Tomaselli is Director of the Centre for Communication, Media and Society. He moves a lot in his 4x4 but he is also at times stationary applying space-time postulates to film theory.*

**Disclaimer: The views expressed in this column are the author’s own.**

## Sudoku

9	8			2				3
					1	7		
		7			3		5	2
	5							
4	3	6				2	7	5
							3	
3	9		4			5		
		2	8					
7				3			4	9

# Go Bokke!

The School of Nursing shows their support for the Springboks.



Produced by the Publications Unit, Corporate Relations Division. Tel: 031 260 1245/8668/2957 [www.ukzn.ac.za](http://www.ukzn.ac.za)  
UKZN DABA is printed on environmentally friendly paper.