



VOLUME No 5 – ISSUE No 1

May 2009

Message from the Deputy Vice-Chancellor



Professor Leana Uys.

Dear Colleagues

The first quarter of this year has seen the announcement of the Howard Hughes initiative K-RITH which promises a bright research future for the College. We were very fortunate that the launch of the project brought the College excellent media exposure. We wish our local team, led by Professor Sturm, a smooth run during the planning, building and setting up of the research centre.

I have also been very involved in setting up the PhD Group Supervision workshops with Professor Anthony Pillay from the NRMSM and Professor Ola Oduntan from the FHS. We are running two groups – a group of candidates whose proposals/protocols have not yet been accepted, and a group whose proposals have been submitted and approved. Each group meets on a Friday afternoon and Saturday every three months. We have had two vibrant workshops for the pre-proposal group and the second one for the post-proposal group is happening the weekend of the 29 and 30th May. A total of 45 PhD candidates have registered and I think we are all finding it an excellent learning opportunity. We usually have a few supervisors and external experts attending as well. You are all welcome to participate, so please let us know if you need more information. Our aim is to increase our PhD completion, and assist in the development of good PhD supervisors.

The recent NRMSM graduation was quite special. Two UKZN Fellows from the Faculty was recognized, Professor S Govender and Professor G P Hadley, and Professor T Madiba received one of the Distinguished Teacher Awards of 2008. We also bestowed an Honorary Doctoral Degree on Professor Bruce Walker. The Faculty graduated a total of seven doctoral degrees, of which a number were staff members. Congratulations to all concerned. Not to be left out, one of the academics of the FHS was also awarded a Distinguished Teacher Award – congratulations to Dr Robin Joubert.

The FHS is very busy developing new post-graduate programmes to address niche needs. They are currently seeking approval for programmes in Pharmacy Practice and Autism Spectrum Disorders. The Faculty is also working on two programmes on Research Management, which we hope will grow the research management capacity in our College.

Lastly, I need to mention that the collaboration with the University of Eduardo Mondlane in Maputo has been launched and the Dean and the Head of the MPH programme visited the College in March. We are collaborating with them in developing a multi-disciplinary course work Masters Degree in Health Sciences research. We hope that this University will become an active research partner of our College.

I hope the year remains as positive and productive as it started!

SOUTH AFRICAN RESEARCHERS ON THE FRONT FOOT IN THE FIGHT AGAINST TB

Mega million rand grant from Howard Hughes Medical Institute spurs efforts at University of KwaZulu-Natal.

The extensively drug resistant (XDR) strain of tuberculosis (TB) was first identified in South Africa in 1994 by a group of KwaZulu-Natal-based researchers who described it as a “killer timebomb” ...but their concerns fell on deaf ears.

The researchers discovered it initially as a multi drug resistant (MDR) strain of TB which was spreading through the population at an alarming rate. They reported their startling finding to authorities who sadly dismissed the researchers’ concerns and took no action, saying if the strain was resistant then it wasn’t a problem as it wouldn’t be transmitted from one person to another.

That particular strain is the one that developed into XDR TB and was responsible for the deaths of patients at the Church of Scotland Hospital at Tugela Ferry in the KwaZulu-Natal Midlands in 2005 – an incident which

shocked the world and demanded urgent attention.

While MDR TB can be treated and cured, XDR TB is practically incurable.

One of those early researchers was Adriaan Willem Sturm, who is now Dean of the University of KwaZulu-Natal’s Nelson R Mandela School of Medicine in Durban, South Africa, and a renowned leading international light in research into the age-old disease which has been the cause of countless deaths down the ages.

He is also interim director of the new KwaZulu-Natal Research Institute for Tuberculosis and HIV (K-RITH).

During his career as a medical microbiologist, Professor Sturm has studied tuberculosis, HIV, and sexually transmitted diseases. He was a leading scientist investigating the first outbreak of XDR-TB in KwaZulu-Natal and a principal investigator on the project that sequenced the genetic code of that pathogen.

He began his research career in the Netherlands and became Chair of the Microbiology Department at Aga Khan University in Pakistan in 1990. He joined the then University of Natal in 1993 and has served as a Professor, Head of the Medical Microbiology Department, and now Dean. Professor Sturm is also Director of the Medical Research Council’s Genital Ulcer Disease Research Unit at the University.

Dutch born Professor Sturm (64) is currently at the forefront of an exciting development in the fight against the disease – the mega-million rand grant to the University of KwaZulu-Natal (UKZN) by the Howard Hughes Medical Institute in Washington in the United States which will see the construction of a new building on the Medical School Campus in Durban to house K-RITH as well as provide funds to ensure intensive research into the disease for the next 10 years at least.

“The HHMI-UKZN partnership is a major and unique investment into one of humanity’s major global health challenge, that of HIV and TB. The partnership is addressing a real problem that affects real people. The projects defined in the K-RITH programme are there to address important research questions that would provide greater insights, understanding and the potential for solutions. All these should bring hope to people who are infected and affected. Most critically, this partnership is an investment into the future, in the training of a new generation of scientific leaders in this important area of health research,” says UKZN’s Vice-Chancellor Professor Malegapuru Makgoba.

Quiet and unassuming, Professor Sturm is excited about the grant and the possibilities it opens up. “Intensive research is already underway both here



Artist’s impression of the new KwaZulu-Natal Research Institute for Tuberculosis and HIV (K-RITH).

and in the United States and I am genuinely hopeful this will lead to significant breakthroughs in the short term in the fight against the disease. When I say short term I am hopeful that it will be within the next few years,” he said.

Explaining some of the background to the development of the disease in South Africa, Professor Sturm said when he arrived in Durban in 1993 from the Medical School in Karachi, Pakistan, the HIV epidemic was in its infancy. “It was an epidemic of viral infections spreading in the population without causing too much disease. There was a high prevalence of TB at that time – nothing unusual for South Africa – but the occurrence of HIV quickly overtook the TB problem and that is in fact the driver of the problem we are facing at present.

“The reason for that is that HIV-infected people are more susceptible to getting TB than they are to acquiring full blown AIDS. The point is that with the rapid spread of HIV, the spread of TB increased as well.

“In the past the best way of knowing whether a person had TB was if one of their family members had TB. This is no longer the case because it is in the places that people frequent that the spread of bacterium is most common, such as travelling in taxis, in market places and in shabeens (informal pubs). In fact, anywhere where there is an overcrowded environment, even if it is in the open air,” said Professor Sturm.



Professor Willem Sturm.

“The fact that the number of people with TB increased led to the microbes having a better chance of becoming drug resistant because there was a larger total population of bacteria in the community. This results at the same mutation frequency to a higher number of cells with mutations and this has led to our main problem at present – the presence of two scary types of TB – MDR and XDR.”

Professor Sturm said the MDR strain could be treated although the death rate was significantly higher than normal TB. However, XDR was basically untreatable and with the high HIV rate, the mortality rate was that much greater. “There is no doubt that HIV with drug-resistant TB is a killer disease.

“KwaZulu-Natal is the epicentre of the HIV epidemic in South Africa and the province has a high number of XDR TB cases. Another problem is that our system is not geared to isolating infected people while there are inadequate facilities available to treat this airborne disease. So the chances of getting infected with the XDR bacterium when visiting a health care facility to get treated for some other ailment is very high – especially if the patient has Aids.”

Professor Sturm said since the 1960s there had been an incorrect belief that when TB became drug resistant the organisms which carried the resistance lost their capacity to transmit from one person to another. The misplaced principle was that as long as appropriate treatment was administered to the person susceptible to TB, there was no need for concern about drug resistance.

“The XDR strain has serious implications and cannot really be controlled **at present** for the simple reason that it is wide spread. When we started examining it in 2005 we found the organisms in 14 of KZN’s health care facilities but within a two-year

period it had spread to a large number of other facilities. In the middle of 2007 we found the strain in 42 of our health care facilities... now we are in 2009 and it is undoubtedly far more widespread because it is untreatable.

“You can’t do anything about it – you can’t stop it. The only way of stopping it is to prevent transmission and that you can only do when the patients are identified – that is why we are involved in big research projects at UKZN thanks to the grant from the Howard Hughes Medical Institute.

“The diagnosis of drug resistant TB takes a minimum of 31 days to identify positively – and that’s quick, usually it takes longer; so before you know what you are dealing with the organisms have already spread. Even if you had facilities to isolate patients it would still be too late – so one of the big projects is to design a test that is able to identify drug resistant TB in a couple of days,” said Professor Sturm.

“In the only year we have complete figures for - 2006 - we diagnosed 2 600 cases of MDR and of those 10% were XDR. In 2007 we have data for only the first six months and the number equalled the total in 2006, that is 2600. The chances of that figure at least doubling by the end of that year are very good.”

Professor Sturm said another great concern was that only 25% of the 2 600 MDR cases in 2006 were referred for treatment to the King George V Hospital in Durban – the other infected people were still walking around spreading TB. Many of those people would die but others would continue spreading the disease.

“Our research offers hope for TB and HIV sufferers. I am confident of a significant breakthrough within a few years,” he added.

- Greg Dardagan

ANTIBIOTIC COMBINATION FOR XDR-TB

Scientists from the Albert Einstein College of Medicine of Yeshiva University have indicated that two antibiotic drugs indicate a potential to combat Extremely Drug Resistant Tuberculosis (XDR-TB).

On September 1, 2006 the World Health Organization announced that a deadly new strain of XDR-TB had been reported from the Tugela Ferry district in Northern KwaZulu-Natal. Of the 544 patients studied in the area, 221 had multi-drug resistant TB (MDR). From these 221 cases, 53 were identified with XDR-TB. Of the 53, 44 were tested for HIV and all were found to be positive. Within 16 days of first being diagnosed through sputum specimen collection, 52 out of the 53 patients died. Since then around 30 new cases are reported daily in KwaZulu-Natal indicating a threat to both regional and global health.

In South Africa, it is estimated that about 70 percent of all TB patients are infected with HIV. In 2008, UKZNs Centre for the AIDS Programme of Research in South Africa (CAPRISA) found that mortality among HIV/TB co-infected patients can be reduced by a remarkable 55 percent if anti-retroviral therapy is provided with TB treatment.

Currently, TB treatment consists of 4 antibiotics that should be taken for at least six months. These are Isoniazid, Rifampin, Pyrazinamide and Ethambutol. However; a significant number of new cases of TB are MDR and XDR. MDR-TB patients are resistant to at least Rifampin and Isoniazid and often to all four. XDR-TB patients are resistant to the drugs used for the treatment of MDR-TB, fluoroquinolones and kanamycin/amikacin. There are no reliable drugs to treat XDR-TB.

During the course of 2009, a trial of a small cohort of patients in KwaZulu-Natal will be conducted by scientists from the Nelson R Mandela School of Medicine at the University of KwaZulu-Natal, led by the Dean and Interim Director of the KwaZulu-Natal Institute for TB and HIV Research, Professor Willem Sturm. The trial will test the potency of the drug combination of Meropenem with clavulanic acid on a small group of patients. In South Africa one in every four cases of TB is XDR-TB.

If the results are successful and funding is available a trial involving a larger number of XDR-TB patients will be conducted. The Albert Einstein College of Medicine is hopeful that the results will be successful and have already filed a patent application on the novel TB treatment.

- MaryAnn Francis

GRADUATION 2009

The University of KwaZulu-Natal conferred 7841 degrees at 18 graduation ceremonies held over 7 days. Of these 360 degrees were either *summa cum laude* or *cum laude* passes and 59% of all graduates are female. The university also conferred 9 honorary doctorates.

In her welcome speech to parents, guests and graduates, Professor Leana Uys; Deputy Vice-Chancellor and Head of the College of Health Sciences said, "The College of Health Sciences is proud to announce two major infrastructural development projects this year. The first is the R600 million grant awarded to the university by US-based Howard Hughes Medical Institute for the development of the KwaZulu-Natal Research Institute for Tuberculosis and HIV (K-RITH). The second development is the new Student Residence housed on the Pietermaritzburg Campus for Medical students."

The College of Health Sciences awarded an Honorary Doctorate to esteemed HIV researcher Professor Bruce D. Walker and two Fellowships to Professor Larry Hadley and Professor Shunmugam Govender. "The Fellowship awards are a recognition by the university of those senior members of academic staff who have distinguished themselves in academic and scholarly work which is of such high quality as to merit special recognition", said Professor Dasarath Chetty, Pro-Vice Chancellor of Corporate Relations.

Professor Larry Hadley is currently the Head of Paediatric Surgery at the Nelson R Mandela School of Medicine and Chief Specialist at the Albert Luthuli Central Hospital. In 2004, he was awarded the Rahima Dawood Travelling Fellowship of the Association Surgeons of East Africa and the Royal College of Surgeons of Edinburgh.

Professor Shunmugam Govender is the current Head of the Department of Orthopaedics at the Nelson R Mandela School of Medicine as well as the Director of the Spinal Unit at the King George V Hospital. He was previously awarded peer reviewed fellowships by the East Africa College of Surgeons and the College of Medicine of South Africa.

The College of Health Sciences was proud to announce that two members of its staff were awarded with Distinguished Teacher's Awards. They are Professor Thandinkosi Madiba from the Nelson R Mandela School of Medicine and Dr Robin Joubert from the Faculty of Health Sciences. The Distinguished Teachers Awards rewards those who demonstrate innovation and excellence in the areas of curriculum development, teaching methodology and assessment methods.

HONORARY DOCTORATE FOR RESPECTED HIV RESEARCHER



Professor Bruce Walker.

Distinguished international scientist, Professor Bruce Walker, who is doing research into HIV at the Nelson R Mandela School of Medicine, has received an Honorary Doctorate from UKZN.

Professor Walker is leading international research to try to understand how people infected with the human immunodeficiency virus are able to fight the virus through their own immune systems. His research focuses on an international cohort that now numbers more than 1300 HIV infected individuals who are not on any medication. Those who are able to maintain a viral load of less than 50 RNA copies/ml are termed elite controllers.

Professor Walker is committed to finding a vaccine to combat HIV and has spearheaded the development of advanced clinical and laboratory facilities particularly those of the HIV Pathogenesis Program and the Doris Duke Medical Research Institute at UKZN. These initiatives were made possible in part through a Doris Duke Foundation grant awarded to Professor Walker to improve HIV medical research in Durban.

Professor Walker always knew that he would pursue a career in science having been raised by two academics. His father was a Geology Professor and his mother a psychologist and artist. In the 1980s Professor Walker began research to get to grips with how the immune system in a human body tries to fight HIV. He found that HIV usually wins the internal battle.

In the 1990s, Professor Walker focused on the various strategies the virus uses to combat the body's immune system, establishing that one out of every 300 HIV- infected patients has an immune system able to fight the virus. These findings led to the next level of research which is the current project in which he is engaged.

This global project focuses on understanding the biological processes which underlie the ability of the immune systems of these patients to combat and prevent any further infection of cells by HIV.

The elite control of HIV refers to this group of individuals otherwise known as "elite controllers". Elite controllers are able to keep their viral load to below 50 virus particles per millilitre of blood. With a viral load of below 2000, one is unlikely to get sick and much less likely to transmit the virus to others, hence transmission and progression is relatively controlled. Professor Walker and his team will explore which host genetic factors are associated with prolonged immune control of infection.

* There are about 5.4 million people living with HIV in South Africa.

- *MaryAnn Francis*

TRIUMPH IN ADVERSITY FOR UKZN DEPARTMENT HEAD

Mr Khathuthshelo Percy Mashige, head of UKZN's Department of Optometry, overcame the handicaps being a quadriplegic forced on him and has graduated with a Master's Degree in Optometry.

Mr Mashige, formerly of the Limpopo Province, joined the then University of Durban-Westville in 1993 as an optometry student having graduated with a BSc Degree from the University of Witwatersrand.

On completion of his degree, he was appointed as a clinical resident in the Department during which time he obtained a Certificate in Ocular Diseases and Pharmaceutical Applications from the New England College of Optometry.

Mr Mashige was appointed Associate Lecturer in 2000 and Head of the Department of Optometry in 2008.

In 2003, whilst conducting field research, Mr Mashige was involved in a tragic motor vehicle accident which resulted in him becoming a quadriplegic. Through determination and the support of colleagues, family and friends, he was able to come to terms with many challenges, returning to the Department of Optometry in 2005.

His disability meant he had to change his teaching methods from being extremely practical to theoretical.

Since joining the Department as an academic, Mr Mashige has embarked on various projects. For his Master's Degree in Optometry he conducted an investigation into the practice trends of optometrists in the private sector in KwaZulu-Natal. The findings of his study

indicated various shortfalls in the service quality and standards of the various practices

Mr Mashige's study also indicated that the majority of private practices were located in the urban areas with only 10.3% in rural areas. This was despite the equity targets of the Department of Optometry which require that 60% of students are from previously disadvantaged backgrounds.

The University of KwaZulu-Natal is one of only four Optometry Departments in the country; hence many students are also from provinces such as the Western Cape, Northern Cape, Mpumalanga, Eastern Cape and the North West. Research has indicated that many of these graduates go back to their provinces to practice.

In 2008, Mr Mashige conducted a study entitled: An Assessment of the Level of Diabetic Patients' Knowledge of Diabetic Mellitus, its complications and management in Durban. The study indicated that diabetic patients knew about the two main types of diabetes and 77% of them reported having Type 2 Diabetes.

Many respondents felt that hereditary factors, diet and lifestyle factors were important risk factors in the development of diabetes. Although 66% of subjects knew of the threat that diabetes mellitus poses to a person's eyesight, only 53% knew the disease could result in diabetic retinopathy, cataracts and glaucoma.

The results indicated a need for educational programmes aimed at improving the knowledge of the effects of diabetes mellitus on the



Mr Khathuthshelo Percy Mashige.

eyes and the need for regular eye examinations. This study was recently expanded nationally.

This year, Mr Mashige enrolled for a PhD in Optometry and is determined to attain his qualifications within three years. His topic is: The Economic Analysis of Blindness in South Africa.

Other projects he is currently working on include: An evaluation of Ergonomics factors leading to computer vision syndrome among computer users employed at UKZN; The Knowledge, Attitudes and Practices of KwaZulu-Natal traditional healers with regards to eye care; The factors influencing Optometry students in choosing their career and institution of learning; The Influence of socio-economic and environmental factors on the health status and quality of life of older persons in KwaZulu-Natal, and A comparison of statistical outcomes of the two methods of visual acuity scoring.

- MaryAnn Francis

ACADEMIC'S RESEARCH ADVANCES DERMATOLOGY IN KZN



Professor Jamila Aboobaker.

A UKZN academic's research assessing skin disorders among patients in Durban has advanced the dermatology profession in KwaZulu-Natal.

Professor Jamila Aboobaker, head of the Department of Dermatology at the Nelson R Mandela School of Medicine (NRMSM), graduated with a PhD in Medicine for her research titled: Skin Disorders in Primary Health Care in KwaZulu-Natal: Testing for Solutions after Assessment of the Burden of Disease and Evaluation of Resources.

Professor Aboobaker's study, aimed at determining the prevalence of disorders in the greater Durban region, was the catalyst for many developments in dermatology.

The case studies of 785 patients from both private and public hospitals were part of her investigation which assessed the severity of skin disorders and the levels of treatment needed. She started her research in 1998, a year prior to her appointment as Head of the Department of Dermatology.

Being department head and simultaneously embarking on this research placed Professor Aboobaker in a position to implement positive changes in the profession as determined by research findings.

One intervention was the training of primary health care nurses to identify and attend to common skin diseases at clinics and hospitals in KwaDabeka, Newlands, Isipingo, Newlands and Phoenix. Her initiatives have also led to an increase in the number of trainee dermatologists at the Medical School from two to twelve.

Over the last ten years, 15 dermatologists qualified at UKZN enabling dermatology services at five metropolitan hospitals in Durban. However, the most important accomplishment for Professor Aboobaker is her role in decreasing the waiting period for patients seeking treatment at provincial hospitals.

Describing her achievement as a "dream come true", Professor Aboobaker said many people had been skeptical about her ability to complete her PhD while managing a department. "It is a relief that my research will be acknowledged by the University through the PhD. I embarked on the study with the view to implementing my findings. It is not often that implementation of research findings is achieved."

- Neesha Maharaj

PHD FOR RESEARCH INTO CARE OF TRADITIONAL CIRCUMCISION INITIATES

Research into the provision of cultural care by health care professionals to AmaXhosa men who undergo traditional circumcision has earned a UKZN graduate a PhD in Nursing.

Dr Jafta Ntsaba is one of three graduates within the School of Nursing to achieve his doctorate for research into: The Delivery of Cultural Care by Health Professionals among the hospitalized AmaXhosa Male Initiates of Traditional Circumcision in Eastern Cape.

The research undertaken at four hospitals in the Eastern Cape included the participation of 13 hospitalised initiates and nine health care professionals. It aimed to establish guidelines for health care professionals in the provision of cultural health care to hospitalised initiates.

Dr Ntsaba, who in the past was responsible for implementing programmes aimed at curbing complications related to circumcisions in Sterkspruit, Eastern Cape, undertook this research due to the lack of guidelines for nurses in providing culturally acceptable care to the sufferers. His research intended to provide clarity on appropriate cultural care for hospitalised initiates.



Dr Jafta Ntsaba.

In seeking solutions for the nursing profession, Dr Ntsaba looked at what health professionals deemed appropriate cultural care for hospitalised male initiates and how initiates themselves wanted to be treated.

His suggestion in connection with developing a cultural congruent care policy was the need to “preserve what is good for the custom, to negotiate what is harmful with the hospitalised initiates, educate them on what is good and to restructure some of the processes carried out in hospitals”.

The recommendations of the actions of health professionals could lead to acceptable cultural care to hospitalized AmaXhosa male initiates of traditional circumcision.

Dr Ntsaba said a challenge to women nurses was that traditionally in Xhosa culture it was unacceptable for women to provide cultural care to initiates.

Describing his latest academic achievement as “exceptional”, Dr Ntsaba said he was proud of his educational accomplishment as he was responsible for financing his education since Grade 7.

“I think I am a role model to other nurses showing that the sky is the limit. To the nursing profession this means so much because my research on traditional circumcision and the nursing profession is a new field and I hope nurses will be able to use evidence-based information to deliver cultural care to the AmaXhosa hospitalized male initiates,” said Dr Ntsaba.

Dr Ntsaba, who currently works at the Canberra Hospital’s Eye Clinic in Australia, plans to return to South African and continue research into Transcultural Nursing.

- Neesha Maharaj

ASTHMA THE FOCUS OF DOCTORAL RESEARCH



Dr Poovendhree Reddy.

Genetic factors coupled with environmental exposure increase the risk of children in the south Durban region developing respiratory diseases.

This emerged out of a research document titled: Epidemiological and Genetic Risk Factors Associated with Asthma in the South Durban Region, by Dr Poovendhree Reddy, who graduated with a PhD in Occupational and Environmental Health from the Faculty of Medicine at UKZN.

Dr Reddy received inspiration for her studies through participation in the South Durban Health Study (SDHS) undertaken on behalf of the eThekweni Municipality in 2004 by Prof Rajen Naidoo of the Department of Occupational and Environmental Health at UKZN. To date there has been no similar work done on the African continent and the SDHS is the only study group in Southern Africa active in this area of research.

Focusing on 369 children between the ages of 9 and 11 years old, the study determined the significance of genetic polymorphisms in genes such as GSTM1 (Gluthathione-S-Transferase) and NQO1 (NAD quinone oxidoreductase) in influencing asthma among the children who were also exposed to air pollution.

“The increased risk to air pollution conferred by the GSTP1 and GSTM1 genotypes may have clinical and public health importance because this variant is common in most populations,” said Dr Reddy, a lecturer in Environmental Health at the Durban University of Technology.

Dr Reddy says her research has established that both environmental exposures and genetic factors influenced the susceptibility of children to developing asthma.

“Studying genes may inform us about the biology of asthma which may lead to new therapies or preventative strategies. This study supports the importance of further investigation on these and other genotype variants involved in oxidative stress and respiratory phenotypes in larger cohorts,” she added.

Dr Reddy, whose ultimate goal is establishing a unit for further research in genetic epidemiology, said researching the complex topic of genetic epidemiology had been a challenge.

“Balancing work, motherhood and my research was difficult. Determination and drive helped me succeed. I have always thrived on a challenge,” she added.

- Neesha Maharaj

BLIND GRADUATE HAS A DREAM



Mr Celenkosini Sibiyi.

Visually impaired graduate, Mr Celenkosini Sibiyi is on a mission to make Speech-Language Therapy accessible to his community now that he's achieved a Bachelor of Communication Degree in Speech Language Pathology.

The journey to academic success has been an arduous one for Mr Sibiyi whose visual acuity of 6/84 makes him legally blind.

He has been visually impaired since childhood due to a retinal disorder for which there is no treatment. However, the determination to qualify as a Speech-Language pathologist and serve the rural community of Ngwavuma has taken him through the challenges he encountered.

With the aid of binoculars during lectures, special magnifying spectacles, the provision of large font size notes and specialised Zoomtext computer software, Mr Sibiyi was able to access study material. Staff within his discipline ensured the necessary resources were made available to Mr Sibiyi for his participation in the clinical modules.

"I wanted to prove the point that I was capable of completing my degree. I wanted to set an example for disabled people in my community that I had the potential to succeed despite difficult times. I wanted to prove that I'm more able than disabled," said Mr Sibiyi.

Serving his community service at the Mosvold Hospital in Ngwavuma, Northern Natal, Mr Sibiyi said a bursary through the Friends of Mosvold Scholarship Scheme ensured his entry to study at UKZN in 2004.

Proud to have graduated, Mr Sibiyi is determined to create awareness of speech-language therapy among the community of Ngwavuma where access to such treatment is limited.

As the only visually impaired student admitted to study within the Discipline of Speech Language Pathology, the experience had also been a learning curve for lecturers.

Mrs Penny Flack, deputy head of the Discipline of Speech Language Pathology said: "Cele is the first visually impaired student we have had in the programme so this was a learning experience for all of us.

"However, he is an extremely determined, hard-working and committed young man who was always willing to put in the extra time necessary, whether it was for additional individual tutorial support from staff or extra sessions with the academic development tutor. He also spent every vacation period volunteering at the hospital in his home community of Mosveld."

- Neesha Maharaj

PRECEDENT SET IN DISSERTATION FORMAT



Mr Leshern Karamchand.

The Faculty of Health Sciences has – for the first time - accepted a new dissertation format in awarding a Master’s Degree in Medical Biochemistry.

Mr Leshern Karamchand, who graduated cum laude for his research which investigated the toxicity of antiretroviral drugs taken by HIV positive patients, presented his dissertation in the form of research papers published in a peer reviewed journal as opposed to the traditional format.

His research paper titled: Lymphocyte Mitochondrial Depolarisation and Apoptosis in HIV-1 infected HAART (Highly Active Antiretroviral Therapy) Patients, was published in the Journal of Acquired Immune Deficiency Syndrome (JAIDS) in August 2008.

Forty-eight HIV positive patients, attending the Family Health Clinic at the King Edward VIII Hospital in Durban, participated in the study which investigated the toxic side effects of the Non-Nucleoside Reverse Transcriptase Inhibitor (NNRTI) class of antiretroviral drugs on their lymphocytes. Through an investigation of 32 case studies of participants taking antiretroviral drugs compared to 16 who were not on the drugs, Mr Karamchand demonstrated that NNRTI drugs induced lymphocyte apoptosis (programmed cell death) *in vivo*.

Professor Anil Chuturgoon, Head of the Discipline of Medical Biochemistry, said he was pleased his discipline was the first within the Faculty of Health Sciences to have a Master’s student graduate by submission of published scientific articles.

“The traditional thesis format should be actively discouraged as many theses lie on shelves without being published. I commend the University for the innovation which becomes a ‘win-win’ situation for both the students and the discipline.”

Professor Chuturgoon added that examiners found Mr Karamchand’s thesis to be of a high standard and warranted a distinction.

Responding to his academic success, Mr Karamchand said he placed high expectations on himself and was elated to have earned his degree cum laude. Learning that he was the first student to obtain his Master’s Degree in Biochemistry through the submission of a dissertation of published research papers, Mr Karamchand said: “It is good to set a precedent and I advise students to follow this route. Papers that are internationally peer reviewed lend more credit to the work submitted for examination. Furthermore, it stands up to international scrutiny.”

Mr Karamchand attributed his success to a supportive family and the advice of his supervisors, Professor Chuturgoon, and Dr Halima Dawood of the Discipline of Medical Biochemistry and Department of Medicine respectively.

As a recipient of a Fulbright Scholarship, Mr Karamchand will pursue his PhD in Nano Biotechnology at a university in the United States in August.

- Neesha Maharaj

UKZN ACADEMIC NAMED AS ONE OF THE TOP 50 MOST INFLUENTIAL INDIVIDUALS IN HIV/AIDS IN THE WORLD



Professor Coovadia

Leading academic, scientist and human rights activist, Professor Hoosen (Jerry) Coovadia has been recognised as one of the top 50 most influential individuals in HIV and AIDS in the world by the Family Health International (FHI) based in the USA for his outstanding contribution to medical science and medicine in the field of HIV and HIV advocacy. Professor Coovadia who was the former Head of Paediatrics at the Nelson R Mandela School of Medicine at UKZN and the Victor Daitz Chair in HIV and AIDS is widely recognised as an expert in perinatal HIV transmission. He is currently a Director in the Durban Branch of the Reproductive Health Research Unit.

Family Health International (FHI) has implemented a systematic effort to identify the most influential individuals in HIV and AIDS and involve these thought leaders in a worldwide campaign to increase awareness of and support for family planning as an HIV prevention strategy.

As a distinguished academic whose primary fields of expertise are Paediatric Nephrology, Infectious Diseases and Nutritional Diseases, Professor Coovadia has published prolifically, leads a range of research programmes, advisory groups and development trusts, and is involved in numerous multidisciplinary activities, development initiatives (e.g. poverty alleviation) and health policy formulation. He is internationally recognised for his groundbreaking research in HIV and AIDS transmission from mother to child, especially through breastfeeding and is the Protocol Chair for HIVNET 023 and HPTN 046.

Professor Coovadia said, “I am as surprised as I am pleased that work in the field of a comprehensive programme for prevention of perinatal transmission of HIV spills over into wider issues”.

Professor Coovadia has received numerous accolades and awards. He was elected as a Fellow of the University in 1995 and was awarded an honorary DSc by the University of Durban Westville and the University of the Witwatersrand. In 1999 President Nelson Mandela honoured him with the Star of South Africa for his contribution to democracy and health and he received a silver medal from the Medical Research Council for excellence in research. In 2000 he received the International Association of Physicians in AIDS and Care Award, the Heroes in Medicine Award in Toronto, Canada, the Nelson Mandela Award for Health and Human Rights and he was elected a Foreign Member of the Institute of Medicine of the National Academy of Sciences, USA – an honour that is seldom awarded. In addition he received the ASSAf Science for Society Gold Medal by the Academy of Science of South Africa for his outstanding contribution to medical science and the South African Medical Association’s (SAMA) Fellowship in the Art and Science of Medicine Gold Award.

He is renowned for being chairperson of many types of international academic meetings and conferences, and is a leading figure in the health education and research and corporate sector initiatives in Africa.

He is particularly committed to developing research capacity, having supervised over 40 postgraduate students and taught in the medical, nursing and allied health professions for more than 20 years. His research output is exceptional – he has authored or co-authored more than 300 articles in peer reviewed journals, many of them leading international journals. He is co-editor of the textbook *Paediatrics and Child Health*, which is widely used by medical students and junior doctors throughout South Africa.

- Xoliswa Zulu

UKZN CONTRIBUTES TO GLOBAL HEALTH POLICIES & SCIENTIFIC RESEARCH

Professor Salim Abdool Karim Pro-Vice-Chancellor (Research) and Director of the Centre for the AIDS Programme of Research in South Africa (CAPRISA) has been appointed to serve as the Chairperson of the Scientific and Technical Advisory Group (STAG) for Reproductive Health and Research, at the World Health Organization (WHO) based in Geneva. The Advisory Group is comprised of about 30-40 leading scientists from all over the world who provide WHO with expertise in contraception, pregnancy, infertility, abortion, sexually transmitted infections and reproductive health services.

The main task of this Advisory Group is to review the content, scope, and dimensions of the Human Reproductive Program and to make recommendations for research priorities.

Professor Abdool Karim, who served as the Vice-Chair of STAG for the last three years was selected by the WHO to serve as the Chairperson for 2009 and to Chair the 2009 meetings of the Group.



Professor Salim Karim

Professor Abdool Karim said that the appointment is in recognition of the quality of South African science. “I think this Group provides an important service by assisting WHO in trying to find ways to improve reproductive health,” he said.

“Serving on the Advisory Group of the WHO has exposed me to research that is being done on the major global challenges in reproductive health. When I go to these meetings I’m humbled to learn about the global challenges facing our attempts to improve health in areas such as contraception and safe pregnancy. The people in the Advisory Group are world experts. These meetings provide me with an opportunity to learn from them and see how scientists from other regions of the world approach these important health problems,” said Professor Abdool Karim.

The Human Reproduction Program (HRP) originated in 1972 as a WHO Special Program to support and evaluate international research and development related to human reproduction, with particular reference to the needs of developing countries. The Special Program carries out two broad types of activities: firstly, coordinating research through a global network; and secondly, building national capacity in fertility and sexual and reproductive health research. A major HRP objective has been to monitor and provide information on the safety and efficacy of the most widely used contraceptives, which is an invaluable global public good. HRP has also engaged in basic and applied contraceptive research and in research on priority sexual and reproductive health problems that affect poor and vulnerable groups, particularly poor women and adolescents.

Professor Abdool Karim is, a clinical infectious diseases epidemiologist whose main current research interests are in microbicides and vaccines to prevent HIV infection and implementing antiretroviral therapy in resource constrained settings. He is also Professor of Clinical Epidemiology at the Mailman School of Public Health at Columbia University and Adjunct Professor of Medicine at the Weill Medical College of Cornell University.

WHO is the directing and co-ordinating authority for health within the United Nations system. It is responsible for providing leadership on global health matters, shaping the health research agenda, setting norms and standards, articulating evidence-based policy options, providing technical support to countries and monitoring and assessing health trends.

- *Thembeke Dlungwane*

UKZN'S RECEIVES R7 MILLION FOR AFRICAN TRADITIONAL HEALTH LABORATORY

The University of KwaZulu-Natal's has received R2 million from the Ibn Sina Institute of Tibb for the construction of first African Traditional Medicine Laboratory. The initiative is led by UKZN's Professor Nceba Gqaleni Chair in Indigenous Health Care Systems funded by the National Research Foundation. Over the next five years, the Institute has committed a further R5 million over a five year period to sustain the programme.



Professor Gqaleni, a leading scientist at the Nelson R Mandela School of Medicine and his team have conducted basic and applied research into traditional medicine and African Health care systems.

L-R: Professor Nceba Gqaleni; Professor Rashid Bhikka: Director and Chair of the Ibn Sina Institute of Tibb-South Africa, Mr Bruno Van Dyk: Executive Director of the UKZN Foundation and Professor Nelson Ijumba: Deputy Vice-Chancellor of Research.

In 2007, the Nelson R Mandela School of Medicine was awarded a Research Chair on Indigenous Health Care Systems from the Department of Science and Technology. The mission of the Chair is to promote African Traditional Medicine through excellence in research and to become a centre of choice for traditional health practitioners, indigenous knowledge holders and scientists for research of African Traditional Medicine. Training will include short courses, bridging modules and undergraduate courses.

Since the awarding of the Chair in 2007, several international and national collaborative projects have been initiated including the partnership with the International Collaborating Centre on Indigenous Phytotherapies (TICIPS). TICIPS presented the first opportunity for medical doctors, scientists and traditional healers to internationally cooperate as equal partners in exploring indigenous African phytotherapies for AIDS, secondary infection and immune modulation in a clinical trial.

Together, scientists, medical practitioners and traditional healers will study the medicinal properties, safety and effectiveness of several African plants in use today by traditional healers. South Africa is home to more than 200,000 traditional healers who care for more than 27 million people.

The Ibn Sina Institute of Tibb is a non-profit organization that was established in 1997 to promote the training and practice of Unani-Tibb in South Africa. Unani-Tibb is a traditional system of medicine with its roots tracing back to Hippocrates, Galen and Ibn Sina which is currently extensively practiced in the Arabian and Indian sub-continent.

- *MaryAnn Francis*

UNESCO-L'OREAL SPONSORS UKZN'S PhD STUDENT'S PROJECT

Ms Nonhlanhla Dlamini, a PhD student in the Department of Occupational and Environmental Health based within UKZN's Nelson R Mandela School of Medicine recently received the UNESCO-L'OREAL Fellowship in Paris, France for her research project entitled, "An Investigation of African Traditional Medicine used in the Treatment of Kaposi's Sarcoma".

The UNESCO-L'OREAL International Fellowship is awarded to women in science and thus far the programme has awarded 135 fellowships to women across 71 countries. Ms Dlamini has been given the opportunity to collaborate with the University of Florida, United States. Within the laboratory at the University of Florida, she will have access to an in vitro model of Kaposi's sarcoma. This model will be used to test the efficacy

of the African traditional medicine against Kaposi's sarcoma.

In South Africa, about 80 % of the population still makes use of traditional medicines. Ms Dlamini will scientifically evaluate and validate an African Traditional

Medicine with the potential to be used as a treatment for Kaposi's sarcoma, a cancer of increasing importance in Africa because of its close association with HIV and AIDS.

Ms Dlamini said, "Current clinical treatments for Kaposi's sarcoma have limited efficacy and toxic side effects. Newer treatments have limited availability because they are expensive. It is therefore necessary to find alternative treatment modalities and African Traditional Medicines offers



Ms Nonhlanhla Dlamini

a fresh, new approach. This study has a potential to produce not only an effective and safe product but also a product that will be accessible and affordable to the general South African public."

- MaryAnn Francis

RECOGNITION AWARD FOR PROFESSOR SABIHA ESSACK

At a glittering gala dinner held on the 15 April, Professor Sabiha Essack, UKZN's Dean of the Faculty of Health Sciences was honoured with the Minara Chamber of Commerce Recognition Award for her individual achievements and contribution to society.

Professor Essack began her professional career with the B. Pharm degree in 1988 and practiced as a hospital pharmacist for three years within the KwaZulu-Natal Department of Health before returning to the University of KwaZulu-Natal (Westville) in 1992 to pursue the M. Pharm degree. As a Wellcome Trust Research Fellow she completed her research towards a *PhD* at St Bartholomew's and the Royal London School of Medicine and Dentistry in the United Kingdom. Her *PhD* research involved the molecular biology and biochemistry of b-lactamase-mediated resistance in South African nosocomial *Klebsiella pneumoniae* isolates.

Professor Essack is president of the South African Chapter of the Alliance for the Prudent Use of Antibiotics and a member of the American Society of Microbiology, the International Society for Infectious Disease, the National Antibiotic Surveillance Forum, the Federation of Infectious Diseases Societies of South Africa and the Islamic Medical Association. She also served on the National Executive of the Pharmaceutical Society of South Africa (2004-5).

Due to her contribution to transformation in higher education she has been selected as coordinator of the Africa Higher Education Collaborative, a 4-country Ford Foundation-funded initiative addressing student access, retention and success in African Higher Education.

Vice-president of the Minara Chamber of Commerce said, "The Chamber embarked on the Recognition Awards to honour persons, such as yourself, whose successes and progress are an inspiration to our country and to our community. Highlighting your contribution serves as an example to the younger generation and sets a goal for others to emulate."

PROFESSOR ESSACK APPOINTED CO-ORDINATOR TO AFRICAN EDUCATION THINK TANK

Dean of the Faculty of Health Sciences, Professor Sabiha Yusuf Essack, has been appointed Co-ordinator to the Africa Higher Education Collaborative (AHEC).

AHEC is a collaborative of scholars from four African countries – Egypt, Kenya, Nigeria and South Africa – which aims to identify strategies for improving equity and access to higher education in Africa by serving as a think tank and repository of information and analysis about access and equity issues in African higher education.

Insights and solutions gained from this interaction are shared with policy makers, fellow scholars and practitioners across the African continent.

“It is a privilege to learn with and from African colleagues facing similar

challenges within different socio-political contexts,” said Professor Essack.

As Co-ordinator, Professor Essack’s specific focus will entail the development of documents, agenda setting, contributions to official communications and being a representative of the four-country group.

“My participation advances UKZN’s vision of becoming the Premier University of African Scholarship. It features prominently in addressing access and success in higher education on a continental level,” said Professor Essack.

Professor Essack, who has been involved in a number of initiatives within AHEC, is a NRF-rated researcher and has established the Antimicrobial Resistance Research



Professor Sabiha Essack.

Proto-Unit in the School of Pharmacy and Pharmacology. She has secured several research grants for Essential National Health Research, from the World Health Organization, the Wellcome Trust, the Medical Research Council and the National Research Foundation to investigate strategies for the prevention and containment of antibiotic resistance.

- *Thembeke Dlungwane*

POSTGRADUATE PROGRAMME IN MEDICAL INFORMATICS ENHANCED

The School of Information Systems & Technology (IS&T) and the Department of Telehealth at UKZN are working together to enhance the post graduate programme in Medical Informatics.

The programme leading to a Postgraduate Diploma in Medical Informatics and a Master of Medical Science in Medical Informatics introduces students to the different areas in healthcare which may be improved through the implementation of modern Information and Communications Technologies.

The School of IS&T brings to the collaboration its expertise in cutting edge course delivery technologies such as podcasting and virtual

classrooms. A joint effort by the School of IS&T, the Department of Telemedicine and the UKZN Innovation has seen the installation of the first fully fledged podcast producer solution in South Africa based on Apple technologies.

Professor Manoj Maharaj, the Head of School of IS&T, said: “When you consider that 90 percent of Africans who access the Web do so via mobile telephones, the ability of the podcasting technology to easily compress video into a format that may be viewed on mobile telephones makes lectures available to a large number of Africans.”

The School of IS&T also has an active research project called

NextEd, supported by IBM and the African Association of Universities, that is investigating the use of online environments for content delivery in virtual classrooms. A pilot project between UKZN, Daystar University in Kenya and the University of Massachusetts in the United States is already underway.

Professor Maurice Mars of the Department of Telehealth said the collaboration had been extremely beneficial for both departments and was in line with their vision to share medical information and education with other institutions around Africa.

- *Xoliswa Zulu*

HAEMOPHILIA FOUNDATION PROJECT LAUNCHED

The Novo Nordisk Haemophilia Foundation project has been launched at a function at the Nelson R Mandela School of Medicine.

The launch – attended by Department of Health officials, Haemophilia Foundation members, academics, clinicians as well as patients living with haemophilia – is seen as a milestone in the improvement of health care for haemophiliacs in KwaZulu-Natal.

Haemophilia is a genetic disorder which impairs the body's ability to prevent blood clotting. The effects of this disorder are manifested in men while the carriers are women.

KwaZulu-Natal has the largest number of patients living with haemophilia in South Africa – a total of 300 – while there's only one comprehensive treatment centre based at King Edward VIII Hospital in Durban.

“Two comprehensive health care centres will be established at Greys Hospital as well as at Ngwelezana Hospital. Patients will receive multi-disciplinary care by a team of experts resulting in early diagnosis closer to the homes of patients,” said Dr Rajendra Thejpal, co-ordinator of the project.

The project will take expert health care services into the communities, create patient awareness, improve the expertise of a range of health care professionals who treat haemophiliacs and consolidate comprehensive health care for all patients living with haemophilia.

Dr SSS Buthelezi, General Manager of Priority Health Programmes in the Department of Health said: “The Novo Nordisk Haemophilia Project is one of many prestigious projects launched by the University of KwaZulu-Natal and indicates its commitment to the community.

“The province of KwaZulu-Natal has the largest uninsured patient population and hence the Department of Health is grateful for the assistance from UKZN and its global partners both to improve health care and to strengthen the resources at hospitals.”

Mr Bradley Rayner, Chairperson of the South African Haemophilia Foundation who was diagnosed with haemophilia at the age of three months, encouraged all patients at the launch to get involved in treatment care.

The 20th Anniversary of World Haemophilia Day on April 17 was commemorated by the Novo Nordisk Pharmaceutical Company, health care workers and patients living with haemophilia in four provinces of the country. The Novo Nordisk Haemophilia Bus travelled to the provinces of KwaZulu-Natal, North West, Limpopo and Mpumalanga raising awareness about the condition.

- MaryAnn Francis



Seen at the launch of the haemophilia project are UKZN's Head of the Department of Haematology; Professor VB Jogesaar; Haemophilia Project Co-ordinator, Dr Rajendra Thejpal, and Senior Professional Nurse in Haemophilia at the King Edward VIII Hospital, Sister Phumi Nkosi.

NEW HEAD OF MEDICAL SCIENCES

Newly-appointed Head of Medical Sciences at UKZN, Professor William Daniels, is a man on a mission.

The charismatic former University of Stellenbosch Head of Medical Physiology is excited about his new appointment.

“I am so happy to be here because I want to make a difference. I am a very motivated individual – especially when it comes to my work – so I think my stay here will be a fruitful one,” said Professor Daniels.

Professor Daniels said one of the major challenges would be to build on the foundation his predecessor, Professor Cephas Musabayane, had established.

“He has done so much for the department and his academic credentials speak volumes. I think it

will be a huge challenge for me to build on what he has achieved. But I have trust in my abilities and I know I will be up to it.”

A specialist in neurosciences with the emphasis on brain functioning and behaviour, Professor Daniels aims to improve the research thrust within the School and the University at large.

“Our university is research driven. To live up to that as academics we need to do more work in terms of research production. My focus is to make sure we improve our research capabilities. I also want to improve the relationships we have with other departments, I think that is very important,” said Professor Daniels.

His vision includes among other things to make the School of Medical Sciences one of the best within the



Professor William Daniels.

Faculty of Health Sciences through having proper first world infrastructure.

Another challenge was for his department to attract more African post-graduate students.

- Sabelo Nyuswa

NEW HEAD OF PHARMACY AND PHARMACOLOGY SCHOOL SPELLS OUT HER PRIORITIES

Enhancing research, working on the possibility of increasing the first year student intake and introducing new modules for undergraduate and postgraduate students are priorities for newly-appointed Head of the School of Pharmacy and Pharmacology, Dr Fatima Suleman.



Dr Fatima Suleman.

Responding to her appointment, Dr Suleman said: “I applied for this position because I wanted to make a difference at the School. I’m humbled by my success and excited to work with a team of 20 staff members to raise the profile of the Institution both nationally and internationally.”

With a clear plan in mind for the School, Dr Suleman hopes to secure the necessary funding to increase research output by academic staff.

Two innovative on-line modules she designed are expected to be introduced shortly – an on-line AIDS education course for first year Health Sciences students and an on-line master’s course in Pharmacy Practice aimed at encouraging postgraduate students to continue their studies.

While she is confident her plan to admit more than 85 first year pharmacy

students is achievable, she said filling staff vacancies to meet the demand of additional students posed a challenge.

A lecturer at UKZN since 2005, Dr Suleman’s areas of research include pharmaco-vigilance, pharmaco-economics and health systems research. She plans to pursue her own research interests after she takes care of the additional duties that form part of her new job.

Holding a Master’s degree in Pharmacy Practice from the former University of Durban-Westville and a PhD in Pharmacy through the University of Illinois (USA), Dr Suleman has had research articles published in the *International Journal of Pharmacy Practice*, *Africa Insight* and *Journal of Evaluation in Clinical Practice*.

- Neesha Maharaj

DISTINGUISHED TEACHERS AWARD

Four academics from the Faculties of Health Sciences, Humanities and Management Studies received the prestigious Distinguished Teachers Award at graduation ceremonies in April.

Professor Thandinkosi Madiba, a Professor of Surgery at the Nelson R Mandela School of Medicine; Dr Francesca Balladon, a Senior Lecturer within the French Programme; Dr Robyn Joubert, Head of the School of

Audiology, Occupational Therapy and Speech-Language Pathology; and Associate Professor Kriben Pillay, Programme Co-ordinator for the Leadership Centre are recipients of the Awards for the 2008 academic year.

The Distinguished Teachers Awards rewards those who demonstrate innovation and excellence in the areas of curriculum development, teaching methodology and assessment methods.

Deputy Vice-Chancellor, Teaching and Learning, Professor Renuka Vithal said: "The standard of entries was very high and the selection committee had a difficult task of identifying the successful candidates. This year we are very pleased with the diversity of academics and disciplines being recognised and rewarded."

Professor Madiba said: "It reminds me of my own days as a student and it makes me wish that all my teachers who encouraged me to be what I am today were all still alive to witness the tremendous responsibility and power which they instilled in me."

Receiving the Award is both "rewarding and humbling" for Dr Joubert who has lectured for 33 years. Dr Joubert subscribes to participatory teaching where students interact with one another and their lecturers.

- Neesha Maharaj



Professor Madiba.



Dr Joubert.

UKZN'S DEPARTMENT OF OPTOMETRY COLLABORATES WITH WORLD VISION INTERNATIONAL

Mr Khathutshelo Mashige, Head of the Department of Optometry at the University of KwaZulu-Natal (UKZN) is proud to announce a joint initiative with World Vision International (WVI) – South Africa. The two organisations will offer free vision screening tests to children in communities identified by World Vision International as requiring these services. Children that are identified as having a vision problem will then be referred to the Department of Optometry's state of the art paediatric clinic situated on the Westville Campus.

World Vision International-South Africa Office was created in 1950 as an emergency relief, development and advocacy agency. The organization's mission is based on Christian principles and it's vision for every child is "life in all its fullness, our prayer for every heart and the will to make it so". World Vision South Africa focuses on

children as the heritage and future of the community. Currently the organization has a total of 500050 children registered and in receipt of its services.

Last year UKZN's Department of Optometry was approached by World Vision South Africa to assist with a patient by examining the child and offering free optometric devices. Seven year old Siboniso Ngidi was diagnosed with bilateral cataracts and referred to St Aidan's Hospital for surgery after being referred to World Vision South Africa through its KwaMaphumulo Area Development Programme in the Stanger district.

Mr Khathutshelo Percy Mashige said, "The department recognizes community engagement as one of the three pillars of its core functions. This collaboration is aimed at strengthening co-operation between our department and World Vision International South

Africa. It will mainly involve optometry students examining patients arranged through World Vision International. This initiative will benefit our students in that it will provide them with the much needed exposure to patients presenting with a variety of clinical problems. With the imminent introduction of community service in optometry, the department plans to reciprocate by ensuring that its activities make a positive impact in communities. Furthermore, this will create an opportunity for students to do research projects in these communities, enhancing the mission and vision of UKZN."

For further information, please contact Mr Mashige on 031-2607352 or Ms Precious Geveza at Precious_Geveza@wvi.org.

- MaryAnn Francis

NRF RATING FOR SPORTS SCIENCE RESEARCHER



Dr Andrew McKune.

Dr Andrew McKune, Associate Professor at the School of Physiotherapy, Sport Science and Optometry has received a Y2 National Research Foundation (NRF) rating.

The rating is “awarded to people normally younger than 35 years of age, who have held a doctorate or equivalent qualification for less than five years at the time of application, and who are recognised as having the potential to establish themselves as researchers within a five-year period after evaluation, based on their performance and productivity as researchers during their doctoral studies and/or early post-doctoral careers”.

Dr McKune specialises in Exercise Physiology, Teach Exercise Physiology and Exercise Science in the Discipline of Sport Science. He is co-ordinator of the coursework Master’s Degree in Sport Science, Biokinetics and Exercise Science Streams.

He is currently working on three research projects – (1) examining the effect of exercise on immune function and inflammatory responses in clinical and healthy populations; (2) examining methods to prevent or reduce exercise induced skeletal muscle damage, and (3) examining the use of the microdialysis technique in exercise and sport science.

In 2007 he was recognised as Junior Researcher of the Year at the Tshwane University of Technology and in 2008 he received the MRC Grant for Self Initiated Research.

“The NRF rating has played an important role in motivating me to continue researching. The feedback I received from the reviewers highlighted areas where I can improve. This will really help me move forward so that I am better placed to improve my rating in 2014.”

Dr McKune has presented more than 30 papers of which 16 have been published.

- *Thembeka Dlungwane*

VIDEO-CONFERENCING USED TO IMPROVE SKILLS OF MIDWIVES

The School of Nursing’s *Happy Mothers and Babies by Empowering Midwives Programme* has begun in earnest with midwives from rural areas receiving advanced midwifery training through video conferencing.

Using video conferencing technology provided by the Department of Tele-Health Medicine at the Nelson R Mandela School of Medicine, Mrs Thandi Ndebele, the Midwifery Programme Director at the School of Nursing, linked up with four learning sites in the Madadeni, Manguzi, Lower Umfolozi and Port Shepstone areas.

At present 43 midwives are improving their midwifery skills through the two-year programme which is a collaborative effort between the School of Nursing and the KwaZulu-Natal Department of Health.

The programme was started in response to the high mortality rate of newborn babies and mothers in rural areas. Lectures on the ‘Prevention of Mother-to-Child Transmission of HIV’ and on ‘disseminated Intravascular Coagulopathy’ as well as regular question and answer sessions formed part of the day’s programme.

Mrs Ndebele, who has overseen the programme since inception, said: “This training session is a momentous occasion for us because it’s the first time we have used such technology (video-conferencing) in facilitating skills development. There aren’t many doctors out at the targeted sites to train midwives so video conferencing allows us to reach out to more people.”

- *Neesha Maharaj*

LATEST IMAGING SYSTEM INSTALLED AT NEW MOLECULAR PHARMACOLOGY UNIT

Pharmacology research at UKZN received a boost thanks to the recent acquisition of a state-of-the-art imaging system valued at R260 000.

The ChemiDoc XRS Imaging System – used in image capturing and analysis - is now set up in the Department of Pharmacology.

The new equipment is earmarked to aid work conducted by the department's newly formed Molecular Pharmacology Unit. According to Pharmacology lecturer, Mr Peter Owiri, the system will facilitate new research in the areas of drug interaction and drug metabolism.



From Left: Mr Peter Owiri, Lecturer and Dr Johannes Bodenstein, Head: Department of Pharmacology seen with the new ChemiDoc XRS Imaging System.

Used primarily by the Department for the analysis of DNA and protein expression systems, the imaging system's versatility will facilitate research by other disciplines.

Research groups within the School of Pharmacy, Physiology, Biochemistry, Microbiology and the Biomedical Research Unit are also set to benefit through the use of the system.

"I'm elated and thankful to the Dean of the Faculty of Health Sciences for this latest purchase. It's going to take our research to a new level," said Mr Owiri.

Having set up a new Molecular Pharmacology Unit late last year, Mr Owiri said this latest equipment would enable researchers to work more efficiently as in the past samples of research work had to be sent to external laboratories.

Initially, only postgraduate masters and PhD students and staff will have access to the equipment but later undergraduate students will be trained to use it. Since its installation at the end of January researchers and postgraduate students have been trained to use the imaging system.

- Neesha Maharaj

HIV INCIDENCE HIGH AND UNCHANGED IN RURAL HLABISA OVER FIVE-YEAR PERIOD



The Africa Centre in Mtubatuba

A study conducted by Dr Till Bärnighausen, senior epidemiologist at The Africa Centre for Health and Population Studies and Associate Professor at the University of KwaZulu-Natal, has found that the HIV incidence in the Hlabisa sub-district, Umkhanyakude remains high. The study is based on data from the Africa Centre HIV surveillance which once per year asks all adults who are residents in the Africa Centre Demographic Surveillance Area for informed consent to participate in population-based HIV testing.

Over a five year period, from 2003 through 2008, 770 seroconversions (converting from HIV negative to HIV positive status) occurred among 9,614 individuals and 23,136 person-years at risk. The overall HIV incidence was 3.3 per

100 person-years. The high HIV incidence occurred despite a range of intervention programmes offered in the area such as those offered by the non-governmental organization *LoveLife* as well as *Star For Life*, a school-based programme in the district, and free voluntary counselling and testing in public-sector primary care clinics. UKZN's Africa Centre also, as a service with its HIV surveillance, offers voluntary counselling and testing (VCT) in the homesteads of the participants, should they wish.

Dr Bärnighausen reported that 76% of the observed 770 seroconverters were women; 64% lived in rural areas and 11% were migrants. 80% of seroconversions occurred in people under the age of 30. The high rate of seroconversions in young people indicated a need to reach youth in HIV prevention. While a large proportion of the recent seroconverters under the age of 25 was still in school (>40%), >40% did not attend school.

51% of seroconverters reported having attended a voluntary counselling and testing service at least once before subsequently seroconverting. The majority of seroconverters who attended VCT used the testing services in public-sector primary care clinics. While this observation does not allow any judgement of whether or not VCT is effective in preventing HIV acquisition, it does suggest that VCT coverage and effectiveness needs to increase in order to reduce the current high level of HIV incidence in the community.

57% of seroconverters lived in a homestead which included at least one other HIV-positive member and 12% lived in homestead with one other member who had seroconverted in the past five years. Statistics also indicated that 32% of seroconverters were not aware of Anti-retroviral Therapy (ART). 57% of those seroconverters who were aware of ART knew where to obtain treatment, and 32% knew somebody personally who was taking ART.

The recommendations of the study are to intensify efforts to prevent HIV infection. While school based interventions would be promising, because they would potentially reach large proportions of seroconverters, they should include a component for out-of-school youth as well. Prevention interventions should reach both rural and urban populations as well as migrants. Finally, service delivery and reach of Voluntary Counselling and Testing needs to expand. The data further suggest that two types of intervention approaches could hold promise, that is, family-based prevention methods as well as the integration of Anti-Retroviral therapy (ART) and HIV prevention.

The work at the Africa Centre is possible through the excellent working relationship with Traditional Councillors and the community in the area. Ongoing feedback sessions are held between researchers and traditional councillors and the community, for instance through regular roadshows organised by The Africa Centre.

Dr Bärnighausen stated, “we do not believe that intervention methods are not having a profound effect on HIV prevalence in the area, however these methods need to be strengthened and adapted to the current status quo”.

Dr Till Bärnighausen may be contacted on 035-5507617 or via e-mail, tbarnighausen@africacentre.co.za

- MaryAnn Francis

DELEGATION OF HEALTH SCIENCES SPECIALISTS VISITS USA

A UKZN delegation of Health Sciences specialists visited centres and universities in the United States recently to discuss the proposed new multi-disciplinary post graduate programmes in Autistic Spectrum Disorders. The Faculty of Health Sciences plans to launch the programmes in 2010.

The delegation comprised Deputy Vice-Chancellor and Head of the College of Health Sciences, Professor Leana Uys; the Head of the School of Audiology, Occupational Therapy and Speech Language Pathology, Dr Robin Joubert and Senior Lecturer in the Discipline of Speech Language Pathology, Ms Jennifer Ann Pahl.

The delegation visited two campuses of the University of Massachusetts (UMASS) – the National Autism Centre in Boston and the Autism programme in the Child Development Centre at Yale University in New Haven.

The visit was co-ordinated by the office of Dr Marcelette Williams, Senior Vice- President for International Relations of UMASS. In 2006, the University of KwaZulu-Natal and the University of Massachusetts signed an agreement to collaborate with regards to teaching and research.

Professor Uys said: “It is hoped the discussions will lead to a further Memorandum of Understanding with the University of Massachusetts to collaborate on the programmes. We received extremely valuable information and access to resources and were given excellent advice on the curricula.”



Together here are, from left, Mr Robin Joubert (UKZN); Dr Alice Carter, Head of the School of Psychology at UMASS in the United States; Professor Leana Uys (UKZN); Dr Susan Wilczynski, CEO of the National Autism Centre, and Ms Jennifer Pahl (UKZN).

MOZAMBIQUAN AND UKZN ACADEMICS JOIN HANDS

Academics attached to the Eduardo Mondlane University (UEM) in Maputo, Mozambique, paid a working visit to UKZN's College of Health Sciences recently.

The visitors were Dr Ismail Mamudo, Dean of the Faculty of Medicine at the university, and Dr Baltazar Chilunde, Head of the School of Public Health.

The aim of the visit was to strengthen an ongoing collaboration between UEM and UKZN's College of Health Sciences and assist in the growth of research capacity at UEM.

The collaboration is focused on developing course-work Research Masters Degrees open to all health professionals at UEM and building the research support systems at the university.

- Leana Uys



The group who participated in the UKZN/UEM Curriculum Workshop are, from left, Head of School: Pharmacy and Pharmacology at UKZN, Dr Fatima Suleman; Dean: Faculty of Medicine at UEM, Dr Ismail Mamudo; DVC Health Sciences at UKZN, Professor Leana Uys; Head of School: Public Health-UEM, Dr Baltazar Chilunde; Dean: Faculty of Health Sciences at UKZN, Professor Sabiha Essack and Project Leader-UKZN, Dr Lyn Middleton.

SINGLE DOSE OF TENOFOVIR PROTECTS AGAINST AN HIV-LIKE VIRUS IN MONKEYS

New data presented at the 16th Conference on Retroviruses and Opportunistic Infections in Montreal, Canada, show that monkeys receiving



a vaginal application of tenofovir gel 30 minutes before virus exposure were completely protected from simian human immunodeficiency virus (SHIV).

In this study six macaques received a single dose of tenofovir gel 30 minutes before exposure to a low-dose of SHIV (an HIV-like virus) in the genital tract. Virus exposure was repeated twice a week for 10 weeks, or 20 times in each animal. At the end of the 10 weeks none of the macaques had become infected, indicating that tenofovir gel as a single pre-exposure dose was protective.

This study provides strong animal data to support the general approach of

coitally related pre-exposure dosing of tenofovir being taken in CAPRISA 004. Women in CAPRISA 004 are asked to use tenofovir gel both before and after vaginal intercourse to assess whether it offers protection against HIV.

The animal study was conducted by researchers from the Center for Disease Control in Atlanta, USA, and the Yerkes Primate Research Center at Emory University, Atlanta, USA.

For more information see the CROI website: <http://www.retroconference.org/2009/>.

- Salim Abdool Karim

COURSEWORK MASTERS IN HAND REHABILITATION AT UKZN

Recently the School of Audiology, Occupational Therapy and Speech Language Therapy launched a coursework Masters degree in Hand Rehabilitation. The degree is one of only two offered in the country.

The students are qualified occupational and physiotherapists from hospitals and private practices in KwaZulu Natal

and the Western Cape. Teaching will be done by local and national experts in Hand Rehabilitation. The programme aims to provide practitioners with advanced knowledge and skill in hand and upper extremity rehabilitation, within each of the two disciplines.

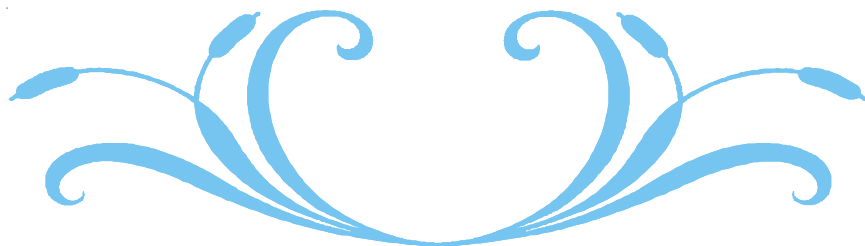
The course is designed to meet the needs of working professionals, thus

lectures occur in blocks of a week at a time for four contact periods (modules) in the first year and 3 modules in the second year, one of which is the mini research dissertation which has to be completed in order to qualify with a Masters degree in Hand Rehabilitation.

- Robin Joubert



Seen at the launch are from left, Mrs Rain Van De Reyden, Senior Lecturer in Occupational Therapy; 3rd from left Dr Robin Joubert, Head of School of Audiology, Occupational Therapy and Speech Language Therapy with the current registered students.



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