

HIV

Discovery
FOUNDATION

neonatology

TRANSMISSIONS
FROM MOTHER TO CHILD
IS AROUND 30%
WITHOUT PMTCT
INTERVENTIONS

CONTROLLING
RHEUMATIC
heart disease

CARDIOLOGY

health

ART OF
THE POSSIBLE

DERMATOLOGY

FAMILY MEDICINE

EMPHATICALLY
TO GROUPS

Streptococcus

GENERAL PRACTICE

AFFECTS 1 IN 400 BIRTHS.

TB



Dr Mukesh Chhira



DOCTOR KGOMOTSO LOVEY SANYANG



DOCTOR Kate WEAKLEY



DR MARTIN BAC



DOCTOR Lydia MYBURGH



DR BLANCHE JELINE CUPIDO



DOCTOR LISA FRIGATI



DR DENIS O'Mahony



DR STEFAN HOFMEYR



DOCTOR KHOLISIWE KUZWAYO



DOCTOR Brian ALLWOOD



DISCOVERY FOUNDATION AWARDS



DR Shaun KLEINHANS



DOCTOR Phindile GINA



DR PATRICK NTULI



Doctor ANTHONY ALBERS



Doctor ROSSY MAMOTABO MATSHELA



Doctor SALOME ABBOTT



DOCTOR CHEVAAN HENDRICKSE



DOCTOR CORDELIA DLOVA



DOCTOR ZIYAD DANGOR

LEADERS IN HEALTHCARE



Doctor LOUIS JENKINS



DR JOHN TUMBO



DR KWALAROTSENG ANNIKIE MOHLALA



DOCTOR Ramokone MAPHOTO



DR ALHAGI NJIE



DR NOMONDE GUMATA

DISCOVERY FOUNDATION ACADEMIC FELLOWSHIP AWARDS

1. Dr Brian Allwood
2. Dr Mukesh Chhiba
3. Dr Blanche Cupido
4. Dr Ziyaad Dangor
5. Dr Cordelia Dlova
6. Dr Phindile Gina
7. Dr Chevaan Hendrickse
8. Dr Kholisiwe Kuzwayo
9. Dr Ramokone Maphoto
10. Dr Mamotabo Matshela
11. Dr Kwalabotseng Mohlala

DISCOVERY FOUNDATION SUB-SPECIALIST AWARDS

12. University of Cape Town, Department of General Surgery.
Sub-specialty: Surgical Gastroenterology. **Dr Stefan Hofmeyr**
13. University of Pretoria, Department of Paediatrics and Pulmonology.
Sub-specialty: Paediatric Pulmonology. **Dr Salome Abbott**
14. University of Limpopo, Department of Paediatrics and Child Health.
Sub-specialty: Neonatology. **Dr Kgomotso Lovey Sanyane**
15. University of Stellenbosch, Department of Obstetrics and Gynaecology.
Sub-specialty: Reproductive Medicine. **Dr Nomonde Gumata**
16. University of Stellenbosch, Department of Paediatrics and Child Health.
Sub-specialty: Paediatric Infectious Diseases. **Dr Lisa Frigati**
17. University of Stellenbosch and University of Cape Town, Department of
Paediatric Rheumatology. Sub-specialty: Paediatric Rheumatology.
Dr Kate Weakley
18. University of Limpopo, Medunsa, Department of Internal Medicine.
Sub-specialty: Cardiology. **Dr Patrick Ntuli**

DISCOVERY FOUNDATION RURAL FELLOWSHIP AWARDS

INDIVIDUAL AWARDS

19. Dr Louis Jenkins
20. Dr Shaun Kleinhans
21. Dr Denis O'Mahony
22. Dr John Tumbo

INSTITUTIONAL AWARDS

23. Van Velden Hospital, Dr
Lydia Myburgh
24. Clinical Learning Centres,
Mpumalanga, Dr Martin Bac

DISTINGUISHED VISITORS AWARDS

25. Clinical Learning Centres,
Mpumalanga, Dr Martin Bac
 - Prof GS Fehrser
 - Prof R Erasmus
26. Ngaka Modiri Molema District,
Dr Alhagi Njie
 - Prof Yosuf Veriava
 - Prof Mkhululi Lukhele

DISCOVERY FOUNDATION EXCELLENCE AWARD

27. Hambisela Programme, Cerebral
Palsy Association, Eastern Cape

Foreword by Dr Vincent Maphai,

CHAIRPERSON OF THE DISCOVERY FOUNDATION

We believe private and public healthcare should work together in South Africa to ensure a strong and equitable healthcare system. It is in this area that the Discovery Foundation can make the greatest contribution. Our vision with the Discovery Foundation Awards is to help develop future specialists, most importantly, in the field of Academic Medicine – a critical field for the future of healthcare in our country. We believe that in this way, the Discovery Foundation is complementing the sustainability of both the public and private healthcare sectors.

It's been six years since we launched the Foundation Awards, and we are now seeing the impact of our investment. The recipients we have funded are now focussed on numerous initiatives that are helping to build capacity in our healthcare system, thereby supporting government in its vision to provide healthcare for all, and further entrenching South Africa as a world leader in creating innovative healthcare solutions.

What we are also beginning to see are the long-term returns on our investment and the ripple effect our support is having in the broader society. Having completed their training, some of our recipients are now supervising and training other upcoming medical professionals in their respective fields. In this way they are imparting their skills and passing their knowledge on to a new generation of medical practitioners who are keen on remaining in South Africa and making a significant contribution to our country. These recipients are fast becoming global experts in their fields, with the potential to shape policies and discourse on healthcare to ensure optimal healthcare access for all South Africans.

Please join us in congratulating this year's recipients of the Discovery Foundation Awards. We are proud to be partnering with them and we wish them well in their chosen fields. We trust you will find their stories, highlighted in this booklet, insightful and inspiring.

DR
VINCENT MAPHAI

Chairperson
Discovery Foundation



Our commitment

TO STRENGTHENING HEALTHCARE IN SOUTH AFRICA

Corporate social investment has evolved from the ‘right-thing-to-do’ to being an important contribution to the development of our country. Used strategically, businesses have the opportunity, and importantly the resources, to provide support to government in its role and responsibility to develop South Africa. Some may question whether it is a business’ role and whether it really makes a difference. We’d like to think that this role of businesses in our broader society is critical in making sure we succeed as a society. It is important for the following three reasons:

A country’s developmental needs and business interests go hand-in-hand: both are necessary for our country to succeed

A society’s developmental needs should go hand-in-hand with business interests in order for a country to succeed. Society should develop, especially where there are huge inequalities, and business interests should also continue to be served. Both are integral to the future growth of a country. Business needs a stable society to flourish and society needs all South Africans – including business – to contribute to its development.

As South Africans, we were able to build this dream and vision of a stable society after the first democratic elections in 1994; and the majority of South Africans bought into this vision. However, while we have had many successes, our country still experiences inequalities. We cannot sustain our vision of a stable society in the face of these inequalities.



For business to succeed in South Africa, we need to have confidence in our country as a stable society

Investor confidence in a country depends on the perception that a country is stable; that it is being governed responsibly and that circumstances are favourable for businesses to grow and be profitable. As a result, business has a vested interest in contributing to this notion of a ‘stable society’. Corporate social investment is a way to achieve this. While business cannot solve all problems or meet all challenges, companies are able to show that they understand the bigger picture within the limited resources available. This shows good intent and creates invaluable goodwill that is necessary to maintain our vision of a sustainable society.

Every South African must have a stake in creating a stable society

In South Africa, with our historical narrative of excluding people, it is even more important for every citizen to be part of creating this stable society we strive for. Through corporate social investment initiatives, business can cross divides and create opportunities for South Africans from all walks of life, to interact and engage with each other. Encouraging employees for example, to get involved in community projects expose many to those communities who do not have the same resources or opportunities they do. CSI is therefore about inclusiveness, the very tenet on which our democracy was founded.

More about our support for healthcare in South Africa

The issue of healthcare is a highly sensitive and politicised issue, not only in South Africa, but also globally. Access to healthcare is an issue that most governments in the world grapple with. It is an issue that affects each citizen, and it continues to grow in importance. In South Africa, it is an issue of restoring and ensuring people’s dignity. It was one of the first areas our government looked at in 1994 to combat inequalities: these have included the introduction of free healthcare in 1994 for all children under the age of six together with pregnant and breastfeeding women making use of public sector health facilities (extended to all those using primary level public sector healthcare services in 1996) and the extension of free hospital care (in 2003) to children older than six with moderate and severe disabilities.

Discovery, as one of the leading financial organisations in South Africa, has an important role to play in our healthcare sector. We understand that the private healthcare sector cannot flourish without a successful and robust public healthcare system. Should one fail it would have a hugely negative impact on the stability of our society. It is also important to understand that the private sector relies on the public sector for an adequate supply of human resources as doctors and nurses are trained in the public sector. In turn, the public sector can use many of the skills and tools developed by the private sector to for example improve the quality of care and management of resources in the public sector. The private sector invests greatly in risk management – skills and tools that are useful for the public sector as well. Supporting projects that make healthcare accessible to more South Africans, and strengthens the healthcare system, has therefore been a logical choice for our CSI initiatives. Our strategy is to choose projects and areas where we can supplement and support healthcare delivery, and where our support will have a multiplier effect in the broader society. We believe that many synergies can be created between the public and private sector, as well as between different stakeholders working in healthcare.

The Discovery Foundation is an example of this strategy. By focusing our investment on developing future specialists and especially academic specialists, we are able to sustain the quality of academic and medical training in South Africa. This long-term vision of boosting academic and clinical knowledge in South Africa’s medical profession, complements the sustainability of both the public and private healthcare sectors.

THE DISCOVERY FOUNDATION

The Discovery Foundation was launched in 2006 with the aim of investing in the education and training of medical specialists and the development of academic and research centres, with a specific focus on those areas with the greatest need.

The vision of the Discovery Foundation is to extend Discovery’s philosophy of making people healthier to more South Africans. Through the Discovery Foundation’s support for specialist training and skills development, we believe we can make a difference and contribute to the future health and wellbeing of all South Africans. Over a 10-year period, the Foundation will have invested more than R100 million in the training of 300 specialists for South Africa’s public healthcare sector.





DISCOVERY FOUNDATION
**ACADEMIC FELLOWSHIP
AWARDS**

These awards are aimed at boosting clinical and academic research and knowledge in South Africa.



“ I am currently training as a sub-specialist Pulmonologist at Groote Schuur Hospital, where I am completing my senior registrarship, and I have completed my Masters Degree in Public Health at the University of Cape Town’s School of Public Health. I am interested in researching the association between pulmonary tuberculosis and chronic obstructive pulmonary disease for my PhD. The burden of chronic obstructive pulmonary disease in low and middle income countries is largely unknown, and this association has previously not been studied. With South Africa’s high disease burden of both non-communicable and communicable diseases, this study is important, for it could help reverse the falling life expectancy of South Africans. I am committed to addressing the country’s healthcare needs, and the Discovery Foundation Academic Fellowship Award will enable me to take the time I need to conduct this research and realise my dream of remaining in the country’s public sector as a specialist in both pulmonology and critical care, and furthering my academic medicine career in a South African university. ”

RESEARCH TOPIC

A study of Tuberculosis-associated Obstructive Pulmonary Disease (TOPD) that will look at the association between pulmonary tuberculosis and chronic obstructive pulmonary disease. This study will be conducted under the supervision of Professor Eric Bateman, Director of the University of Cape Town Lung Institute in conjunction with the Desmond Tutu TB Centre at the University of Stellenbosch.

80 million people globally are affected with chronic obstructive airway disease, a disease normally caused by smoking.



DR BRIAN ALLWOOD

Senior Registrar at Groote Schuur Hospital,
Cape Town, Western Cape

“ I am passionate about making a contribution towards research in the area of Tuberculous Pericarditis (TB Pericarditis). IMPI (Investigation of Management of Pericarditis) is a multi-centre, randomised, double-blind, placebo-controlled trial, designed to evaluate the effectiveness and safety of adjunctive *Mycobacterium w* immunotherapy and prednisolone in 1 400 patients with TB pericarditis from several sites in Africa. *Mycobacterium w* is a heat-killed immunotherapeutic vaccine that has shown significant clinical benefits in the treatment of leprosy. It has also shown efficiency in the treatment of pulmonary TB, but these studies were too small to show significant clinical benefits. The immunogenicity of *Mycobacterium w* in TB has been studied in mice. The study showed that this immunogenicity enhanced T-helper 1 responses, resulting in release of type-1 cytokines, predominantly interferon- γ and interleukin-2, and this propagated cell-mediated immunity against TB, showing that it has a protective effect. The immunogenicity of *Mycobacterium w* vaccination in TB has not been studied in humans. I want to determine the immunogenicity of *Mycobacterium w* vaccination in patients with TB pericarditis in the Cape Town cohort of the IMPI trial. This sub-study of the IMPI trial will provide a new analysis of the immunological responses induced by *Mycobacterium w* vaccination in patients with TB pericarditis. The Discovery Foundation Academic Award will enable me to do this research and my Masters Degree by dissertation. My research has the potential to encourage further research into the use of *Mycobacterium w* as an immunotherapeutic vaccine in the fight against all forms of TB, not just TB pericarditis. Such studies would have a significant impact on TB-associated morbidity and mortality worldwide. My dream is to start my sub-specialist training in Cardiology once I have completed my Masters Degree, and continue doing research in cardiovascular medicine.”

RESEARCH TOPIC

Determining the immunogenicity of *Mycobacterium w* vaccination in patients with TB Pericarditis in the Cape Town cohort of the IMPI trial. This research for a Masters Degree by dissertation will be done under the supervision of Dr Mpiko Ntsekhe, a consultant cardiology specialist and senior lecturer in the Faculty of Health Sciences, University of Cape Town.

Tuberculous Pericarditis, which affects the membrane of the heart, is a significant clinical problem in Africa. It accounts for up to 10% of patients hospitalised with heart failure due to constrictive pericarditis; and in South Africa, at least half of all patients with this condition are HIV-positive. In South Africa, despite TB treatment, there is still a mortality of 26% after six months of treatment, which rises to 40% in HIV-positive patients.

DR

MUKESH CHHIBA

Physician at Groote Schuur Hospital,
Cape Town, Western Cape







“ I am a qualified specialist physician doing my Registrarship in Cardiology at Grootte Schuur Hospital and I am completing my Masters in Medicine. I am interested in furthering my clinical and research training and becoming a clinical scientist in the field of cardiology. I became passionate about cardiology after being exposed to it during my medical studies at an undergraduate level. This interest grew during my internship when I realised the immense clinical burden that cardiac disease presents on our healthcare system at all levels. It is astounding that an easily preventable disease such as rheumatic fever remains so prevalent despite there being a very affordable treatment. Very few doctors in South Africa appear to be familiar with the World Health Organization guidelines for treating patients for rheumatic heart disease, and currently, there is no South African data pertaining to the rates of penicillin prescription and the rates of adherence to secondary prophylaxis for rheumatic heart disease. There is a huge need to address potential interventions to get the high cardiac disease burden under control in South Africa. The Discovery Foundation Academic Fellowship Award will enable me to further my research in the field of rheumatic heart disease and afford me the opportunity to further my clinical and research training and remain in the academic medicine field. My dream is to make a contribution to the body of medical knowledge on cardiac diseases and impart my knowledge on to future students in a teaching capacity.”



RESEARCH TOPIC

Rheumatic heart disease has been virtually eradicated in the Western world, with effective secondary prophylaxis programmes proving to be the most cost-effective intervention in reducing its incidence. However, adherence to secondary prophylaxis in middle to low income countries remains a challenge, and is poor in South Africa. This research aims to look at the clinical characteristics in contemporary care and barriers to adherence to secondary prophylaxis of 300 patients with rheumatic heart disease in Cape Town as well as ways to address these barriers. This research study will be conducted under the supervision of Professor Bongani Mayosi, Head of Department of Internal Medicine, at the University of Cape Town.

According to the World Health Organization, globally, almost 2% of deaths from cardiovascular diseases is related to rheumatic heart disease.

DR

BLANCHE JELINE CUPIDO

Senior registrar at Grootte Schuur Hospital,
Cape Town, Western Cape



DR
ZIYAAD DANGOR

Paediatric Specialist at Chris Hani Baragwanath Academic Hospital, Soweto, Gauteng

“ I am a paediatric specialist working at the Chris Hani Baragwanath Academic Hospital – one of the largest hospitals in the world, serving a population of over 1.2 million people. My interest is in academic medicine, and I have completed my Masters of Medicine through the University of the Witwatersrand. The study which looked at the impact that the antiretroviral treatment programme has had on the burden of TB in Sowetan children was presented at the 7th World Society for Paediatric Infectious Diseases in Melbourne, Australia in 2011. I am furthering my academic career and have registered to do my PhD. My topic relates to understanding the immune correlates of

RESEARCH TOPIC

Researching immunity in pregnant mothers and their newborn infants to the Group B Streptococcus (GBS) bacterial infection in the South African population. This research will examine the role of systemic and mucosal antibody in the protection of newborns and assist in the preparation for an effective vaccine that will immunise pregnant women for the protection of their newborn infants. This study will be conducted under the supervision of Professor Shabir Madhi, Executive Director of the National Institute for Communicable Diseases.

preventing Group B Streptococcus (GBS) disease in newborn infants. I believe the work I am doing in this field is important as there is a high incidence of death in newborn infants in South Africa due to sepsis, and GBS is the leading cause. Through this research, I hope to make a major contribution toward the future planning of a successful vaccine that will prevent GBS sepsis in newborn babies. My dream is to be able to provide good healthcare to all South Africans, and to provide them with a ‘first world service in a third world country’.”

Neonatal deaths account for 25% of all under-5 childhood deaths, of which one-third is due to sepsis, with Group B streptococcus a leading cause of neonatal sepsis worldwide.



DR
CORDELIA DLOVA

Dermatologist at the Dermatology Department,
University of KwaZulu-Natal



DERMATOLOGY
 •
 RESEARCH THROUGH
 THE UNIVERSITY OF KZN
 •
 COSMETIC SKIN AND HAIR DISORDERS
 IN AFRICANS AND INDIANS
 •
 SEVERE FORM OF SCARRING
 HAIR LOSS

“ My research interest falls under the umbrella of ethnic skin and hair with a special focus on the prevalence and significance of cosmetic skin and hair disorders in African and Indian women in KwaZulu-Natal. We will be looking at the use of some of the natural indigenous botanicals as skin lightening agents as well as the prevalent abuse of commercial skin lightening agents in these two populations. Furthermore, studies will be conducted taking a closer look at some of the scarring hair disorders which affect African and Indian women in Durban. The Discovery Foundation Academic Fellowship Award will enable me to focus on my research towards the completion of my PhD.

Commercially available skin lightening cosmetics have a broad use in Africa and South Africa. These products can cause a wide array of skin damage – some of which may result in irreversible, adverse skin effects on the end user.

There is a wide use of traditional plants for cosmetic purposes, particularly by rural South African women. However, the activity and safety of these plants have never been investigated. We are hoping that our research will be able to answer some of these questions. I want to believe that our research results will assist us in the education of Black and Asian women with regards to the dangers of using skin lighteners. Undertaking this research for my Doctorate will equip me to mentor and supervise both Masters and Doctoral students in Dermatology, thus increasing the capacity of researchers and scholars in Dermatology and contribute to the overall body of knowledge about skin disorders in Africa.

We are hoping that we will be able to embark on a massive public education campaign for women about the dangers of using skin lighteners and in addition, advise them on the appropriate use of hair grooming products to minimise hair loss. ”

RESEARCH TOPIC

A study on the use of traditional plants and modern cosmetics for skin lightening purposes, as well as examining some scarring hair disorders that affect the African and Indian populations in Durban. This study, which also aims to critically evaluate the appropriateness of current legislation on the use of skin lightening products and recommend evidence-based amendments, will be conducted under the supervision of Prof Dulcie Mulholland, Head of Natural Products Research Group, Department of Chemistry, University of Surrey, UK, and Prof Richard Hift, Dean of the Medical School, Nelson R Mandela School of Medicine, UKZN.

Currently, only
20 out of 200
South African
dermatologists
practice in the
academic sector.



“ I am doing my registrarship at Groote Schuur Hospital in Internal Medicine, and I am interested in the TB pandemic affecting South Africa. South Africa has one of the highest TB rates in the world, and with almost half a million TB cases treated annually, TB control is failing due to the growing incidence of multi-drug resistance TB, the high prevalence of TB in people living with HIV/AIDS, and TB diagnoses not being detected earlier. I strongly believe that with the development of innovative tools that will assist in the rapid diagnosis and treatment of TB, this pandemic can be slowed down and controlled more effectively. This research will form part of my thesis for my Masters in Medicine. The Gene Xpert MTB/RIF is a new, automated real-time diagnostic test that can detect the TB bacterium and is being rolled out in the country. However, the positive predicative value of the test for rifampicin resistance (resistance to TB antibiotics) is only 75%. This means that the test is picking up more drug-resistance TB than it should be, which will lead to overtreatment, excessive cost and adverse reactions to potentially toxic drugs. Further studies are required to determine the extent of this problem and how solutions to this can be created. This could be done through a new, updated test, performing genotypic and phenotypic studies on biological samples, and looking at how Gen Xpert could be optimally combined with other additional tests. I believe that as an educated South African female from a previously disadvantaged background, I have a social responsibility to contribute to solving the nation’s health crises, including TB. I feel there is still more work to be done in South Africa in terms of filling the gaps in treating TB. The research I am undertaking will enable me to make a difference in the lives of people diagnosed with TB by giving them an accurate diagnostic test that will quickly determine if they have TB or not, and in the case they do have TB, direct them to the correct treatment as soon as possible. This research has inspired me to become a clinician scientist as there is a great need for clinician scientists to take up research upon a discovery and change or speed up the ways in which certain diseases are diagnosed and treated. My dream is to see South Africa’s high TB rates fall drastically. The Discovery Foundation Academic Fellowship Award will equip me with the basic skills required to pursue my dream of becoming a clinician scientist, further my academic career and play a role in conducting research that will benefit South Africa and enhance patient care. ”

RESEARCH TOPIC

Developing new and innovative tools for rapid diagnosis of TB in South Africa as TB control in South Africa is failing. With almost half a million TB cases treated annually in the country, it is the most common opportunistic infection in HIV-infected people. One of the ways in which the high mortality rate from TB can be reduced is through more rapid and accurate diagnosis of TB. This research will be conducted under the supervision of Professor Keertan Dheda of the Lung Infection and Immunity Unit at the University of Cape Town.

South Africa has one of the world’s highest TB rates, and almost half a million people with TB are treated in South Africa each year.

DR
PHINDILE GINA

Medical Registrar at Groote Schuur Hospital,
Cape Town, Western Cape



“I recently qualified as a physician specialist with an interest in cardiology, and I am doing my senior registrarship in cardiology at the Groote Schuur Hospital. I am particularly interested in pulmonary hypertension, which is when high blood pressure presents in the lungs’ arteries, causing the heart’s right side to work harder than normal. This condition can result in heart failure, and there is no known cure for it.

My research in this area for my MMed has revealed that there is a vacuum in our knowledge of the extent of right heart failure and pulmonary hypertension in the African population. The Discovery Foundation Academic Fellowship Award will assist me in my research, which will be invaluable to building a registry of patients with pulmonary hypertension in South Africa. It will greatly contribute to research in this area to better understand the factors causing pulmonary hypertension and right heart failure in the African population. In this way I hope to increase patients’ quality of life and life expectancy. I am pursuing a career in academic medicine, and it is my dream that my research will in the near future facilitate the training, technological advancement and development of more effective and targeted therapies for Africans diagnosed with pulmonary hypertension, thereby helping to prevent unnecessary deaths, both in South Africa and the rest of Africa.”

RESEARCH TOPIC

Conducting an echocardiographic assessment of the right ventricle in a sub-study of the Pan-African pulmonary hypertension cohort Trial (PAPUCO). The PAPUCO is a multinational study of pulmonary hypertension in Africa and this study will be conducted under the supervision of Professor Karen Sliwa, Director of the Hatter Institute for Cardiovascular Research in Africa at the University of Cape Town.

Pulmonary hypertension is a progressive disease and is a common pathway to right heart failure in the African population. According to the Pulmonary Hypertension Association of South Africa, it is estimated that 50% of patients diagnosed with pulmonary hypertension survive for five years after diagnosis. There is no known cure for this condition.



DR

MUHAMMAD CHEVAAN HENDRICKSE

Senior Registrar at Groote Schuur Hospital,
Cape Town, Western Cape



RESEARCH TOPIC

To investigate the emergence of nevirapine resistant HIV-1 mutations in HIV-positive pregnant women who have been exposed to single-dose nevirapine for Prevention of Mother to Child Transmission (PMTCT). This study will also compare the emergence of nevirapine resistance in HIV-positive women with single versus multiple-dose nevirapine exposure at the Dr George Mukhari Academic Hospital. The study will be conducted under the supervision of Dr Zinhle Makatini, a consultant clinical virologist and previous Discovery Foundation Award recipient.

DR KHOLISIWE KUZWAYO

Registrar at Dr George Mukhari Academic Hospital,
Pretoria, Gauteng



South Africa has the largest antiretroviral programme in the world, and carries 17% of the world's HIV and AIDS disease burden. In addition to this, South Africa is one of the few countries in the world where maternal and child mortality has increased since the 1990s. This high death rate is largely attributable to HIV and AIDS, which accounts for an estimated 42.5% of maternal deaths, and 35% of deaths in children under five years of age.

USAID HIV/AIDS Health Profile for South Africa, 2011

“ I am currently training as a Clinical Virologist and doing my registrarship at the Dr George Mukhari Hospital at the University of Limpopo's Medunsa Campus. I started studying medicine late in life after spending many years as a nursing sister in various public hospitals across South Africa, including Dr George Mukhari Hospital where I developed an interest in training as a clinician and being trained as a medical doctor. Once I completed my training, I felt that doing specialist training in Virology would give me an opportunity to add value to South African society, especially with our high burden of HIV disease. I am doing my MMed and am deeply interested in researching the nature of HIV drug resistance in HIV positive women and researching the emergence of HIV-1 drug resistant mutations and understanding this trend. The Discovery Foundation Academic Fellowship Award will assist me in conducting this research, which is important to ensure that appropriate policy guidelines concerning the treatment of HIV-positive pregnant women are drawn up to counter the drug-resistance rate. It is my dream to be able to contribute to the policy decision making process concerning treatment of HIV-positive pregnant women and to reduce the high incidence of HIV-1 drug resistance among this group, giving them high quality care and treatment. ”





DR RAMOKONE MAPHOTO

Clinical Virology Registrar at Dr George Mukhari Hospital,
Pretoria, Gauteng

(PMTCT) interventions at the Dr George Mukhari Hospital, and I am interested in determining the proportion of infants with HIV-1 drug resistant mutations and describing the immunological and virological parameters of these infants. The award will impact positively upon my research in that not only will I have an amazing opportunity to gain clinical research experience and strengthen my role as a budding clinical virologist – I will also have the opportunity to make a difference on two levels. Firstly, on a personal level, as a clinical scientist researcher, I will gain experience in laboratory competence and exposure to assist in decision-making with clinician colleagues on what HIV treatment regimen changes, if any, should be. Secondly, on a public health level, my research will provide me with an opportunity to play a role in informing policy framework in South Africa and guiding the way forward, as well as being able to formulate future HIV treatment guidelines. I dream of becoming a robust world-class scientist whose achievements will assist in informing both South African and international health policies.”

In Sub-Saharan Africa, almost two million children between the ages of 0 and 14 years need antiretroviral therapy, and the WHO aims to reduce the level of mother to child transmission rate globally to less than 5% by 2015. *The World Health Organization*

RESEARCH TOPIC

The investigation of paediatric HIV-1 drug-resistant outcomes in children with maternal exposure to various Prevention of Mother to Child Transmission (PMTCT) interventions at the Dr George Mukhari Hospital ARV Paediatric Clinic. It is known that vertical transmission is one of the ways in which HIV is transmitted, and according to UNAIDS, this results in up to 90% of HIV transmission in infants, and without PMTCT, this transmission rate is around 30%, but is substantially reduced when PMTCT strategies are introduced. The World Health Organization has introduced PMTCT guidelines for resource-limited settings advocating the use of mono therapy or dual therapy to address this transmission concern, but the use of just one or two antiretroviral drugs during pregnancy could result in HIV drug resistance. This could compromise future treatment for both mother and child in cases where the child contracts HIV despite PMTCT intervention. This study will be conducted under the supervision of Dr Zinhle Makatini, a consultant clinical virologist and previous Discovery Foundation Awards recipient.

“ I am currently engaged in a Clinical Virology Registrar Specialist Training Programme at the University of Limpopo (Medunsa Campus) with the ultimate goal of attaining Fellowship in Pathology (Virology). I have long been interested in Clinical Virology and have always valued the importance of pursuing academic excellence, and am excited about receiving the Discovery Foundation Award for Academic Excellence. For my M Med, I have undertaken a research project that looks at investigating the paediatric HIV-1 drug-resistant outcomes in children with maternal exposure to various Prevention of Mother to Child Transmission

RESEARCH TOPIC

Looking at the application of speckle tracking echocardiographic technology to assess ventricular function. This study is conducted under the supervision of Professor Patricia A. Pellikka, co-director of the Echocardiographic Laboratory at the Mayo Clinic and new president of the American Society of Echocardiography (ASE); United States.

The World Health Organization estimates that by 2030, almost 23.6 million people will die from cardiovascular diseases, mainly from heart disease and stroke. These are projected to remain the single leading cause of death.

“ I am a senior specialist and cardiologist who is currently doing a year-long study in the field of echocardiography at the Mayo Clinic in the United States as part of their Echocardiography Research Fellowship Program. This research will form part of my PhD by dissertation on “application of the new echocardiographic technology to detect subtle and early features of ventricular dysfunction through the speckle tracking echocardiography technology”. This is a PhD project on the biomedical engineering science tack – focusing on cardiac imaging. I am passionate about cardiology as I grew up in the Limpopo province where there are no full time cardiologists or a cardiac centre, and I have a specialised interest in advanced cardiac imaging and molecular genetics. I am currently focusing on the use of advanced echocardiographic technology, which is an underdeveloped area in South Africa.

This research is important for South Africa because currently the country does not have this technology and is lagging behind other countries in terms of advanced echocardiographic technology. The Discovery Foundation Academic Fellowship Award will enable me to conduct this research and bring this new technology to the country, which will make great impact on assisting medical professionals in the screening and early detection of myocardial disease in the entire cardiac spectrum and enable patients to access early treatment, especially in poor communities.

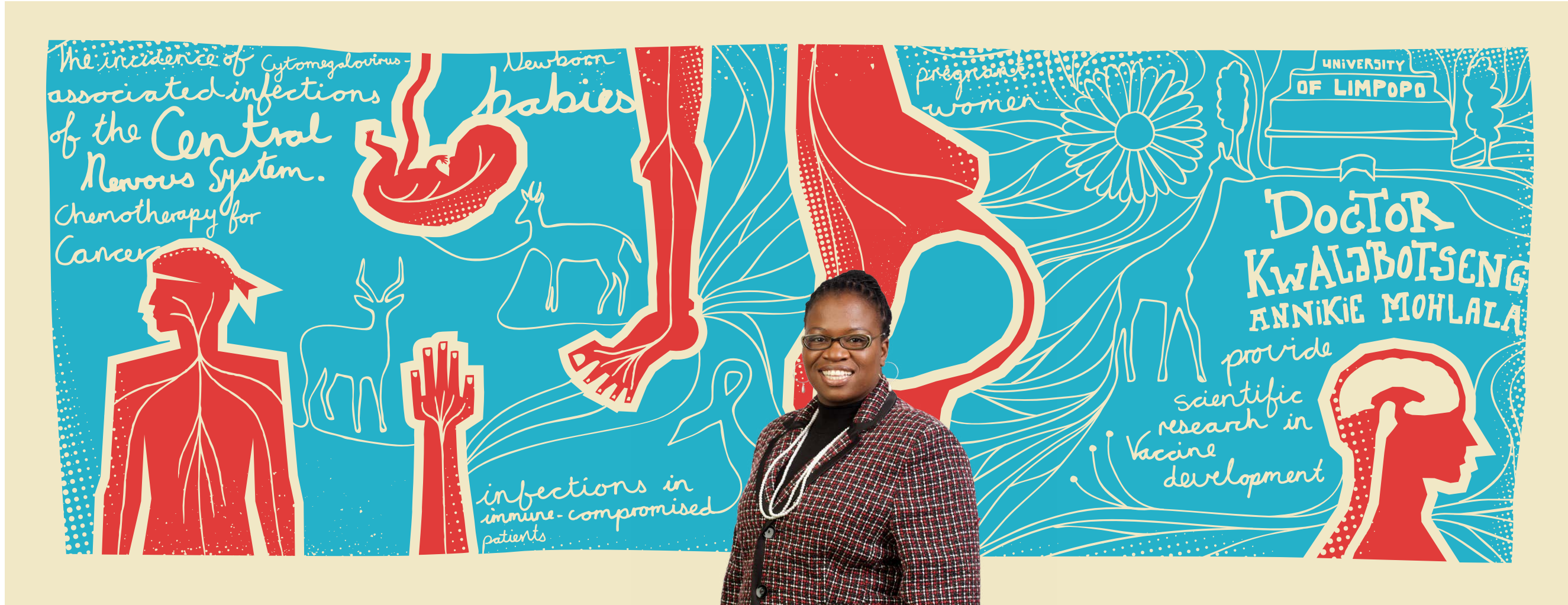
Additionally, I will be able to contribute to developing and improving the quality of Echocardiography in South Africa, especially in areas where there is lack of expertise and knowledge of the new modalities. I want to develop myself academically so that I can, in future, teach and develop upcoming young, new researchers in this field, and supervise both Master and PhD students, as well as develop my own, new technological skills which will benefit both South Africa and the African continent.

My biggest dream is to become a leader and expert in this field and develop a cardiology research Centre where creative, innovative solutions to the country's high burden of cardiac disease will contribute toward creating a better cardiac care in future for the country, and attract a wealth of talent and investment. ”



DR
MAMOTABO ROSSY MATSHELA

Cardiologist and Senior Specialist at Inkosi Albert Luthuli Central Hospital,
Durban, KwaZulu-Natal



DR
KWALABOTSENG ANNIE MOHLALA

Registrar at University of Limpopo,
 Medunsa Campus, Limpopo



“ I dream of being able to make a positive impact in this field so that a vaccine for cytomegalovirus (CMV) can be developed, protecting future generations. ”

Dr Kwabotseng Annie Mohlala

RESEARCH TOPIC

Assessing the incidence of cytomegalovirus (CMV) associated Central Nervous System infections by detecting CMV in cerebrospinal fluid samples in adult patients in the northern Pretoria region at the Dr George Mukhari Hospital. CMV infection frequently affects the central nervous system in HIV-positive patients and the varied clinical manifestations of CMV disease make virological detection for it essential in the proper diagnosis and treatment. Clinical diagnosis of it is often unreliable due to the fact that a wide variety of viruses, fungi and bacteria must be considered as etiological agents of central nervous system infections. As a result, for prognosis of CMV disease, it is important to achieve a rapid, reliable laboratory diagnosis. This study will be conducted under the supervision of Dr Thanda Kyaw, a pathologist and lecturer at the University of Limpopo

“ I am doing my registrarship in virology at the University of Limpopo-Medunsa Campus and am passionate about practising virology in the capacity of a clinician scientist in South Africa. I am passionate about dedicating my life’s work to the sciences as I believe I am able to make a difference through my work. My thesis for my MMed centres around Cytomegalovirus infections, particularly with relation to HIV-positive patients and how proper diagnosis and treatment of this disease in these patients can be made, and to help reduce the high morbidity and mortality in immuno-compromised patients. My research in this field is important for it will help shed light on this disease which more often than not, poses a diagnostic challenge to clinicians. The Discovery Foundation Academic Fellowship Award will enable me to complete my MMed in this field and make a contribution to this under-researched field. Following this, I will be able to impart the knowledge I gain in the most optimal way possible to the body of South African medical research, and to future generations. I dream of being able to make a positive impact in this field so that a vaccine for CMV can be developed, protecting future generations. ”





DISCOVERY FOUNDATION
SUB-SPECIALIST AWARDS

Support for the training of
South Africa's specialists

2

ABOUT THE DEPARTMENT

The University of Cape Town's Surgical Gastroenterology Unit offers the full spectrum of Surgical Gastroenterology interventions from regular abdominal surgery to complex surgery such as liver transplants and treating pancreatic cancer. This is the fifth most common cancer among South Africans. The unit is the only unit in the country with the capacity and expertise to offer sub-specialist training in Hepatobiliary Surgery, and to some extent, Colorectal Surgery. Surgical Gastroenterology includes many pathologies which are common in South Africa, including oesophageal cancer, gastric cancer, liver cancer, portal hypertension, colon cancer, alcoholic pancreatitis and cirrhosis. While many of these problems can be managed by a General Surgeon, the more complex cases need to be under the care of a sub-specialist at a tertiary institution. There is, however, a shortage of Surgical Gastroenterologists to meet the required need in the country's tertiary institutions. Furthermore, two senior surgeons in this field are retiring this year, leaving a huge void which needs to be addressed by training additional sub-specialists in the field and transferring skills to these upcoming subspecialists. The Discovery Foundation Academic Sub-Specialist Award will be used to train a sub-specialist candidate, Dr Stefan Hofmeyr, in this field. He will be trained and supervised by Professor Delawir Kahn, Head of the Department of General Surgery at the University of Cape Town.

DR STEFAN HOFMEYR
FELLOW IN SURGICAL
GASTROENTEROLOGY AT GROOTE
SCHUUR HOSPITAL, CAPE TOWN,
WESTERN CAPE

“ I am a registered General Surgeon – currently training as a fellow in Hepato-Pancreato-Biliary/Upper GI Surgery at the Surgical Gastroenterology Unit of Groote Schuur Hospital. The Unit is attached to the Department of Surgery at the University of Cape Town. The duration of the fellowship is two years and will create the opportunity for me to sub-specialise in surgical conditions of the liver, pancreas and biliary system. I find these conditions interesting as they often require complex decision-making, while both the endoscopic and surgical procedures for these conditions are technically demanding. The Discovery Foundation Sub-specialist Award will enable me to complete this fellowship, which will equip me with the necessary theoretical and technical experience to offer patients with these conditions state of the art patient care and management. My dream is to become a sub-specialist Hepato-Pancreato-Biliary Surgeon and contribute significantly to this field in South Africa.”

There are only five HPCSA registered Surgical Gastroenterology sub-specialists in South Africa.

UNIVERSITY OF CAPE TOWN

Department of General Surgery
Sub-specialty: **Surgical Gastroenterology**
Candidate: **Dr Stefan Hofmeyr**



ABOUT THE DEPARTMENT

The University of Pretoria's Department of Paediatrics and Pulmonology is committed to excellence in teaching, research and providing outstanding medical services to all communities. The university's various respiratory and allergy clinics offer full diagnostic services to patients. The university has one of only four, fully comprehensive Cystic Fibrosis Clinics countrywide, and has recently started a clinic focused on serving HIV-positive patients with Chronic Lung Disease. To date, seven Paediatric Pulmonologist sub-specialists have been successfully trained at the University's Steve Biko Academic

Hospital. The Department wants to train another aspirant Paediatric Pulmonologist, Dr Salome Abbott, who is interested in making a contribution to this field. Since there are currently no posts available in this field in both the university and the country, the Discovery Foundation Sub-Specialist Award will be used to train Dr Abbott over a period of two years, after which she will emerge as an expert in the field and a qualified Paediatric Pulmonologist. She will be trained and supervised by Professor Robin Green, Head of the Department of Paediatrics and Pulmonology at the University of Pretoria.



DR SALOME ABBOTT PULMONARY FELLOW IN TRAINING

“I recently completed my MMed in Paediatrics, and am a newly qualified paediatrician. I have a passion for clinical Paediatrics, but became more interested in research after completing my MMed on the topic of “The role of atopy as a Predictor (predictor) of Childhood Asthma” which has been submitted as an article to a medical journal. I am very interested in respiratory viral detection in young children and viral bronchiolitis is the second most common cause for admission of infants to hospital. The human rhinovirus causes common colds, and new human rhinoviruses strains which have been recently identified, have been shown to be more common and associated with worse diseases than previously thought. I hope, through my research, titled “Viral induced African bronchiolitis-like episode” to identify and investigate viruses involved in acute lower respiratory infections in children and defence mechanisms in these children.”

Up to 20% of South Africans have Pulmonology chronic lung diseases caused by HIV, TB and asthma. Viral bronchiolitis is the second most common cause for admission of infants to hospital.

UNIVERSITY OF PRETORIA

Department of Paediatrics and Pulmonology
Sub-specialty: Paediatric Pulmonology
Candidate: Dr Salome Abbott

ABOUT THE DEPARTMENT

The 55-bed Neonatal Unit at the Dr George Mukhari Academic Hospital offers a wide range of high-tech facilities and services, including allied healthcare services. Patients are admitted from clinics and hospitals from around the North Gauteng region, and it is a referral centre for patients from hospitals in Limpopo, North West and Mpumalanga provinces. Neonatology is a very important paediatrics sub-speciality as it represents the very beginning of paediatric care, with neonatologists looking after the health and wellbeing of the most vulnerable paediatric patients – newborn babies – who have a vast array of clinical needs that require specialised care and knowledge. As a result, neonatologists play an important role in ensuring that newborn babies receive the required treatment important for their survival. Unfortunately, there is a shortage of neonatologists in South Africa, and because of the lack of sufficient care available, many South African babies don't live to celebrate their first birthday, especially in rural areas where there is a lack of skilled professionals for both maternal and child health. The university wants to train more neonatologists who will transfer their specialist knowledge on to other healthcare workers. The Discovery Foundation Sub-Specialist Award will be used to train paediatrician Dr Kgomotso Lovey Sanyane as a sub-specialist in neonatology. She will be trained and supervised by Professor Muthuhadnini Patience Mawela, the Principal Specialist and Deputy Head of the University of Limpopo's Department of Paediatrics and Child Health and Head of the Neonatal Unit at Dr George Mukhari Academic Hospital.



DR KGOMOTSO LOVEY SANYANE

PAEDIATRICIAN AT DEPARTMENT OF PAEDIATRICS AND CHILD HEALTH AND THE DR GEORGE MUKHARI ACADEMIC HOSPITAL, PRETORIA, GAUTENG

Neonatologists play an important role in ensuring that newborn babies receive the required treatment important for their survival.

UNIVERSITY OF LIMPOPO

Department of Paediatrics and Child Health

Sub-specialty: **Neonatology**

Candidate: **Dr Kgomotso Lovey Sanyane**



“ I recently completed my MMed in Paediatrics through the University of Limpopo-Medunsa Campus. I am deeply interested in the Sub-speciality of neonatology. The neonatal period, which marks the beginning of life in the world for every individual, is the most fragile and sensitive period of life. The management of medical and surgical conditions during this period is not only important for any clinical problems that can arise during this time, but can have deep, long-lasting implications for a baby's health for the rest of their lives. I have a personal interest in the management processes for birth asphyxia and hypoxic ischemic encephalopathy – this condition is the leading cause of cerebral palsy in South Africa. Timely and effective care of newborn infants with birth asphyxia and hypoxic ischemic encephalopathy, including adequate resuscitation, supportive care and induced hypothermia improves both mortality

rates and the neurodevelopmental outcome and quality of life for newborn infants. The Discovery Foundation Sub-specialist Award will fund my post as a fellow in training in the sub-specialty of neonatology, and gives me the opportunity to gain expertise in this field so I can provide better care for newborn babies under my care and impart my knowledge to other neonatal healthcare professionals in the communities we serve. I am passionate about working as a neonatologist in the communities and surrounding clinics, making a difference to people's quality of life. It is my dream that all newborn infants will be born in facilities where they will be cared for by a trained healthcare professional who will have the necessary expertise and functional equipment at hand to provide each baby with the best care possible, giving them the best chance at survival and a good quality of life right from the beginning.”





UNIVERSITY OF STELLENBOSCH

Department of Obstetrics and Gynaecology

Sub-specialty: **Reproductive Medicine**

Candidate: **Dr Nomonde Gumata**

DR NOMONDE GUMATA

SPECIALIST OBSTETRICIAN AND GYNAECOLOGIST AT THE
KALAFONG HOSPITAL AND STEVE BIKO ACADEMIC HOSPITAL,
PRETORIA, GAUTENG

“ I am a practising specialist Obstetrician and Gynaecologist at Kalafong-Steve Biko Academic Hospital. I am very interested in training as an infertility sub-specialist at the University of Stellenbosch as I believe that many South African women with fertility problems are inappropriately managed due to a lack of well-trained medical professionals. There is a critical shortage of infertility specialists and very few African infertility sub-specialists in the country, alongside with a few reproductive medical training institutions, of which the University of Stellenbosch is one. The Discovery Foundation Sub-Specialist Award will give me an opportunity to train in this field and once I have completed my training, I will be able to impart my knowledge and skills on to my peers and patients in the communities I serve. My dream is to be able to return to the Kalafong-Steve Biko Hospital complex and impart all my new knowledge to those who need it so they can improve the lives of ordinary South Africans. ”

There is a critical shortage of infertility specialists and very few African infertility sub-specialists in South Africa.

ABOUT THE DEPARTMENT

The Reproductive Medicine Unit was started up in the early eighties, soon after the birth of the first test tube baby in Southern Africa as a result of the unit's research in infertility issues affecting both male and female patients. The unit has a research record spanning over 30 years, and the unit is internationally recognised for its sperm morphology evaluation. There is a need for young gynaecologists to be trained in this field as most of this training takes place at the Tygerberg Hospital and Groote Schuur Hospital, and there is a shortage of infertility sub-specialists in South Africa. There are only two qualified infertility sub-specialists in the country. The University of Stellenbosch, with the help of the Discovery Foundation Sub-Specialist Award, intends to turn this around by training interested medical professionals in this field. Dr Nomonde Gumata will be trained over a two-year period, and she will be supervised by Professor Thinus Frans Kruger, Head of Reproductive Medicine at the University of Stellenbosch.



Each year, infectious diseases kill almost 9 million people worldwide, many of them children under five.

Global Report for Research on Infectious Diseases of Poverty, 2012

DR LISA FRIGATI
 FELLOW IN PAEDIATRIC INFECTIOUS DISEASES,
 DEPARTMENT OF PAEDIATRICS AND CHILD HEALTH,
 TYGERBERG CHILDREN'S HOSPITAL

ABOUT THE DEPARTMENT

There is an urgent need in South Africa for experts and clinicians who specialise in infectious diseases affecting children, as these diseases are a leading cause of death and morbidity in South African children.

With the majority of childhood deaths attributable to infections and the huge challenges posed by tuberculosis, especially the multi-drug resistant variety, and HIV and nosocomial infections, in-depth training and clinical leaders are needed in this field. The department offers excellent clinical training and opportunities for research, however, there is a limited number of sub-specialty training posts available at the Tygerberg Children's Hospital and often lack of financial support for such posts. The department will use the Discovery Foundation Sub-specialist Award to train a candidate, Dr Lisa Frigati in this field, who will be supervised by Professor Mark Cotton, Head of Division: Paediatric Infectious Diseases at the University of Stellenbosch.



“ I am a registered paediatrician with a passion for children's health. I received the Discovery Foundation Sub-Specialist Award to complete a registrarship at the Tygerberg Hospital where I will specialise in and study Paediatric Infectious Diseases. The award will help me develop the necessary skills to ensure that South African children have access to diagnosis and treatment of any infectious diseases they may have, and that once diagnosed, they have access at all times to the appropriate treatment they need, whether it be for HIV, multi-drug resistant TB, or more regular conditions such as pneumonia and diarrhoea. My dream is to see all children receiving the necessary level of care they deserve, and to see the elimination of some infectious diseases causing the high rate of childhood deaths and see children living longer, healthier lives.”

UNIVERSITY
 OF STELLENBOSCH AND
 TYGERBERG CHILDREN'S HOSPITAL

Department of Paediatrics and Child Health
 Sub-specialty: **Paediatric Infectious Diseases**
 Candidate: **Dr Lisa Frigati**



In the UK, health guidelines stipulate that one paediatric rheumatologist is needed for every 300 000 children in a population, but in South Africa where there are 20 million children, this means that a total of 60 paediatric rheumatologists would be needed. There are only five part-time paediatric rheumatologists currently working in the country, and more paediatric rheumatologists are needed to address this shortage in an area of need.

ABOUT THE DEPARTMENT

Paediatric Rheumatology is a recognised HPCSA sub-specialty, however, there are currently no active training programmes in South Africa for this field of study, as it is a neglected discipline, especially in developing countries. South Africa, with a large, unrecognised burden of disease among children, cannot afford to neglect this field any longer, especially as paediatric rheumatology interfaces with other specialities such as orthopaedics, nephrology, cardiology, pulmonology infectious diseases and more. There are only five paediatric rheumatologists in South Africa, who are mostly in part-time employment. There is a dire need to provide training in this area. Two paediatric rheumatologists, Dr Chris Scott and Dr Monika Esser, have developed an exciting proposal for a cross-university training programme using the combined Red Cross Memorial Children's Hospital/Groote Schuur Hospital and Tygerberg Hospital platforms. However, there are no funded posts for training in this sub-specialty in the country. The Discovery Foundation Sub-Specialist Award will be used to train a candidate, Dr Kate Weakley, in this field over two years. Dr Weakley will be trained and supervised by Dr Chris Scott, a Senior Specialist Paediatric Rheumatologist and a previous recipient of the Discovery Foundation Academic Award.

**DR KATE
WEAKLEY**
REGISTRAR AT RED
CROSS CHILDREN'S
HOSPITAL, CAPE TOWN,
WESTERN CAPE

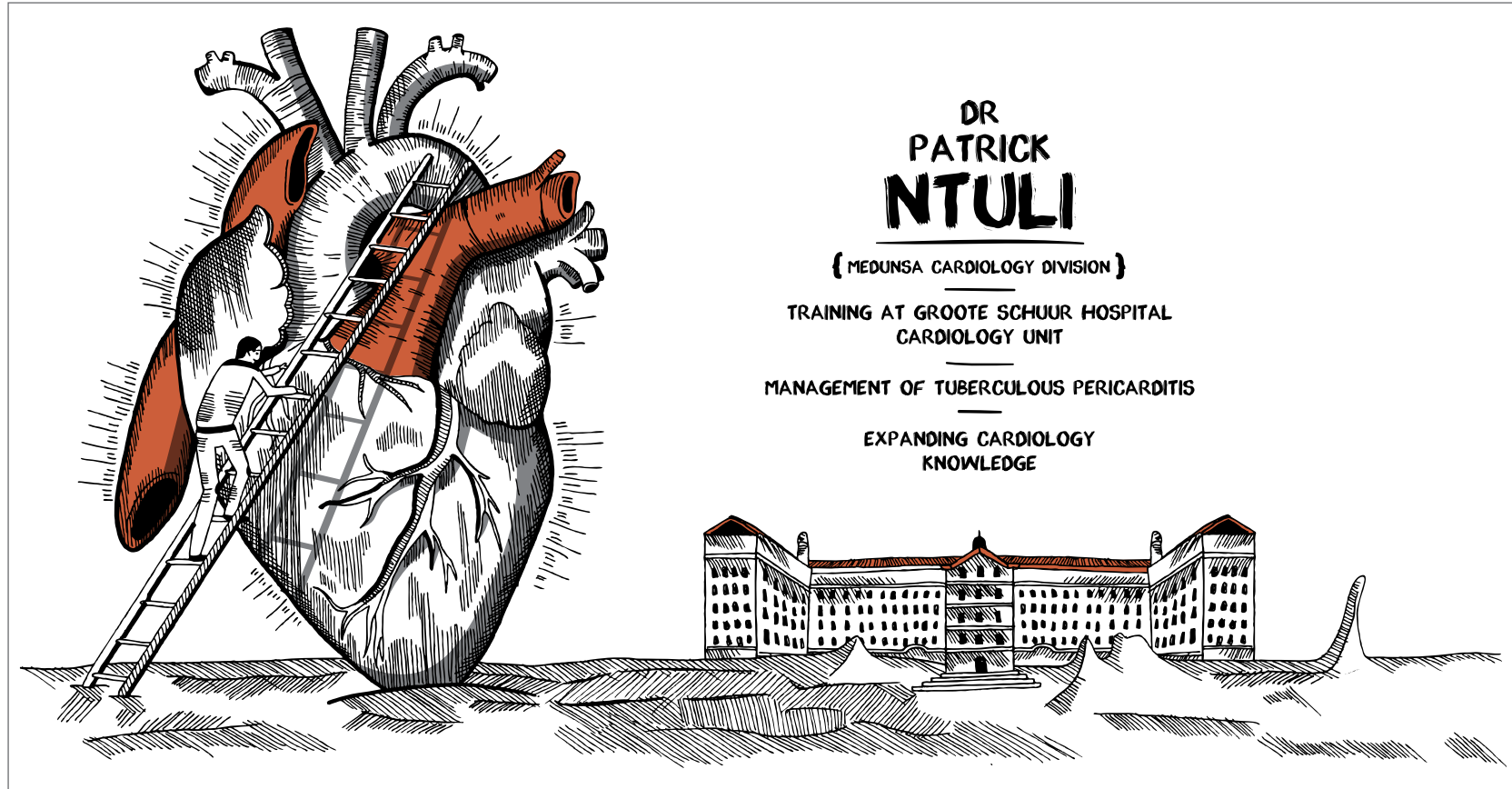
“ I am currently completing my final year of paediatric registrar training at the Red Cross Children's Hospital, the paediatric academic hospital affiliated with the University of Cape Town. I have a broad range of medical experience in surgery, orthopaedics, paediatric surgery, internal medicine and ENT. I have a special interest in paediatric rheumatology, teaching and doing research that specifically centres on juvenile idiopathic arthritis and infectious diseases such as HIV/AIDS and TB. I did my Masters in Medicine thesis on juvenile idiopathic arthritis and received a distinction for this research. I have been attending rheumatology clinics and assisting with the care of rheumatology patients for over two years, and worked alongside Dr Chris Scott during my three-month rotation. Doing this work sharpened my interest in paediatric rheumatology, which stems from witnessing young patients who are unaware of their condition and are often mismanaged with delayed diagnoses. This lack of awareness leads to increased suffering, pain and deformity, which can be avoided with the appropriate care and treatment. The Discovery Foundation Sub-Specialist Award will enable me to receive the necessary knowledge and training in paediatric rheumatology to pursue my interest in academic medicine and research. I am dedicated to making a contribution to the rheumatology field in South Africa, and developing a paediatric rheumatology department. My dream is to be able to develop educational and outreach programmes to improve awareness of children with musculoskeletal and rheumatic diseases. ”

UNIVERSITY OF STELLENBOSCH AND CAPE TOWN

Department of Paediatric Rheumatology

Sub-specialty: Paediatric Rheumatology

Candidate: Dr Kate Weakley



The University of Limpopo-Medunsa’s Cardiology Division runs two weekly Cardiology Clinics, and sees about 80 patients each day during those two days of the week.

DR PATRICK NTULI
 PHYSICIAN, DR GEORGE MUKHARI ACADEMIC HOSPITAL, PRETORIA, GAUTENG

ABOUT THE DEPARTMENT

The University of Limpopo-Medunsa’s Cardiology Division currently has one registered Cardiologist who also acts as a co-ordinator for Registrar Training in Internal Medicine, and the Department is not as fully fledged as other universities’ Cardiology Departments. The Department is training two fellows in Cardiology, and one of these fellows is Dr Patrick Ntuli, who will be gaining his certification in Cardiology. The Discovery Foundation Sub-Specialist Award will enable the Department to send Dr Ntuli for training at Groote Schuur Hospital’s Cardiology Unit which has all the necessary facilities for this training. Once this training is complete, Dr Ntuli will be able to play a critical role in imparting his academic knowledge and expertise on to the Department and assist with developing the Department into a full Cardiology Unit that will better serve future medical students and outreach activities in the community. Dr Ntuli’s mentor, Prof Phindile Mntla, who is based at Medunsa, is excited about this Medunsa-UCT collaboration. Dr Ntuli will train at Groote Schuur Hospital under the leadership, guidance and mentorship of: Prof Bongani Mayosi, Prof Patrick Commerford and Dr Mpiko Ntsekhe. Dr Ntuli’s Master of Philosophy(M.Phil.) research project, which he will be doing concurrently with the certificate in Cardiology, is on cardiomyopathy and is supervised by Prof Bongani Mayosi.



“ I am a physician working at the University of Limpopo, Medunsa Campus, and at the Dr George Mukhari Academic Hospital, and in addition to this, I am a site sub-investigator for the on-going *Investigation of the Management of Tuberculous Pericarditis (IMPI) trial*. This study is aimed at putting to rest the controversies surrounding the management of Tuberculous pericarditis. I recently completed my MMed in Internal Medicine and the Fellowship of the College of Physicians in South Africa, FCP(SA). I am now interested in training as a Fellow in Cardiology and studying further towards a certification in Cardiology at the University of Cape Town’s Cardiology Unit at Groote Schuur Hospital. I chose to pursue my studies at the University of Cape Town owing to the lack of electrophysiology exposure and a dedicated transplant unit at the University of Limpopo-Medunsa’s Cardiology Department. I am passionate about academic medicine and research, and to further expand my cardiology knowledge and expertise. The Discovery Foundation Sub-specialist Award will assist me in pursuing a career in cardiology, and enable me to impart my knowledge on to medical students through lecturing and mentoring them, as well as making a contribution to the body of knowledge in the management of cardiomyopathy. It is my dream to be able to use this knowledge gleaned from Groote Schuur to assist in developing a fully comprehensive Cardiology Department at the University of Limpopo-Medunsa and make a real difference to communities in need. ”

UNIVERSITY OF LIMPOPO

Medunsa Campus, Department of Internal Medicine
 Sub-specialty: **Cardiology**
 Candidate: **Dr Patrick Ntuli**





DISCOVERY FOUNDATION
**RURAL FELLOWSHIP
AWARDS**

A series of grants aimed at developing and retaining specialist medical skills in rural areas.

3

ABOUT THE RESEARCH

A study aimed at the evaluation and development of an appropriate, valid and practical national postgraduate portfolio of learning for Family Medicine training in South Africa. This research will be conducted under the supervision of Professor Bob Mash, Head of Department of Family Medicine and Primary Care, University of Stellenbosch.

“ I am a specialist family physician and Head of the Family Medicine Clinical Unit in the Eden-Central Karoo geographical service area in the Western Cape’s George region. The Colleges of Medicine of South Africa requires a learning portfolio from registrars who apply to write the fellowship specialist examination at the end of four years of specialist training, and there is a need for a uniform learning portfolio for the assessment of postgraduate Family Medicine training in the country. This is a priority for all eight departments of Family Medicine as the national exit examination for postgraduates in Family Medicine will be the standard examination from 2013. A central requirement to pass this exam is the completion of an adequate portfolio of learning by each registrar. This portfolio must reflect real-time learning and development in the various competencies within the 10 domains of practice in a district hospital context over four years. My contribution to this area will be through developing an appropriate, valid and practical portfolio for Family Medicine training in the country as part of my PhD study. The proposed benefits of my research for South African healthcare will be a more uniform approach towards assessment of specialist training in Family Medicine, and to develop and train doctors with the appropriate skills to function as competent family physicians in South Africa’s district healthcare system. The Discovery Foundation Rural Fellowship Awards will enable me to take a sabbatical to focus on completing my PhD in this area. I believe my research will make a difference by helping to establish a standardised mechanism of postgraduate assessment in the workplace through the portfolio of learning, in developing specialist family physicians for South Africa. Since Family Medicine is a relatively new specialty in the country, my dream is to see competent family physicians living in all the country’s districts and having a positive influence on these communities, making a difference to the health challenges in our country.”

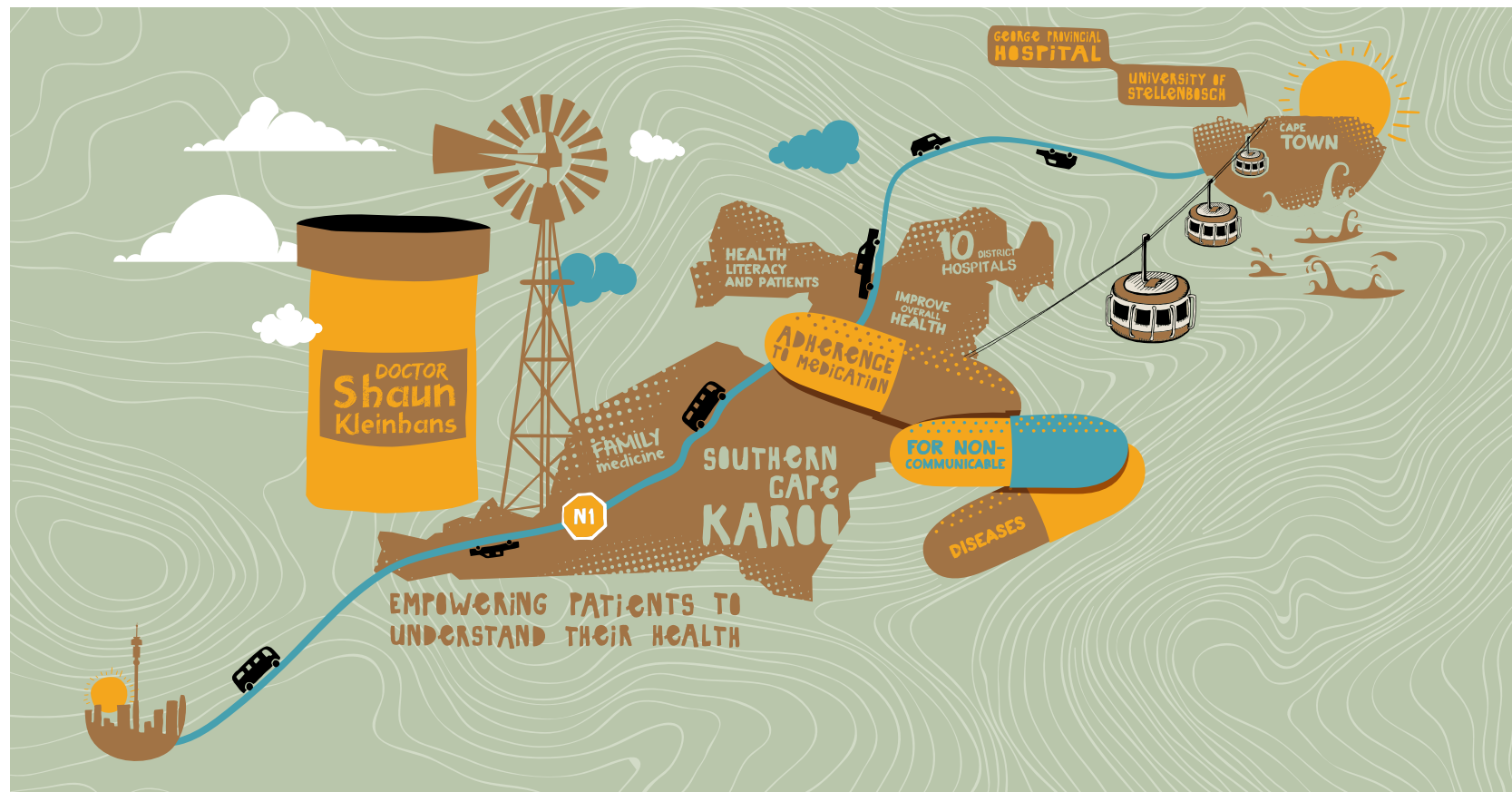
The medical discipline of Family Medicine equips doctors with the necessary skills to work as competent family physicians in South Africa’s rural district system. There are currently seven Family Medicine registrars training in the George region.



DR LOUIS JENKINS

Specialist Family Physician, Head of Family Medicine,
George Provincial Hospital, Western Cape





DR SHAUN KLEINHANS

Medical Registrar in Family Medicine, George Provincial Hospital, Western Cape



ABOUT THE HOSPITAL

Located in the Southern Cape-Karoo region, George Provincial Hospital is one of 10 district hospitals and is the referral centre to all the hospitals in this region. Adherence to medication for non-communicable chronic disease is one of the ultimate goals healthcare workers strive to achieve with their patients. General literacy plays an important role in health and socio-economic growth, and impacts on health literacy. Dr Kleinhans will research, explore and describe the link between health literacy and adherence to treatment for non-communicable diseases in the Primary Health Care facilities in the Eden Municipal District. Many South Africans use the public healthcare sector and poor health literacy leads to poor adherence to treatment. This research will also investigate and address the barriers to adherence. The hospital will use the Discovery Foundation Rural Fellowship Award to enable Dr Shaun Kleinhans to do this research, which will be conducted under the supervision of Dr Louis Jenkins, a Senior Specialist and Head of Department, Family Medicine at George Provincial Hospital.

Health literacy is an important element in ensuring people follow treatments prescribed by their healthcare professional. *Dr Shaun Kleinhans*

“ I am doing my registrarship in Family Medicine at the University of Stellenbosch and work at the George Provincial Hospital. I am very interested in the link between health literacy and patients’ adherence to medication for non-communicable diseases, for there are many factors influencing adherence. This study will aim to describe the link between patients’ health literacy and adherence through the use of questionnaires. In South Africa, impoverished communities rely on the public healthcare services for their healthcare needs, and poverty is associated with a lack of education. I would like to explore the link between health literacy and poor adherence and through my research, evaluate health literacy of a community regarding their medications for non-communicable chronic diseases, and their self-reported adherence to medications. The Discovery Foundation Rural Fellowship Award will help me conduct this research, which has the ability to improve overall health outcomes once the link between health literacy and poor medical adherence is fully understood. My research will benefit patients in understanding how they can improve their own health outcomes and experience a better quality of life. My dream is to help empower patients in understanding their own health and how to look after their health, and to be able to make recommendations around how the medical fraternity can address poor adherence to medications for non-communicable chronic diseases. ”

“ I am a senior lecturer and senior specialist in the Department of Family Medicine at Walter Sisulu University and the Mthatha General Hospital respectively. I have been practicing medicine for over 35 years and have a deep interest in how appropriate use of technology can support rural clinics to improve data quality, resulting in more robust patient records. Such a system will enhance patient care and enable postgraduate activity by Family Medicine registrars in these clinics. Concerning nursing records, there are reporting requirements mandated by the National Department of Health for certain conditions and programmes, including TB, HIV testing and ART initiation in the area of mother and child health. Healthcare workers including nurses working at these rural clinics, capture data in registers through the tedious process of handwritten data and this work is aggregated into data sheets. The problem with this paper-based system is that data quality is notoriously poor, with many inaccuracies and inconsistencies, thus the data lacks validity and reliability. The National Health Insurance will require an electronic information system process that will link service providers and funders. I am interested in assisting with formulating such a system that will enable valid, reliable data collection which will enhance the overall quality of medical services in rural communities. This will make a contribution to reducing the high burden of disease, particularly in relation to the HIV/AIDS and TB pandemic. It is my dream to see a highly efficient, effective health information system process being implemented and used in the country. This will reduce the workload and error rate seen in handwritten data, thus freeing up healthcare workers to be more productive in their mandate to offer patients the best quality care and services possible. ”

ABOUT THE RESEARCH

The aim is to develop information systems for rural clinics to support the practice of medicine in these areas. Barriers to data collection will be identified and addressed. With the appropriate technology, the data quality can be improved. As a result, more robust patient records will enhance the quality of patient care and enable more accurate postgraduate analysis by Family Medicine Registrars. Areas for studying the potential of information systems are in the OR Tambo District Municipality in the Eastern Cape. This study, which will explore different data input methods in TB management, will be conducted under the supervision of Professor Graham Wright, a research professor in the Faculty of Health Sciences at Walter Sisulu University.

DR DENIS O'MAHONY

Senior Specialist at the Department of Family Medicine,
Walter Sisulu University and Mthatha General Hospital

Data quality in South Africa's rural healthcare system is poor, and the National Health Insurance will require a reliable, effective electronic information system process that will link service providers and funders.



ABOUT THE HOSPITAL

A training site for the University of Limpopo-Medunsa Campus, the Job Shimankane Tabane Hospital is a regional hospital located in Rustenburg. It provides specialised services to 1.3 million people living in the North West's Bojanala district. A 322-bed hospital, more than 12 specialists train at this hospital that has limited resources for training more medical students and registrars. The University of Limpopo has been mandated by the Minister of Higher Education and Training to increase its intake of medical undergraduate students from 200 to between 250 and 300 each year to help address South Africa's critical shortage of medical professionals. It has identified the Job Shimankana Tabane Hospital as a place to train more medical undergraduates. The hospital will use the Discovery Foundation Rural Fellowship Award to further develop its clinical facilities and infrastructure which will include the development and renovation of a district training centre. This district training centre will include a resource centre, lecture rooms and accommodation for 36 students. Dr John Tumbo, a principal specialist and senior lecturer in the University of Limpopo-Medunsa Campus' Department of Family Medicine and Primary Healthcare, will oversee the administration of the award.

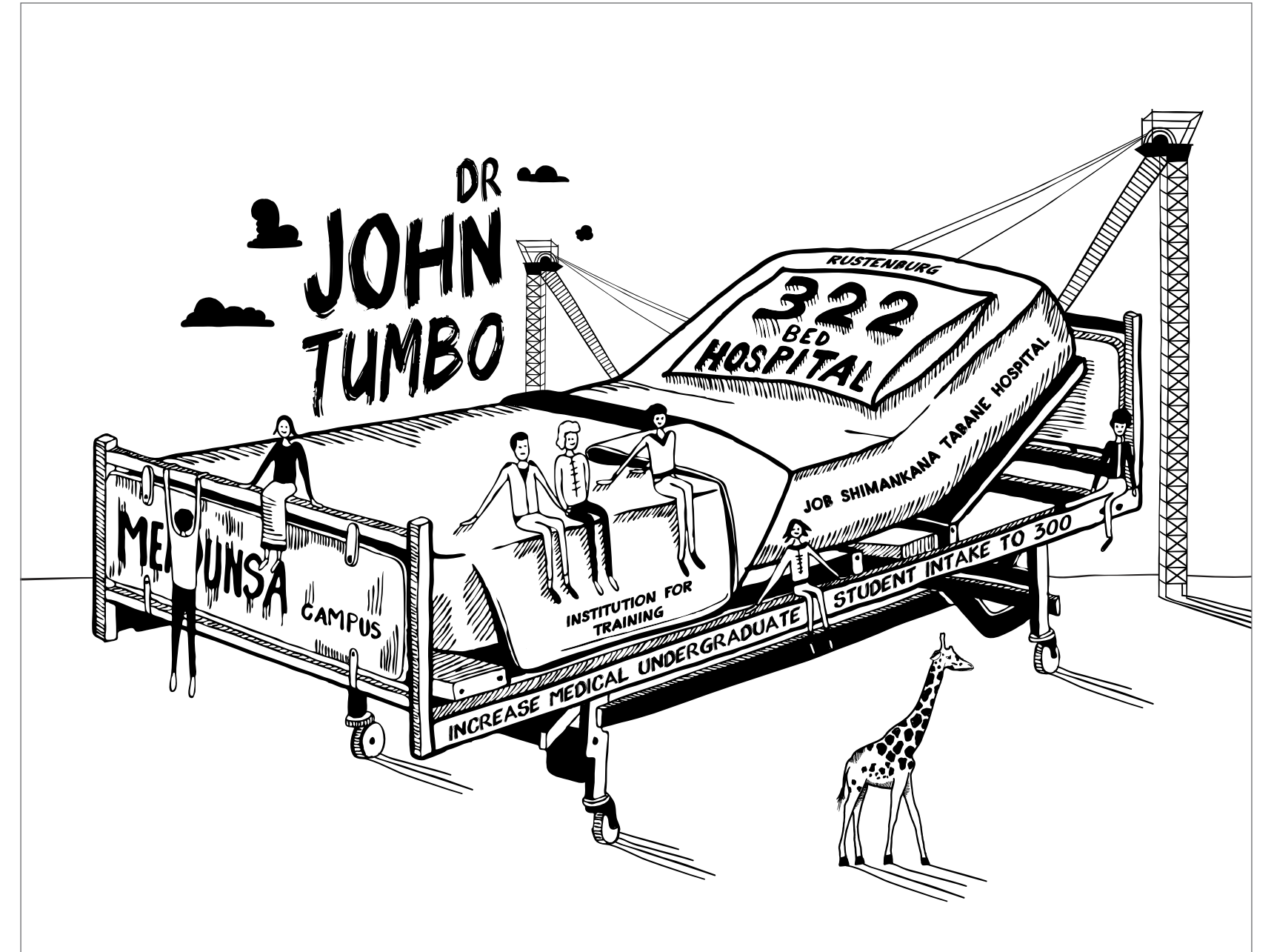
DR JOHN TUMBO

Principal Specialist and Senior Lecturer in Department of Family Medicine and Primary Healthcare at University of Limpopo and Job Shimankana Tabane Hospital, North West

Most rural areas in all countries suffer from a shortage of healthcare professionals, and in South Africa, the shortage is particularly marked; some rural areas have a doctor-to-population ratio of 5.5:100 000.

Rural-origin health science students at South African universities by JM Tumbo, ID Couper, JFM Hugo

“ I am a Specialist Family Physician and the principal specialist and senior lecturer in the Department of Family Medicine and Primary Healthcare at the University of Limpopo-Medunsa Campus. I am interested in rural healthcare delivery, and given the shortage of doctors working in rural areas, I am passionate about seeing this trend reversed. This means training more medical students in this area, particularly in the discipline of Family Medicine and addressing the critical shortage of doctors in South Africa. The Job Shimankana Tabane Hospital in the North West province is ideal for training more medical undergraduate students and exposing them to practical training for rural healthcare delivery, particularly in the primary healthcare field, which will equip them to work in rural areas after completing their studies. It is my dream to see more medical undergraduates working in the rural areas, serving communities with excellent, much-needed primary healthcare services and changing the face of the healthcare system in South Africa for the better. ”







ABOUT THE HOSPITAL

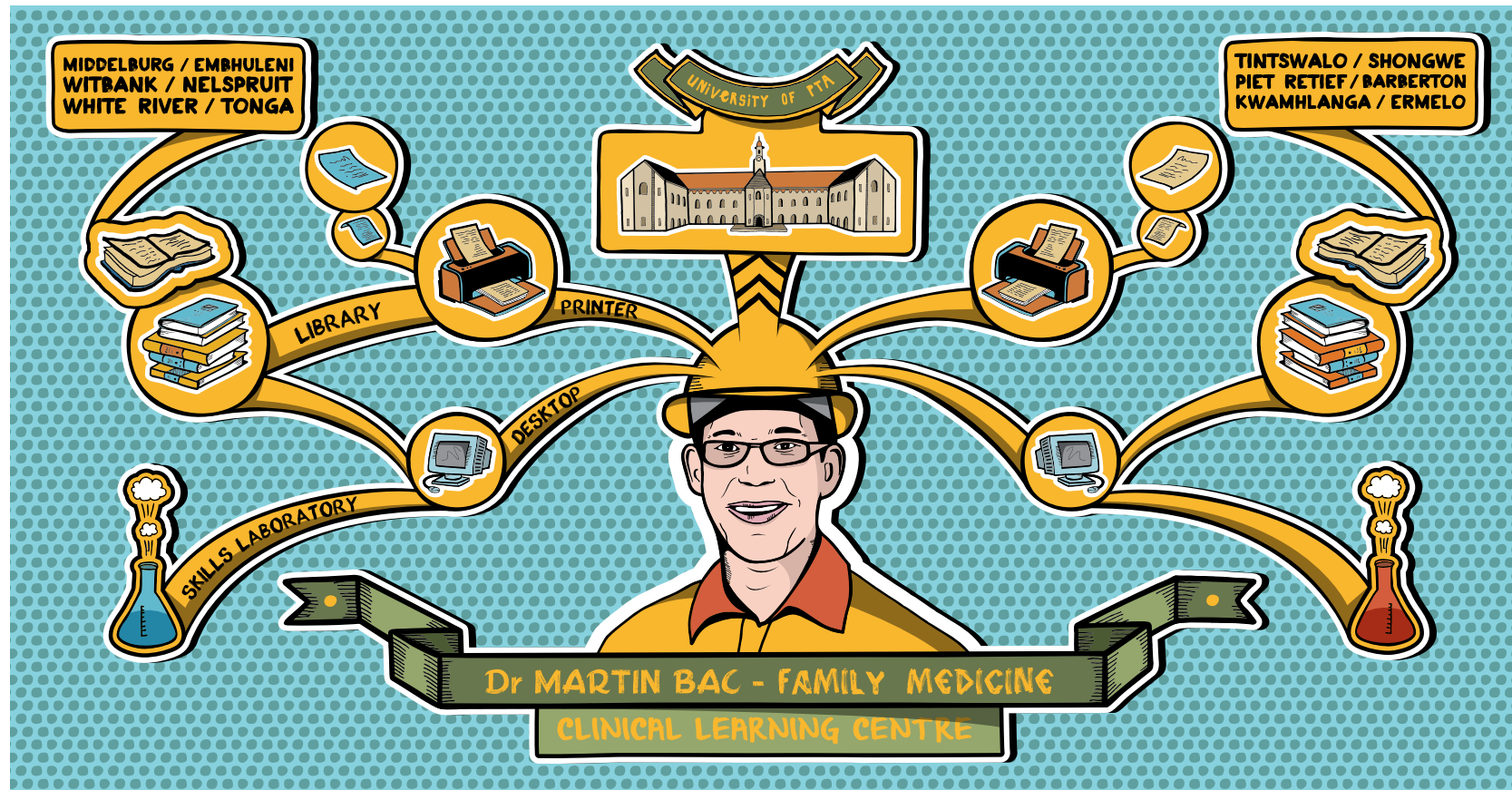
Van Velden Hospital, located in Limpopo's Mopani District, has 86 beds and is severely restricted in terms of resources. The hospital wants to train medical practitioners externally and establish a doctors' centre for internal training of clinical support and nursing staff, and procure medical equipment for improved service delivery. The Discovery Foundation Rural Fellowship Award will be used to achieve this and address staff and equipment shortage, and enhance the hospital's potential. Dr Lydia Myburgh, a medical practitioner at the hospital, will oversee the administration of the award and the hospital's development.

Globally, over 3 million babies die every year in their first month of life, and a baby's chance of survival increases significantly when a skilled birth attendant is present at the baby's birth. *The World Health Organization*

“ I am a medical practitioner with a diploma in Child Health at the Van Velden Hospital in Limpopo, where I oversee the hospital's Paediatrics and Neonatology Department. Our 86-bed Van Velden Hospital is severely restricted in terms of resources, and our greatest challenge is the high prevalence of HIV and TB which contributes greatly to our morbidity and mortality rates, especially in our adult patients. We have a great shortage of both staff and equipment and a great need to improve the patient's care and wellbeing as well as staff morale, especially in the areas of maternal and child health, which are important to us. The Discovery Foundation Rural Fellowship Award will enable our hospital to accomplish the following: send our medical practitioners for external, specialty-related training which would improve the hospital's level of quality of care and attract more doctors to our hospital; establish a Doctor's Centre for space and equipment, which will be used as a hub of learning; generate more internal training opportunities for our clinical support and nursing staff; and to procure much-needed medical equipment for improved service delivery, such as new infusion pumps to support the survival of our premature newborn babies and better equip our Kangaroo Mother Care Unit. This hospital has great potential, and there is an improved service delivery outlook. My dream is to see this hospital functioning to its full potential and serving the community with excellent healthcare services.”

DR
LYDIA MYBURGH

Medical Practitioner, Van Velden Hospital,
Mopani District, Limpopo



DR MARTIN BAC

Senior Lecturer, Family Medicine,
University of Pretoria

The clinical practice of Family Medicine is integral to the District Health System and includes care at community clinic, health centre and hospital levels.

Statement of consensus on Family Medicine in Africa, 2009



“ I am a Family Physician with a deep interest in mother and child health, infectious diseases and how to improve the healthcare delivery in South Africa’s rural areas. In addition to my medical practice, I am also a senior lecturer at the University of Pretoria where I am involved in the training of Clinical Associates and medical students. These Clinical Associates are trained at 20 district hospitals and they have started working at these hospitals where there is a critical shortage of medical professionals. Since the title ‘Clinical Associate’ is a relatively new profession in the medical fraternity, the University of Pretoria and the Mpumalanga Department of Health joined forces in 2009 to develop Clinical Learning Centres (CLCs). In 2010 the first students were placed. These CLCs are situated at 13 hospitals in Mpumalanga to train these Clinical Associates over a three-year course. Medical and nursing students will also train at the CLCs. These 13 hospitals are located in: Middelburg, Witbank, Nelspruit, White River, Tintswalo, Tonga, Shongwe, Piet Retief, Ermelo, Barberton, Embhuleni, Bethal and KwaMhlanga. Final-year students will undergo seven-week rotations in Family Medicine, Community Obstetrics and Paediatrics at rural hospitals within the province. This will help them gain exposure and experience. All these CLCs have basic equipment with a desktop, printer, small library, and in some places, a skills laboratory. I would like to use the Discovery Foundation Rural Fellowship Award to procure more equipment and train the facilitators and education committees to further develop these CLCs as they have the potential to impact positively and improve rural healthcare delivery in the communities. Our first 44 qualified Clinical Associates started working across South Africa’s rural hospitals this year, and with several quality improvement projects in the CLCs, this is just the beginning of this rural teaching platform which will equip students to become excellent Clinical Associates. It is my dream to see a viable, vibrant, functional rural healthcare delivery system in these communities providing excellent healthcare services.”

ABOUT THE HOSPITAL

The University of Pretoria wants to develop Clinical Learning Centres at 13 hospitals in Mpumalanga, a province which has some of South Africa’s most challenged districts healthcare-wise. These centres will train Clinical Associates, which are the newest mid-category level health workers, in rural healthcare delivery. The University of Pretoria will use the Discovery Foundation Rural Fellowship Award to develop these CLCs in the following areas: Middelburg, Witbank, Nelspruit, White River, Tintswalo, Tonga, Shongwe, Piet Retief, Ermelo, Barberton, Embhuleni, Bethal and KwaMhlanga. Dr Martin Bac, a Family Physician and senior lecturer at the University of Pretoria, will oversee the administration of the award and the establishment of these CLCs.



ABOUT THE CLINICAL LEARNING CENTRES

The University of Pretoria wants to develop Clinical Learning Centres at 13 hospitals in Mpumalanga, a province which has some of South Africa's most challenged districts healthcare-wise. These centres will train Clinical Associates, which are the newest mid-category level health workers, in rural healthcare delivery. These CLCs are located in the following areas: Middelburg, Witbank, Nelspruit, White River, Tintswalo, Tonga, Shongwe, Piet Retief, Ermelo, Barberton, Embhuleni, Bethal and KwaMhlanga. These CLCs will be developed and implemented in close cooperation with the University of Pretoria's Department of Family Medicine. Each of the 13 hospitals has a Family Physician who will be responsible for training the Clinical Associates in that hospital. All these CLCs, however, will benefit greatly from visiting medical professionals who are senior lecturers and who will be able to provide them with mentoring, observation, consultation and feedback sessions. These lecturers will play a vital role in the development and execution of all research projects undertaken by registrars and quality improvement projects undertaken by undergraduate students. The University of Pretoria will use the Discovery Foundation Rural Award to enable two distinguished visitors, Professor Sam Fehrse and Professor Robert Erasmus to make 48 visits to the 13 CLCs. The University of Pretoria will oversee the administration of the award.

In 2010, 13 hospitals in Mpumalanga were identified to develop as Clinical Learning Centres. These resource centres assist with the training of clinical associates for rural district hospitals.

PROFESSOR GS FEHRSEN AND PROFESSOR R ERASMUS

WILL ASSIST WITH THE TRAINING PROGRAMME AT THE CLINICAL LEARNING CENTRES IN MPUMALANGA. THE PROGRAMME CONSISTS OF:

- Observed consultations by students, feedback, skills demonstration and project discussions
- Academic meetings
- Skills training
- Professional development and support
- Registrar training
- Development of local Clinical Learning Centre resources
- Bachelor in Clinical Medicine Programme Training.

CLINICAL LEARNING CENTRES

in 13 hospitals in Mpumalanga



ABOUT THE DISTRICTS

The Ngaka Modiri Molema and Dr Ruth Segomotsi Mompati districts in the North West Province, particularly Ngaka Modiri Molema, has a comprehensive primary healthcare system network through 91 healthcare centres and clinics, and 23 mobile clinics. Mafikeng Hospital is the main referral hospital in the region. Despite this, these districts are two areas of extreme rural poverty and deprivation where facilities are far apart, and road infrastructure is still being developed. Attracting South African medical professionals back into the rural public healthcare sector remains a challenge, especially when there is a lack of opportunities for these professionals to study further. The North West Department of Health is passionate about rendering accessible, equitable and integrated quality healthcare throughout the province. A Memorandum of Understanding between the North West Province and the University of Witwatersrand to jointly support deprived rural communities and improve the rural district healthcare delivery system, have been agreed on. A large number of medical professionals leave the rural sector due to lack of opportunities, causing a vacancy rate of 42% and over 50% for medical officers and specialists respectively. It is therefore important for visiting doctors and specialists to offer rural healthcare workers a variety of training opportunities. The University of Witwatersrand will use the Discovery Foundation Rural Fellowship Award to enable two distinguished visitors to visit these districts and perform major ward rounds, and conduct seminars and skills workshops to provide a teaching and learning platform for doctors, interns and community service doctors. The two visiting specialists are Professor Yosof Veriava, a specialist physician and retired Head of Internal Medicine at WITS, and Professor Mkhululi Lukhele, Head of Orthopaedic Surgery at Wits. The award will be administered by the Wits University Health Consortium.

In South Africa, less than half of the overall population lives in rural areas, yet only a tenth of doctors work in rural areas.

FACTS ABOUT THE NORTH WEST PROVINCE:

- It has a population of 3.2 million people
- The North West Province covers less than 9% of South Africa's land area.
- There are more women than men
- Life expectancy is 50 to 54 years
- About 20% of people don't have adequate food supply
- HIV and Aids are the major causes of mortality and morbidity

NGAKA MODIRI MOLEMA AND DR RUTH SEGOMOTSI MOMPATI DISTRICTS



DR ALHAGI NJIE

Principal Family Physician Specialist for the Ngaka Modiri Molema District



DISCOVERY FOUNDATION
**EXCELLENCE
AWARD**

Funding aimed at building centres of
excellence in healthcare



ABOUT THE PROGRAMME

The Cerebral Palsy Association in the Eastern Cape, established in 1955, is committed to encouraging, assisting and caring for all people affected by cerebral palsy, which is a lifelong, incurable condition. The association started the Hambisela Programme to focus on building understanding of cerebral palsy with the aim of empowering primary and community healthcare workers with the necessary skills and knowledge to provide excellent, daily care to people with cerebral palsy. This programme, which is in line with international best practices, helps to enhance the development of children with cerebral palsy. It has been adopted by a number of organisations in other provinces and countries for community-based interventions. The programme assist communities to better accept individuals with disabilities, and helps to improve the lives of children with cerebral palsy and also increases their access to quality education. The Discovery Foundation Excellence Award will be used to implement the second stage of the Hambisela programme in the Eastern Cape, over a 12-month period. The programme will be expanded to the following areas: Nelson Mandela Bay area (Port Elizabeth, Uitenhage and Despatch) and East London. The programme will build and develop the skills and capacity of community-based therapists and healthcare workers to help them adapt the programme to local needs. The administration of the award will be overseen by Dr Anthony Albers, the Chairperson of the Cerebral Palsy Association in the Eastern Cape.

“ Cerebral palsy is a neurological condition that causes problems with movement and posture, and unlike other disabilities and conditions, cerebral palsy affects each individual differently, which means that specific interventions required to assist individuals with the condition need to be tailored according to each person’s specific needs. It doesn’t discriminate among people and affects individuals from all economic sectors, and all social and race groups. Early intervention is essential to allow these children to develop to their full potential. As a result, the Hambisela Programme was created to enable this. Hambisela, which is Xhosa for “make progress”, is a programme that gives both parents and community healthcare workers a better understanding of cerebral palsy and enables them to give better care to their children and patients. They are able to provide a more structured stimulation programme and more therapeutically-correct handling and positioning of the children to meet their developmental needs. The Discovery Foundation Excellence Award will help with the rollout of the Hambisela programme’s second stage, and in addition to building up the specialised skills and knowledge capacity of healthcare workers in managing cerebral palsy; this will also see skills development workshops for community therapists as well as the implementation of a standardised assessment and monitoring system within these structures. I am passionate about making a difference in being able to contribute to an improved quality of life for children with cerebral palsy. My dream is to see the Hambisela Programme being used as a benchmark model for the future roll out of the programme into the Eastern Cape’s rural areas, and across the country. ”

*Dr Anthony Albers,
Chairperson of the Cerebral Palsy Association,
Eastern Cape*

In South Africa, cerebral palsy affects one out of every 400 babies born, which means that about 1 600 children are diagnosed with cerebral palsy every year.

HAMBISELA PROGRAMME

Cerebral Palsy Association, Eastern Cape





DR

MUKESH CHHIBA

DR

KGOMOTSO LOVEY
SANYANE

DR

KATE WEAKLEY

DR

MARTIN BAC

DR

LYDIA MYBURGH

DR

BLANCHE CUPIDO



DR

LISA FRIGATI

DR

DENIS O'MAHONY

DR

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LEADERS IN HEALTHCARE



DR

LOUIS JENKINS

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