SEFAKO MAKGATHO HEALTH SCIENCES UNIVERSITY

FOCUS on SMU

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Ms Ndivhuho Makhado, the Senior Medical Scientist, Microbiological Pathology Department

SMU Scientists Play a Pivotal Role in the Discovery of the Multi Drug Resistant Tuberculosis (MDR-TB) Strains Not Detected by Standard Routine Methods of Detection

By Mr Maditsi Matlala & Ms Ncumisa Malahlana

A ground breaking international research team discovered two different Multi Drug Resistant Tuberculosis (MDR-TB) strains which escape detection by standard routine methods of TB detection. These findings were published in the prestigious "Lancet Infectious Disease" Journal in Oct 2018. *Visit https://www.thelancet.com/journals/laninf/article/PIIS1473-3099(18)30496-1/* for full text.

The research showed that isoniazid monoresistant Mycobacterium tuberculosis (a causative agent of TB) isolates, carry a specific mutation, Ile491Phe mutation from two different strains, which is associated with Rifampicin (RIF) resistance, a surrogate marker for MDR-TB. This mutation is not detected by conventional laboratory tests endorsed by the World Health Organization (WHO) that are used to detect 95% of known RIF resistance within the RIF Resistance Determining Region (RRDR) of the rpoB gene.

The laboratory work, which ultimately resulted in the discovery of the MDR-TB strain began in 2015, in the National Health Laboratory Service (NHLS) - Dr George Mukhari Tertiary Laboratory (NHLS –DGMTL, at SMU), in which Ms Ndivhuho Makhado, the Senior Medical Scientist, in the Microbiological Pathology (MP) Department and team, identified isolates with probable mutation that cause resistance to first line drugs for TB treatment.

The intensive research project involved a collaborative team of Microbiologists from SMU, University of Antwerp (AU) in Belgium and University of Lille, in France, who worked over the months to uncover this new TB strain. A total of 277 Isoniazid (INH) monoresistant isolates were randomly selected from 37 644 positive cultures of TB cases referred to the NHLS - DGMTL from four provinces; Gauteng, North West, Limpopo and Mpumalanga, between 2013 and 2016. The researchers-

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identified the Ile491Phe mutation in 37 (15%) of 249 samples, and reclassified them as MDR-TB, as these are genotypically resistant to all first-line drugs by Deeplex-MycTB sequencing method. Six isolates harboured four distinct mutations potentially associated with decreased bedaquiline sensitivity.

A substantial number of MDR-TB cases harbouring the Ile491Phe mutation in the rpoB gene that are missed by current diagnostic methods, may result in ineffective first-line treatment, continued amplification of drug resistance and concurrent silent spread in the community.

The study highlights a potential challenge in the currently used WHO-endorsed methods in identifying all MDR-TB cases which may result in: amplification of drug resistance, ineffective patient management and adverse treatment outcomes. The researchers further highlight the importance of a continued monitoring of the prevalence of drug resistant TB as well as potentially increased mutations outside the RRDR. The results of this research work will give guidance towards implementing better diagnostic tools such as rapid MAS-PCR and whole-genome sequencing, which can help to improve diagnosis on these clinically significant mutations, and therefore improve TB treatment outcomes in South Africa.

Alumni are well and truly returning home

By Ms Tebogo Manye

The SMU-MEDUNSA Alumni Association (SMUAA) executive pulled off another successful annual general meeting and a 1988 class reunion. The alumni assembled at the Protea Hotel, Fire and Ice, in Menlyn, recently, honouring the call to embark on their home coming to their alma mater.

The prestigious event had a two part programme which comprised of the annual general meeting which was immediately followed by the 1988 Class Reunion. Young and old alumni relished the opportunity to connect across generations and to reminisce about the high and lows of studying at SMU.

Dr Solly Motlanthe, the Interim Chairman of the SMUAA an umbrella body of alumni chapters to which provincial chapters affiliate) called upon alumni to continue making their pledges.

“I plead with the alumni to fill in the pledge forms and contribute a minimum of R200. The fund is utilised for the needs of poor students. There is a moral dividend behind your pledges – your donations will go a long to give a poor student an opportunity to complete their studies and contribute to the welfare of the country - that is a moral dividend that you will reap, should you come on board and make pledges,’ Motlanthe said.

Prof Chris de Beer, the Vice-Chancellor invited alumni to join hands with SMU and appealed to those who are in decision making positions to assist and to open doors for the university to attract third stream funding. Plans to forge strategic partnerships with the neighbouring industry at Rosslyn for fundraising purposes are underway.

Speaking as guest speaker, Prof Ephraim Thibedi Mokgokong, the first Black Vice-Chancellor of the erstwhile Medical University of Southern Africa (MEDUNSA) said, “I am calling upon you, as alumni of SMU, to embrace the ethics and ethos of ploughing back into your alma mater which gave you an opportunity to achieve your dreams. SMU is our institution and it must do well to meet the needs of our country”.

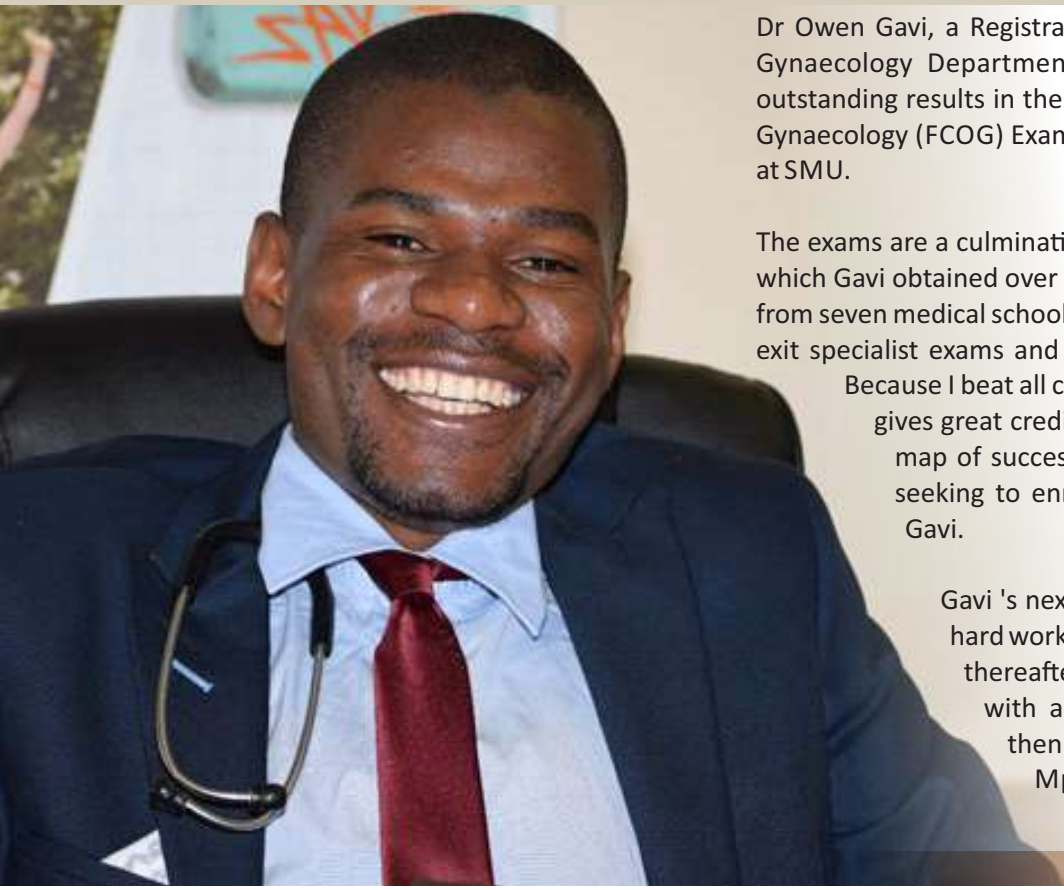
The meeting acknowledged those who went on to enrol for specialist qualifications and qualified as specialists in Cardiology, Dermatology, Anaesthesiology and Chemical Pathology and other specialities.

On a sombre note, alumni who passed on were remembered and their families were presented with memorial plagues signed by the remaining members of their class.

In one voice, alumni elected to maintain a generational mix in the composition of the alumni executive committee and mandated the current committee members to continue for 24 months and volunteers were requested to submit their names to the secretary. The volunteers list will be presented to Prof de Beer in due course, for ratification.

Dr Owen Gavi - the Gold Medal Winner

By Mr Maditsi Matlala



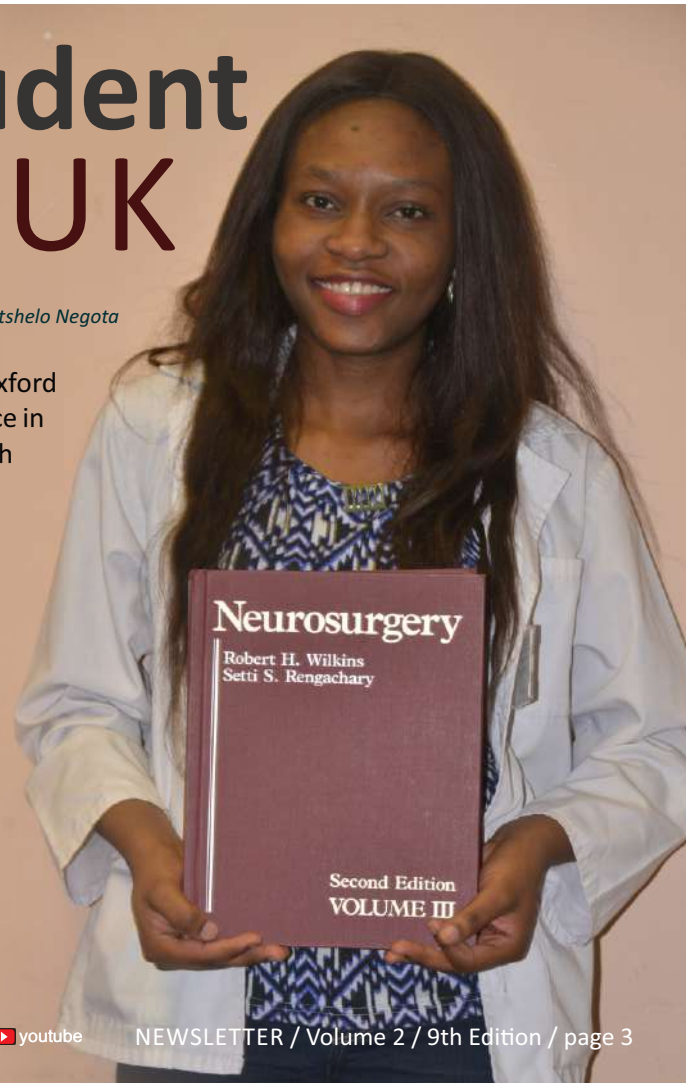
Dr Owen Gavi, a Registrar in the Department of Obstetrics and Gynaecology Department (OGD) obtained a Gold Medal for outstanding results in the Fellow of the College of Obstetrics and Gynaecology (FCOG) Exams. This makes it the first award in O&G, at SMU.

The exams are a culmination of a four year intense programme in which Gavi obtained over 75percent mark, beating 39 candidates, from seven medical schools. "I am glad to receive the award in the exit specialist exams and that shows dedication and hard work. Because I beat all candidates from other medical schools, it gives great credit to SMU and helps to put SMU on the map of success. It is an inspiration to those who are seeking to enrol at SMU to specialise" enthused Dr Gavi.

Gavi 's next move is to rest, catch a breather after hard work in preparations for the FCOG Exams and thereafter look for work to ply his trade. Qualified with an MBChB degree from Zimbabwe, he then went on to serve his internship at the Mpilo Hospital in Bulawayo and later joined SMU as a registrar.

SMU MBChB student jets off to the UK

By Ms Khathutshelo Negota



From 2015, SMU students have been flying to University of Oxford Medical School in the United Kingdom to have first-hand experience in European Medicine. Miss Pipeloluwa Mercy Adegbenro (21), a fifth year student in Bachelor of Medicine & Bachelor Surgery (MBChB) at SMU is one of the 50 Elective students from around the world who will be embarking on such a journey.

The programme will run for the entire month of December 2018 at the Department of Neurosurgery, John Radcliffe Hospital. She will be attending ward rounds and observing Neurosurgical procedures in the theatre.

"My father, Mr Adegbenro always says preparation plus opportunity brings success. Sefako Makgatho Health Sciences University has efficiently equipped me and I am grateful to God for this tremendous opportunity to represent the school on a global platform", said Ms Adegbenro.

Dr Sandile Williams - Director: Research, Strategic Partnerships and Innovation Support

By Mr Maditsi Matlala

Dr Sandile Elroy Johnathan Williams, recently joined the SMU and will be overseeing the Directorate: Research, Strategic Partnerships & Innovation Support. He is Director: Research, Strategic Partnerships & Innovation formerly part of the directorate of research, postgraduate studies and innovation.

The directorate has been split into two Directorates. The first being the Directorate: Research, Strategic Partnerships & Innovation Support and the other being the Directorate: Postgraduate Studies, Research Capacity Development and Ethics.

His portfolio entails responsibility for support and guidance in the following activities:

- Academic leadership and planning in the areas of research, strategic partnerships and innovation support
- Interacting with external partners, including government, local and international universities, alumni, business and local communities, and donors (fundraising)
- Quality assurance and enhancement

Dr Williams has a BSc Honours Degree from the University of the Western Cape (UWC), and a PhD from University of Leeds in the United Kingdom (UK).

He brings a considerable degree of experience in research, its management and policy development, an experience acquired over the years, as a Director, University Policy and Development Support at the Department of Higher Education and Training. His responsibilities included the development, review and implementation of various higher education policies.

He managed the research development grant that is awarded to public universities for the purposes of building capacity and capability of academics. He was responsible for the evaluation of research outputs from public universities for the purposes of awarding subsidy.

Policies under his portfolio included: Research Outputs Policy, Policy on Creative Outputs and Innovations, Language Policy for Higher Education, Policy Framework on Internationalization of Higher Education; and the Differentiation Framework.

He managed the BRICS (Brazil, India, China, Russia and South Africa) Education portfolio which included the BRICS Network University. He oversaw the initiative for the implementation of a national site license for electronic journals databases and also involved in various other initiatives within government and the higher education sector, in general.

At the South African Medical Research Council (MRC), as the Senior Research Manager, he headed Research management and Administration Directorate which oversaw the Research Management portfolio of the MRC and supporting the MRC Vice President. This involved review of the MRC Research units as well as the management of self-initiated research grants awarded to researchers at higher education institutions.

Prior to joining the MRC he was a Senior Scientist at Lectus Therapeutics Ltd, in Cambridge, UK. Lectus Therapeutics Ltd was a drug discovery company with the mandate of identifying novel drug compounds for the alleviation of chronic pain, particular neuropathic pain, as well epilepsy, urinary incontinence and multiple sclerosis. Before this, he had worked at Cardiff University as a Research Associate with a particular research focus on disease conditions caused by abnormalities in the respiratory and cardiovascular systems. Most of this work led to publications in high impact journals, including Science.

He has experienced interesting couple of weeks. But he is still trying to gather all the facts about the portfolio before making any judgements. The initial impressions are that a lot has to be done.

The first major steps he plans to embark upon are to develop appropriate policies/frameworks to guide research, innovations and strategic partnerships. Once the fundamentals are in place, he believes improvements will follow around those key areas.

Dr Sandile Williams, the Director, Research, Strategic Partnership & Innovation Support

Reunion of the 1992 MBChB Class

By Maditsi Matlala

The 1992 Bachelor of Medicine and Bachelor of Surgery (MBChB) Class held their well- attended reunion recently, at the 3 Oakes Boutique Hotel, which is situated in Hartebeestpoort Mountain area, in the North West Province.

Though the initiative to organise the reunion was primarily driven by the members of the 1992 MBChB Class themselves, the event is in keeping with the vision of the SMU to mobilise alumni, to get them to reconnect and to embark on their homecoming, to their alma mater. The reunion is the first step on their journey to take keen interest in the financial and academic welfare of SMU.

The reunion elected a 10 member Interim Executive Committee (IEC) to lead the 1992 MBChB Class in the 2018 - 2019 period. The IEC is comprised of Dr Phillip Makume, Dr Sydney Sebiloane, Dr Collin Skosana, Dr Nkele Makgoba, Dr Motlalepule-Molefi Litheko, Dr Tebogo Pheehaj Dr Thamzela Makaula, Dr Zilungile Mjoli and Dr Ntimbane. The IEC has both provincial and various medical expertise representations for the Alumni. Dr Solly Motlanthe, the current SMU-MEDUNSA Alumni Association (SMUAA) Chairman (SMUAA is an umbrella body of the SMU Alumni Chapters) also attended and apprised them of developments on the alumni front.

The IEC has been mandated to register the 1992 MBChB Class as a legal trust and register it with South African Receiver of Revenue (SARS) for compliance. Once registered and in operation, the Trust will embark on various projects including assistances to their colleagues who need help ,fundraising campaigns and to use the proceeds to provide financial and material assistance to needy SMU students and any needy community identified. Other plans include lobbying the university to introduce financial, risk management and business management courses for medical doctors. Other envisaged programmes will include mental health support and organ donation education.

The reunion also paid tribute to class mates who passed away previously and also vowed to keep their memory alive. The slogan of the Class 92 Alumni is PURPOSE DRIVEN FAMILY(PDF).

Sunday morning

Special Moments

Christmas message

Dear Staff and students

It is the end of another academic year again. I would like to express my sincere appreciation to all of you who contributed to the successful completion of the 2018 academic year and the sustained growth of the University in quality, relevance and stability.

2018 was in many ways a difficult year for the SMU community. The Chancellor of the University and many staff and students passed away during the year and the institution experienced times of instability. I again owe a big thank you to every member of staff and student who remained focused on the goals and objectives of the institution, and who worked tirelessly to ensure significant progress towards attaining our institutional goals and targets for 2018.

It is therefore apposite, not only to thank you, but also to wish you and your family a blessed and relaxed festive season.

Let us return refreshed, energized and ready to make the best of the opportunities of 2019 and face its challenges with courage and wisdom.

Thank you once again for your hard work and dedication towards the development of our University.

Best wishes,

Prof Chris de Beer Vice- Chancellor