



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

HEALTH SCIENCES MATTERS

FACULTY OF HEALTH SCIENCES NEWSLETTER

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3D-Printed total middle ear transplant: **A world first**

Many of us take the ability to hear for granted. Without the ability to hear, we cannot enjoy music, the sound of children laughing or the simple joy of conversing with good friends.

Prof Mashudu Tshifularo, Head of the Department of Otorhinolaryngology (ENT), is giving people the chance to hear again!

Using 3-D printing, Prof Tshifularo is reconstructing the middle ear ossicles or bones that are used during ossiculoplasty and stapedectomy procedures. He is also pioneering the first middle ear organ transplants from his designs. These designs increase the chance of success with minimal intrusion trauma. He says that by only replacing the ossicles that are not functioning properly, the procedure carries significantly fewer risks than known prostheses and their associated surgical procedures. He has already performed laboratory work and two patients received successful middle ear transplants in 2018.



Prof Mashudu Tshifularo



Dear Colleagues,

“Now is the time for change”- This is the slogan that should underpin our thoughts, our daily activities and inform our plans in 2019, another exciting academic year! The last few years have been difficult for higher education institutions throughout South Africa. These challenges demand that we re-think our systems, processes and approaches to the teaching and learning environment, calling for transformation in almost all areas. Whilst transforming, we need to maintain and improve on our high standards of education and research, as well as deliver on the clear directive to graduate innovative, competitive and employable candidates to enter the working world.

With this in mind, we have started, under lead of the Faculty Manager, to transform the foyer area in the HW Snyman North building. The renovations will create integrated, learning spaces for the students that will improve the student experience in our faculty. While the dust and building sounds may be disruptive and unsightly, we are excited for the final product, which promises to be extraordinary if one looks at the architectural images which are posted throughout the building. I would like to call on staff members to carefully consider their role and contribution to the transformation of our faculty during 2019. Transformation refers to more than accepting and embracing our diversity, it also refers to changes in our environment, in the presentation of our teaching, learning and research offering, in our daily conduct and interaction with students and staff to ensure that we optimally strive towards successful completion of degrees, enabling research conducive spaces for postgraduates as well as social responsiveness in delivery of health-based services.

This first edition of the newsletter presents stories from the faculty where a transformation in the approach to service delivery is evident. One such example is the article on the 3D-printed total middle ear transplant development by Prof Tshifularo; confirming that we need to transform our thinking on the translation of research into an improved service or product or that informs policy development or policy change. Similarly, this edition boasts stories of our leading specialists representing the faculty in the areas of forensics, physiotherapy and HIV drug resistance (HIVDR) prevention. These stories are inspiring and we hope to report on many more during the year.

It is clear that we need to go into 2019 with a definitive plan. The Faculty Plan for 2019 is ready for implementation and must inform all areas of delivery - teaching and learning, research with national and international collaborators, transformation and social responsiveness. Crucial questions that will guide us going forward are: “Can we change what we do to contribute to an improved outcome?”, “How will we measure it?” and “What do we need to do differently?” The road ahead is not going to be easy but with the plan as a guide and a positive approach to implementation, we can face the challenges head on.

Now is the time for change!

A handwritten signature in blue ink that reads 'Tiaan'.

Spotlight on research entities

Faculty of Health Sciences alumni at the International Committee of the Red Cross (ICRC)

The Forensic Science division of the International Committee of the Red Cross (ICRC) works to promote and preserve the dignity of the missing, the deceased and their families, in places such as the Central African Republic, the Democratic Republic of the Congo, Mozambique, Somalia and South Sudan.

Through developing forensic sciences as a focal area over the last few years, the Faculty of Health Sciences has developed, and provided some much needed expertise.

UP alumni, lecturers and students currently hold three international forensic specialist positions and one internship at the ICRC helping to build forensic capacity in 28 countries across the African continent.

The specialists are Dr Marie Dussault (extraordinary lecturer at FARC), Dr Jennifer Hughes (MSc Anatomy), Neil Morris (seconded lecturer from the UP Department of Forensic Medicine) and Robyn Vernal (MSc Medical Criminalistics student) as the intern.



Dr Marie Dussault



Dr Jennifer Hughes



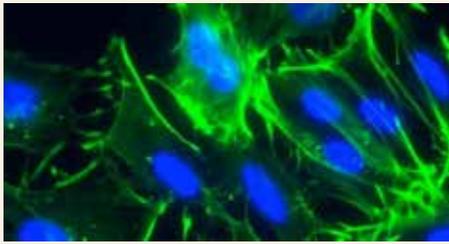
Neil Morris



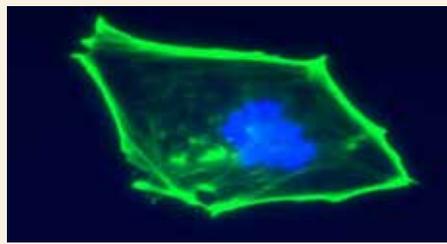
Robyn Vernal



Cancer needs everybody's attention, says Prof Annie Joubert on World Cancer Day



Cancer cell without treatment with a potential anticancer agent



Cancer cell response after treatment with a potential anticancer agent



Prof Annie Joubert

The prevalence of cancer is increasing worldwide. Globally, 14 million people are diagnosed with cancer each year, and approximately nine million lose their lives to cancer annually.

Four of those nine million are between 30 and 69 years old. According to the Cancer Association of South Africa, breast cancer in women and prostate cancer in men are among the top five most prevalent cancers in South Africa. According to the World Health Organization, between 30 and 50% of all cancer cases are preventable!

4 February was World Cancer Day. This initiative by the Union for International Cancer Control aims to enhance cancer awareness and to report on the current status of cancer statistics in relation to global health.

In recent decades, there has been considerable progress in cancer cell biology, paving the way and advancing technology for early cancer detection, screening and surveillance in modern oncology. There are millions of cancer survivors worldwide, showing the cancer awareness, early detection and treatment can make a difference.

Professor Annie Joubert is Head of the Department of Physiology at the University of Pretoria. Professor Joubert's research focus is cancer cellular physiology. She studies cancer drug design and cancer cell signalling to identify targets for therapeutic intervention in the fight against cancer.

Balloon skills in the Division of Paedodontics

Staff members from the Division of Paedodontics, Department of Odontology, School of Dentistry are learning new skills! They try to make children's visits to the dentist as pleasant as possible, and in so doing facilitate future cooperation from our paedodontic patients.

Staff members decided to learn how to fold balloons from a professional clown. So far, the positive response from the young patients, parents and students has been overwhelming. Nothing beats a healthy smile on a child's face!

#TeamPaedodontics



Prof Tahir Pillay appointed as the chair of the Communications and Publications Division of the International Federation of Clinical Chemistry and Laboratory Medicine



Prof Tahir Pillay

Prof Tahir Pillay was appointed the chair of the Communications and Publications Division (CPD) of the International Federation of Clinical Chemistry and Laboratory Medicine (IFCC) in January 2019. He is the first person from Africa to head a division of the IFCC in its 66 year history. The IFCC, based in Milan, is a worldwide, premier non-political organization for clinical chemistry and laboratory medicine made up of a more than 90 member countries and 7 continental federations from different countries and corporate membership from the largest companies in the field of diagnostic laboratory medicine.



Prof Theresa Rossouw

Prof Theresa Rossouw invited by the World Health Organisation

Prof Theresa Rossouw, Department of Immunology at the Faculty of Health Sciences, has been invited by the World Health Organisation to be part of the Research and Innovation working group of HIVResNet for the 2019–2020 term. HIVResNet is at the forefront of HIV drug resistance (HIVDR) prevention, monitoring and response. This working group has been tasked with encouraging research and interventions that will minimize HIVDR, fill existing knowledge gaps on the HIVDR, risk of newer ARV drugs and the impact of service delivery interventions on increasing viral load suppression, and contain HIVDR.

SEMLI's Licinda Pienaar on kykNET TV

Met 'n huppel in die stap is a programme on kykNET TV that focuses on seniors and how life gets a whole new meaning after the age of 50. Mrs Licinda Pienaar from the Department of Physiology, who is also a registered Biokineticist at the Sport, Exercise Medicine and Lifestyle Institute (SEMLI), featured on the programme on 30 January 2019. The episode focused on how to keep your joints healthy. Mrs Pienaar gave her expert advice on how exercises can help treat arthritis, osteoarthritis (OA) and osteoporosis. She recommended doing strengthening exercises that build muscles around OA-affected joints. Stronger muscles relieve the load on the joints, and slow, controlled stretches can improve flexibility and reduce stiffness and pain. Everyone, including those with arthritis, would benefit and minimize further joint damage by doing moderate-intensity exercise. It is, however, important to be evaluated by a biokineticist who can advise on a suitable exercise programme. For more information, contact Mrs Pienaar at licinda.pienaar@up.ac.za or 012 420 6248.



Mrs Licinda Pienaar

GiveWhatYouCan Student Drive



In today's economic climate and fast paced world it is not always possible to come out and help those in need. That is why we have made it easy for staff to donate to the #GiveWhatYouCan Student Drive. Every little donation makes a difference and symbolises team effort. These proceeds will go to students in need, and enable students to meet their potential without having to deal with hunger. In August 2018, *Times Live* reported that 30% of university students were victims of 'hidden hunger', causing poor performance and high drop-out rates. In this regard, we are appealing to everyone to donate the following items:

Non-perishable food (baked beans, mealie meal, pasta, canned fish (such as pilchards and tuna), corned beef, peanut butter, etc)

Toiletries (sanitary towels, body lotion, toothpaste, beauty soap, deodorant, etc)

Clothing items in good condition

All donations should be directed to:
tsholofelo.kungoane@up.ac.za
telephone extension: 2372.



We would love to hear more from departments and staff.
Please e-mail your ideas and contributions for the next edition to Marianna Kotzé
Email: marianna.kotze@up.ac.za