Issue 11, November 2018

South African Society for
Basic and Clinical Pharmacology

Message from the President

What an exciting year this has been for the Pharmacology fraternity. The World Congress of Pharmacology in Kyoto and the inaugural Conference of Biomedical and Natural Sciences and Therapeutics are two major events that took place in 2018. We celebrated the achievements of both our established and young pharmacologists who received various accolades. Together we have made great strides with new developments in the field. We trust that the New Year will take us to even greater heights.

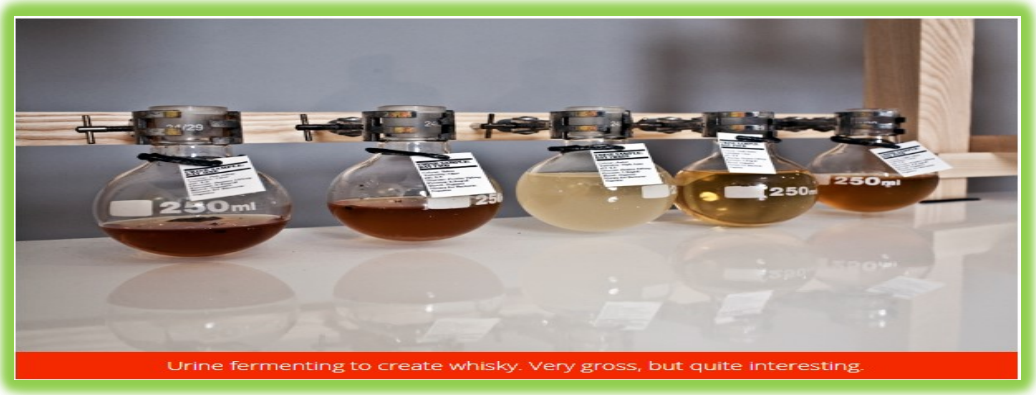
We wish you and your loved ones well deserved rest over the holiday season.

Best wishes

Prof Vanessa Steenkamp

Whisky made from diabetics' urine

The word "diabetes" derives from the ancient Greek word for "a passer through" or siphon; referring to the symptom of excessive urination. English physician Dr Thomas Willis added the term "mellitus" (from the Latin for honey-sweet) in 1674. Diabetes mellitus used to be diagnosed by tasting patients' urine. Dr Willis described the urine from a patient with diabetes as "wonderfully sweet as if it were imbued with honey or sugar." It has now become a strange practice to make whiskey from diabetics' urine.

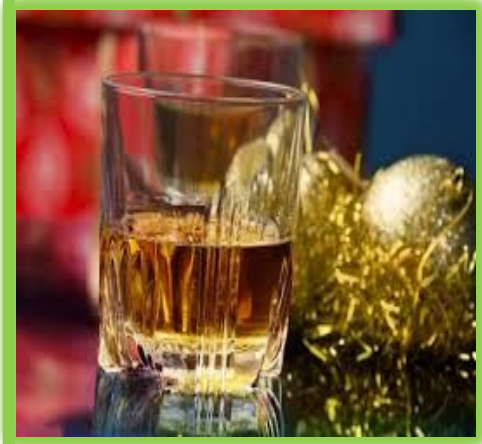


Urine fermenting to create whisky. Very gross, but quite interesting.

James Gilpin, a graduate from Design Interactions in London, has Type 1 Diabetes, and being a somewhat deranged genius, he decided to draw on his own experience in the most bizarre of ways.

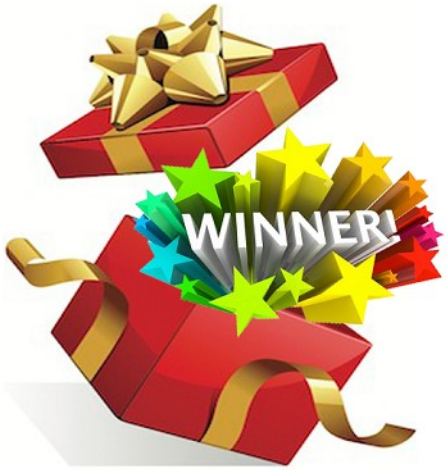
Older people with Type 2 Diabetes often have poorer control over their blood glucose levels. This can be seen by the high levels of sugar in their urine, which Gilpin realised he could put into good use, by fermenting it to make whiskey. The concentration of sugar makes it great breeding ground for mould and bacteria growth, perfect conditions to create whisky. **More info:** **https://www.diabetes.co.uk/blog/2014/10/whisky-made-from-diabetics-urine/**

According to James: "Large amounts of sugar are excreted on a daily basis by type-2 diabetic pts. Especially amongst the upper end of our aging population. As a result of this diabetic pts. Toilets often have unusual scale build up in the basin due to and rapid mould growths as the sugar put into the system acts as nutrients for mould and bacteria growth is it plausible to suggest that we start utilizing our water purification systems in order to harvest the biological resources that our elderly already process in abundance?"

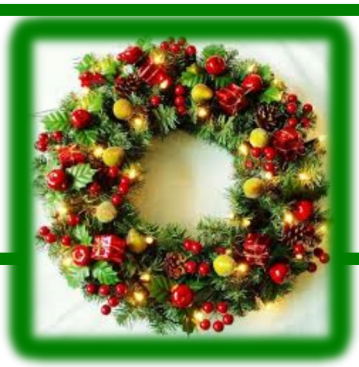


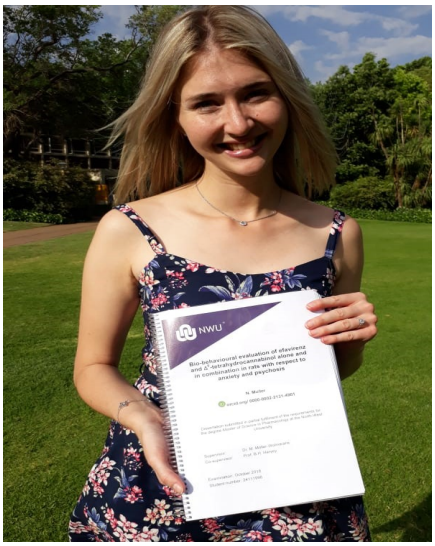
ACHIEVEMENTS

Congratulations to **Prof Elzbieta Osuch** has been honoured with the **South African Medical Association – Gauteng North Branch Award** in recognition of her contribution towards clinical pharmacology. The award title: **"Recognition of outstanding work in the field of Clinical Pharmacology"**



CONGRATULATIONS TO THE CLASS OF 2018





Ms Nadia Muller

Qualification: M.Sc. Pharmacology (NWU)

Title of dissertation: Bio-behavioural evaluation of efavirenz and delta-9-tetrahydrocannabinol alone and in combination in rats with respect to anxiety and psychosis.

Mr Saneesh Kumar (PhD candidate)

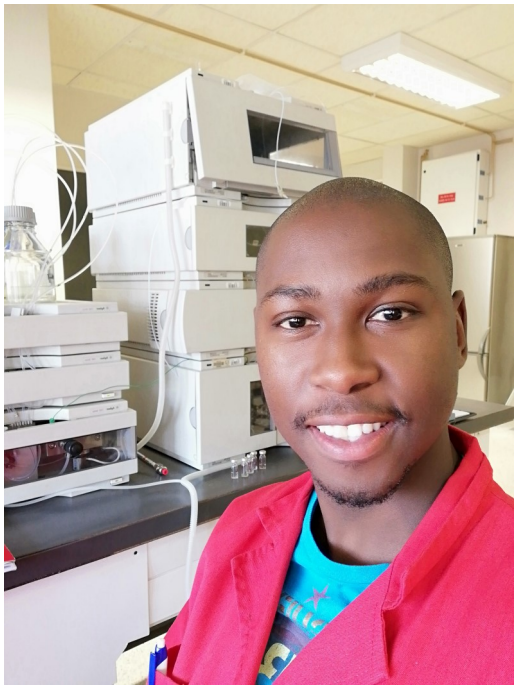
Qualification: M.Sc. Biotechnology (US)

Title of dissertation: Pharmacokinetic herb-drug interactions involving African traditional medicines–fingerprint analysis and in vitro metabolism studies.

Ms Laura Damadeu Kouemo

Qualification: M.Sc. Pharmacvology (UP)

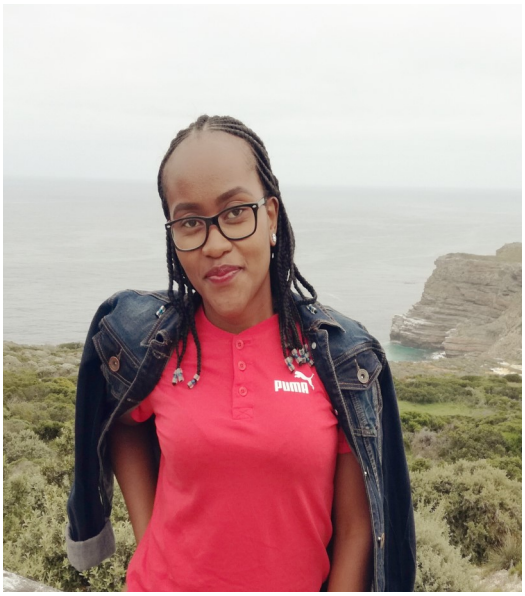
Title of dissertation: Assessing the *in vitro* efficacy of in silico design compounds targeting the Qi site of cytochrome bc1.



Mr Teboho Mooko

Qualification: M.Med.Sc. Pharmacology (UFS)

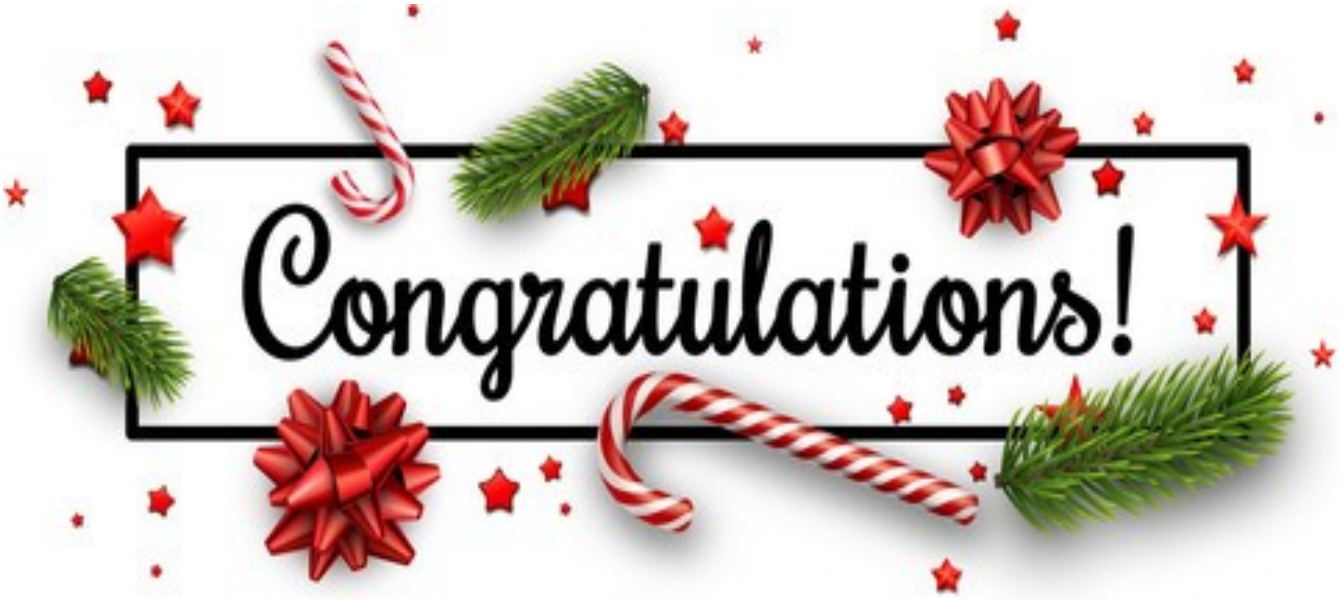
Title of dissertation: Evaluation of the effect of *Cannabis sativa* L. aerial parts extracts on cholinesterase and β-secretase enzyme activity *in vitro.*



Ms Innocensia Mangoato

Qualification: M.Med.Sc. Pharmacology (UFS)

Title of dissertation: The potential of *Cannabis sativa* L. aerial plant parts extracts to reverse drug resistance in selected lung– and colon cancer cell lines.



THE UNIVERSITY of EDINBURGH

IMMUNOPHARMACOLOGY: challenges, opportunities and research tools

IUPHAR International Union of Basic and Clinical Pharmacology

Edinburgh, SCOTLAND

Please see the links below for full details and the report from the IUPHAR/IUIS meeting on IMMUNOPHARMACOLOGY: Challenges, opportunities and research tools (Edinburgh, 1-2 October 2018).

The webpage with links to the report and slides is here:

http://www.guidetoimmunopharmacology.org/immuno/immuphar2018.jsp

The direct link to the report in PDF format is here:

http://www.guidetoimmunopharmacology.org/pdfs/Edinburgh_Immunoparmacology_Meeting_Report_2018.pdf

The associated blog post is here:

https://blog.guidetopharmacology.org/2018/11/02/immunopharmacology-challenges-opportunities-and-research-tools-edinburgh-1st-2nd-october-2018/

And the specific blog post on the Anthony Harmar Memorial Lecture is here:

https://blog.guidetopharmacology.org/2018/11/02/the-anthony-harmar-memorial-lecture-2018-prof-tracy-hussell/

HYDROCHLOROTHIAZIDE: RISK OF NON-MELANOMA SKIN CANCER (BASAL CELL CARCINOMA, SQUAMOUS CELL CARCINOMA)

In collaboration with the South African Health Products Regulatory Authority (SAHPRA), the below listed companies would like to inform you of a new risk of non-melanoma skin cancer (NMSC) (basal cell carcinoma, squamous cell carcinoma) in patients treated with hydrochlorothiazide.

Summary

- Pharmaco-epidemiological studies have shown an increased risk of non-melanoma skin cancer (NMSC) (basal cell carcinoma, squamous cell carcinoma) with exposure to increasing cumulative doses of hydrochlorothiazide (HCTZ)
- Patients taking HCTZ alone or in combination with other medications should be informed of the risk of NMSC and advised to regularly check their skin for any new lesions as well as changes to existing ones and to report any suspicious skin lesions.
- Suspicious skin lesions should be examined; including biopsy and histological examinations.
- Patients should be advised to limit exposure to sunlight and UV rays and to use adequate protection when exposed to sunlight and UV rays to minimize the risk of skin cancer.
- The use of HCTZ needs to be carefully reconsidered in patients who have had previous skin cancer.

Background on the safety concern

HCTZ containing medicinal products are widely used to treat hypertension, as well as cardiac, hepatic and nephrologic oedema or chronic heart insufficiency.

Two recent pharmaco-epidemiological studies conducted in Danish nationwide data sources (including Danish Cancer Registry and National Prescription Registry) have shown a cumulative dose-dependent association between HCTZ and NMSC (basal cell carcinoma, squamous cell carcinoma). Photosensitizing actions of HCTZ could act as possible mechanism for NMSC.

Incidence rates of NMSC depend on skin phenotypes and other factors leading to different baseline risks and varying incidence rates in different countries. Estimated incidence rates vary across different regions in Europe and are estimated at rates of around 1 to 34 cases per 100 000 inhabitants per year for SCC and 30 to 150 per 100 000 inhabitants per year for BCC.

Based on the results of the two Danish epidemiological studies, this risk may increase approximately 4 to 7.7-fold for SCC and 1.3-fold for BCC depending on the cumulative dose of HCTZ.

The product labels will be updated to inform on the risk of NMSC associated with the use of HCTZ.

The **FUNDISA AFRICAN ACADEMY OF MEDICINES DEVELOPMENT and TIERVLEI TRIAL CENTRE** presents a **CLINICAL INVESTIGATOR (AND SITE STAFF) CERTIFICATION COURSE,** from the 11-15 March 2019, at the Nitida Wine Farm, Durbanville, Cape Town.

Since 2015, Fundisa Academy and Tiervlei Trial Centre have hosted the successful Clinical Investigators and Site Staff Certification (CLIC) course in Cape Town and Johannesburg. Different levels of training are available.

CLIC LEVEL 1 covers the core knowledge in the preparation and conduct of studies at investigational sites. This two-day option is aimed at: Sub/Co-Investigators, Study Nurses, Study Coordinators.

CLIC LEVEL 2 covers the knowledge in regulatory and managerial aspects required of Principal Investigators (and Clinical trial managers), according to ICH-GCP definitions and National Legislation. This five-day option is aimed at: Principal Investigators, Clinical Trial Managers, Site Managers.

Pre-register before 31 December 2018 and 2018 registration fees will apply.

Registrations received in 2019 will be subject to a annual fee increase.

Registration deadline: Thursday, 28 February 2019

For more information and to register, contact info@fundisa-academy.com. Space is limited.

VACANCIES: POSTDOCTORAL FELLOWSHIP

The Division of Clinical Pharmacology at the University of Cape Town invites applications for a Postdoctoral Fellowship commencing in January 2019.

The position is available for a Postdoc interested in working in the bioanalytical field of clinical pharmacology and toxicology. In this one year position, the incumbent would develop and validate quantitative liquid chromatography tandem mass spectrometry assays. The ideal applicant would have a PhD in clinical pharmacology or toxicology. The project is led by Dr. Lubbe Wiesner. The Postdoc will be based at the Division of Clinical Pharmacology, Department of Medicine at the University of Cape Town.

Conditions of the award

- PhD in Clinical Pharmacology or Toxicology within the past 5 years with at least one year experience working in a bioanalytical laboratory.
- Applicants may not have previously held any permanent full-time professional or academic posts.
- Applicants are expected to have a good command of English, passion for bioanalytical research and the ability to work in a team.
- Successful applicants will be expected to mentor and train postgraduate students.
- Successful applicants will be required to comply with the University of Cape Town's approved policies, procedures and practices for the postdoctoral sector.

Value and Tenure

The fellowship is valued at between R300 000 and R400 000 per annum, depending on the experience of the applicant and availability of funding. Renewal for a further year is possible, but this will depend on satisfactory academic progress and the availability of funds.

Application process

To apply, send a letter of application, a CV including a list of publications and/or conference presentations, copies of academic transcripts, a copy of the relevant thesis (if no publications have emerged from this work yet), and names (and contact details) from two academics who have taught, supervised or worked alongside the applicant. Applications should be sent to Dr Lubbe Wiesner (lubbe.wiesner@uct.ac.za).

Selection process

Eligible and complete applications will be considered by a committee chaired by the head of Division of Clinical Pharmacology, University of Cape Town.