Research Week (4th-7th September 2017)

VENUE: SCHOOL of PUBLIC HEALTH (SOPH), ROOM 1C
ABOUT 3 MINUTES THESIS (3MT) COMPETITION: INAUGURAL LUNCH AT UWC

Dear Participants,

The Three Minute (3MT) Thesis competition celebrates the exciting research conducted by PhD students. Developed by the University of Queensland, the exercise cultivates students’ academic, presentation, and research communication skills. The competition supports their capacity to effectively explain their research in three minutes, in a language appropriate to a non-specialist audience. 3MT seeks to enhance the profile of the PhD both within universities and the wider community.

This is the inaugural 3MT competition at UWC. The Division (transition to School) of Post Graduate Studies (D/SPGS) has secured the exclusive right to host 3MT and therefore intends to host the 3MT competition earlier in 2018. This is to enable successful participants to compete at both national and international 3MT completions in 2018.

Finally, D/SPGS wishes the participants goodluck as you condense your 3-5 years of research into a 3 minute presentation.

Prof. Lorna Holtman
Director
Division (in transition to School) of Post Graduate Studies (D/SPGS)
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<td>Dr. UNATHI SIDWABA (NATURAL SCIENCE)</td>
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<td>Introduction to Mashauri project Pt 2 (Charleen Duncan)</td>
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<td>15:00-15:15</td>
<td>International Exchange and funding opportunities (Hilda Wilson)</td>
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<td>CLOSING and Thank you (Dr. Olushola Adeniyi)</td>
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AFEEZ JAIYEOLA OLALEKAN

THESIS TITLE: ASSESSMENT OF POVERTY TRENDS IN THE SIX GEOPOLITICAL ZONES IN NIGERIA: EVIDENCE FROM THE GENERAL HOUSEHOLD SURVEY OF NIGERIA

ABSTRACT
The high prevalence rate of poverty in Nigeria has attained endemic proportions and it is becoming worrisome. Poverty remains widespread with a consistently increasing rate averaging 68 percent between 1980 and 2011, with the highest rate estimated at 69 percent in 2010 (NBS, 2012). Given the aforementioned statistics, it is no longer debatable that there is a high rate of poverty in the country. Poverty is complex and is manifested in hunger, unemployment, health-care and education, exploitation and non-availability of clean water and sanitation. In analysing the multidimensional nature of poverty, attributes of household’s welfare deprivation are very important for poverty analysis. Economic growth is also said to be pro-poor if the growth leads to significant reductions in poverty (OECD, 2006 & UN, 1998). However, the issues as to what constitute a significant reduction in poverty and how much the poor must benefit from growth for it to be pro-poor are yet to be resolved (Kraay, 2006). The fact that poverty goes beyond income due to the multidimensional nature of poverty has received little attention. It is in recognition of this that this study aims to examine poverty from an income and non-income dimension, and highlights the concept of pro-poor growth, examine the trends of poverty across the country, analyses the variation in poverty across the six geopolitical zones of the country, examines the impact that economic growth has on poverty reduction in Nigeria and analyses if economic growth in Nigeria is or could be pro-poor. In this study, Monetary and non-monetary indicators of welfare will be aggregated into composite welfare indicator for pro-poor growth assessment. The Nigeria 2010-2011/2012-2013 General Household Panel Survey by World Bank will be analysed using a host of poverty related indicators to ascertain the spatial distribution of poverty across the six geographical zones of Nigeria and will make recommendations regarding the policies needed to reduce poverty in this country.
ALA HOURANI (PhD)

THESIS TITLE: PERFORMANCE OF MUSLIMNESS IN POST APARTHEID CAPE TOWN: AUTHENTICATING CULTURAL DIFFERENCE, BELONGING AND CITIZENSHIP

ABSTRACT

Alhourani PhD’s thesis explored the resurgence of public performances of ‘Muslimness’ and the Muslim aesthetic politics of difference, community making, and multiple intersected belongings in the context of post-apartheid South Africa. Providing a genealogy of Islam and Muslims in Cape Town (including migrants and Capetonian Muslims), the ethnography argues that aesthetic formations of Muslim’s religious style serve as a politics of representation and public identification and as sensorial technology of the self implicated in community formation. Muslim aesthetic politics of subject and community formation were explored through the sensory experiences of visual, sound, and food performances of Muslim-ness. The ethnographic explorations put forward the pronounced public visibility of the Muslims and their dynamic integration into the broader multicultural society of Cape Town. This support two interrelated points: Firstly, that Muslim dynamic integration of local, national, and transnational belongings, and their sense of active citizenship provides a model for Muslim minorities’ negotiation of identity politics and position within a multicultural society. Secondly, the research effectively supports the notion that the South African cultural politics of rainbowism and emphasis on cultural rights provide a lesson regarding the extent to and ways in which other post-colonial multicultural states might integrate minority groups as equal citizens.
ALBERT GORDON OTIENO OMULO

THESIS TITLE: ETHNICITY, GOVERNANCE AND SOCIO-ECONOMIC DEVELOPMENT IN AFRICA: A CASE STUDY OF KENYA AND ITS LUO CO

ABSTRACT

“Ethnicity” and disparate group-based socio-economic development make governance in Africa problematic. Despite this existential reality, the “ethnic” question in African governance remains, largely, only the subject of general discourse. Similarly, attempts at explaining why African political culture, in general, continues to encourage the social reproduction of “ethnic” identities, appear to be largely lacking. This thesis aims to fill some of these gaps by examining the antagonism between the Luo community and the Kenyan state. Theoretically, this study fuses various propositions – obtained from the review of contemporary literature – on leadership and socio-economic development, within the African context, with special reference to the Foucauldian notion of “panopticon” power, Istvan Mészáros’ refutation of “ideological neutrality” and the Instrumentalist Theory of “Ethnicity”. It employs a mixed methods research design, based on multiple sources of evidence, including the Kenyan Government’s Budget Speeches and Statistical Abstracts. The findings include the following: there appear to be strong links between state control and access to healthcare, electricity and rural water supply at particular periods in the county’s independence era, to the detriment of the Luo. Also, it appears that there is a power struggle between certain fractions of capital – the “globalists” and the Kenyan bourgeoisie class (the nationalists).
THESIS TITLE: ASSESSMENT OF PIGMENTED HALOPHILC BACTERIA FOR THE IMPROVEMENT OF REJECT BRINE EVAPORATION RATES

ABSTRACT
Reject brine is a concentrated hypersaline by-product of desalination that cannot be recycled and must be disposed of. The eMalahleni water reclamation plant uses an evaporation pond system for reject brine disposal. The evaporation process results in the precipitation of salt crystals that may be land filled in situ or collected and disposed of elsewhere. The efficiency of this method depends on ensuring high evaporation rates from these ponds, to prevent more brine entering the ponds than can be removed through evaporation. Halophilic bacteria that grow and produce carotenoid pigments in saltern evaporation ponds may be an environmentally friendly alternative to adding synthetic dyes to evaporation ponds to increase current evaporation rates. In this study, inoculation of brine with pigmented cultures of moderately halophilic bacterial isolates resulted in a 20-30% increase in evaporation rate compared to the control. Based on the results, pigmented halophilic bacteria have the potential for affecting an increase in the evaporation rate of the brine.
BELLA GERMAINE NDOH OWEN (PhD)

THESIS TITLE: OPPORTUNITY FOR IMPLEMENTING RECLAIMED WATER FOR DOMESTIC APPLICATIONS IN SOUTH AFRICA: INSTITUTIONAL ENGAGEMENT AND PUBLIC PERCEPTIONS

ABSTRACT

The reuse of wastewater is a critical component of the effective and environmentally sustainable management of South Africa’s municipal water supplies. Recycling municipal wastewater for domestic applications is generally less common because people are repelled by the thought of water that has been in toilets going to taps. This repulsion of ‘toilet to tap’ is a symptom of the disgust or ‘yuck’ emotion. The study addresses negative public perceptions by proposing an approach of terms of engagement with local government, which is likely to shift negative responses to more positive responses. The study proposes that inadequate engagement between the institutions and the public is the premise for negative perceptions and emotions because it inhibits public understanding regarding the safety and benefits of the reclaimed water scheme. This study provides evidence that the interface between the institutions and the public is likely to foster dialogue between the public and local government where reclaimed water is no longer a threat but becomes a solution to water scarcity.
AMANDA ISMAIL

THESIS TITLE: LIVED EXPERIENCES OF SURVIVORS OF TRAUMA TORTURE AND SEXUAL VIOLENCE IN DEMOCRATIC REPUBLIC OF CONGO

ABSTRACT

South Africa is experiencing an influx of Refugees and Asylum seekers from the Democratic Republic of Congo. These individuals come to the country highly traumatized, bruised and in need of a variety of medical and professional care. Little is known about them however, in terms of what experiences they have endured and in particular what psychosocial needs and challenges they face. A wide gap has been reported between popular practices and knowledge on effectiveness of interventions in this field since few studies has been published in this regard. The primary objectives of this study is to conduct a comprehensive analysis of the lived experiences of male and female refugees and asylum seekers from DRC who have endured war, persecution, sexual violence and torture as well as to explore/ uncover what interventions by social workers in South Africa are required to respond to their psychosocial needs. The study employs the qualitative research design, purposive sampling and thematic analysis. Data collection tools include: a scoping review, individual interviews, focus group discussions, as well as a Delphi study. The research instruments is a dictophone, an interpreter and an open ended interview schedule. The theoretical framework utilized is the interpretivist, resiliency and strength based perspectives.
ABSTRACT

There are evidences of hydrocarbon escape features on the seafloor of the Orange Basin, South Africa. This point to the presence of an active petroleum system. Consequently, there is a need to investigate the geological controls on gas escape and the possibility of hydrocarbon accumulation by integrating seismic stratigraphy, seismic attributes analyses and petroleum system modelling. Results show that a reactivated syn-rift listric normal fault serves as a control on gas escape. The reactivation of this fault was due to different episodes of uplift of the continental margin, notably in the early Cretaceous, Late Cretaceous and the Miocene. The late Cretaceous uplift corresponds to the peak of hydrocarbon generation. In addition, results shows the buried fluvial channels of the Albian and Cenomanian age are major carried beds for hydrocarbon migration. It is thus concluded that the uplift that occurs in the late Cretaceous affected the Southern Africa margin and optimise the generation of hydrocarbon from the source unit.
THESIS TITLE: EMPLOY SITUATED LEARNING IN A BUSINESS TERTIARY EDUCATION SETTING

ABSTRACT
The study responds to an appeal from the literature to develop Training Management Students with the knowledge and skills required by South African employers. An approach to learning, referred to as Situated Learning was employed in a Training Management classroom at a university in the Western Cape to impart authentic and relevant knowledge and develop Training and Development Practitioner skills by using a Critical Action Research methodology. Both qualitative and qualitative data was collected from Training Management Students, Experienced Training and Development Practitioners, an academic and the researcher. The findings thus far show Situated Learning is a suitable learning approach for this context. This learning approach was recommended on the grounds that TM students are able to contextualise the real world and develop Training and Development practitioner skills while learning the theory in the classroom.
ABSTRACT
This research is set against a backdrop of increasing the global interest in Shariah-finance in the world. Specifically, this study aims to determine which portfolios performed better during different economic regimes, the Shariah-compliant portfolio (SCP) or conventional portfolio (CP) on Bursa Malaysia through the period (2006-2015). This research focuses on three main areas, namely, investigating the degree of differences in risk and return between (SCP) and (CP); constructing the (SCP) and (CP) and evaluating their performance in different economic regimes respectively, and determining the pervasive macro-economic forces and the significant firm-specific attributes that explain the performance of the (SCP)and (CP), respectively. The findings show that the performance of the (SCP) is largely similar to the performance of the (CP) in terms of its structure and the risk and return characteristics.
IONA GILBURT (PhD)

THESIS TITLE: CINEMATIC AND PHOTOGRAPHIC ASTHETIC IN NOVEL OF J.M. COETZEE

ABSTRACT

This study is an innovative analysis of the multiple ways in which film and photography shape the novels of J.M. Coetzee. The study reveals the central influence of 1960s avant-garde cinema on Coetzee’s creative practice, as evident in simulated optical effects such as fades, dissolves, chiaroscuro lighting, montage editing and accelerated and slowed motion. Besides film, photographs play a key role and several fictions reveal an engagement with technical processes of analogue photography.
THESIS TITLE: EFFECTIVENESS OF A STRUCTURED CIRCUIT CLASS THERAPY MODEL IN THE REHABILITATION OF STROKE: A SINGLE BLIND RANDOMIZED CONTROL CONTROLLED TRIAL

ABSTRACTS
Current advocacy in neuroscientific studies for stroke is that therapy should be directed towards task specificity. Similarly, the intensity of multiple repetitions was identified as the physiological mechanisms behind sustained motor learning following stroke. Circuit Class Therapy (CCT) has been found to offer both the ability to perform task with specificity of goal and the practice of multiple repetitions within a therapy session. However, selection of the most efficient practice intensity/duration to facilitate positive outcome has remained elusive. Using a randomised controlled clinical trial design this study investigated the effectiveness of differing intensities of CCT in the rehabilitation of stroke survivors. Study outcome measures were selected using the ICF framework to determine guide patients’ response post training. Ninety one stroke survivors were randomly allocated into three CCT training groups (120CCT, 90CCT and 60CCT) and a control. Assessment was conducted at baseline, post intervention, and follow-up. Study findings suggested generally a trend towards dose-response in all ICF categories. However, improvement was more apparent at the activity levels and lower extremity related functions. This study investigated the effectiveness varying durations of CCT on stroke outcomes using the ICF as a guide. Findings suggested dose response relationship in favour augmented CCT.
THESIS TITLE: SCREENING OF MARINE BACTERIA AS A SOURCE OF BIOACTIVE SECONDARY METABOLITES

ABSTRACT
Microbial marine endosymbionts are considered a rich source of secondary metabolites with pharmaceutical, industrial and agricultural value. Recent research has shown that the microorganisms' harbored by marine invertebrate are responsible for productions of most compounds isolated from marine invertebrates. *Pseudovibrio* sp. PE14-07 was isolated from a marine sponge and cultivated in three types of media in order to stimulate the expression of genes encoding for secondary metabolites. Its antimicrobial properties were assessed against six test strains (*E. coli* 1699, *P. putida*, *B. cereus*, *S. epidermis*, *M. aurum* and *A. fumigatus*). We observed that each media used for screening produced a different antimicrobial profile, suggesting that the expression of these secondary metabolite pathways are stimulated differently depending on the environmental stimulant. The genome of *Pseudovibrio* sp. PE14-07 was also sequenced using Next generation sequencing and analyzed using bioinformatics tools (Antismash and NaPDos) to mine for secondary metabolites biosynthesis gene clusters. Antismash revealed about 8 secondary metabolites encoded in the genome of the strain including one Non-ribosomal peptide and a hybrid of type I and type III polyketide. Using an OSMAC approach we have showed that *Pseudovibrio* sp. PE14-07 is a rich source of bioactive compounds.
THESIS TITLE: AN ASSESSMENT OF THE ACADEMIC LITERACIES (AL)
MODULES OFFERED AT THE UNIVERSITY OF THE WESTERN CAPE:
TOWARDS AN EMBEDDED HYBRID MODEL OF ACADEMIC LITERACIES

ABSTRACT
The UWC Teaching and Learning Strategic Plan (University of the Western Cape 2006:6) sets out the University’s development as an inclusive and highly flexible higher education institution that aims to “provide students at UWC with an excellent teaching and learning experience that is contextually responsive to the challenges of globalization and the needs of a society in transition”. One of the most important challenges that UWC faces in this regard is the profile of the students it admits — the predominantly working class students who are in need of financial support, have fewer resources and who had inadequate schooling preparation (Letseka & Maile 2008).
Thus, the study sets out to critically evaluate whether UWC (in particular its students) needs a generic embedded Academic Literacies (AL) model or a hybrid embedded AL model. A generic embedded AL model would be one model that is based on one specific theory and practice which all faculties could use, whereas a hybrid model would be a model that draws on different AL theories and practices and that will allow for flexibility pertaining to the different discipline specific domains. The aim of this study is thus to evaluate the various A L modules within the different faculties in order to determine what each faculty’s theories and practices are based on and how AL is embedded within the discipline specific programmes; and its effectiveness with regard to student learning and student success. The objective of the study would be to arrive at an embedded hybrid AL model that faculties could use within their own context and disciplinary domains. It is argued that such a hybrid module will enable a holistic approach to academic literacy and that it will enhance students’ overall learning experiences and success in their academic careers.
THESIS TITLE: ACTINOBACTERIAL DIVERSITY ASSOCIATED WITH TWO MEDICINALLY IMPORTANT PLANTS, ALOE FEROX AND SUTHERLANDIA FRUTESCENS

ABSTRACT
Actinobacteria are a source of biologically active compounds that are important for the pharmaceutical, biotechnology, and agricultural industries. These organisms produce a vast range of biochemicals including antifungals, anti-bacterials, anti-tumour compounds, and anti-inflammatory. The search for new, unique, and naturally produced biochemicals have identified unique environments as a niche source for the discovery of novel bioactive compounds. The Cape Floristic region in South Africa is a biodiversity hotspot due to its unique environment and hosts a range of medicinal plants. This study focuses on the actinobacteria associated with two commercially important medicinal plants known to produce many medicinal compounds, Aloe ferox and Sutherlandia frutescens. This study aims to discover novel actinobacteria species and new bioactive compounds that can be used in the pharmaceutical, biotechnology, and agricultural industries.
THESIS TITLE: PATTERNS IN DIVERSITY, ABUNDANCE, DISTRIBUTION AND COMMUNITY STRUCTURE OF COPEPODS IN SOUTH WEST INDIAN OCEAN

ABSTRACT
Copepods are like small aquatic cockroaches. Very small aquatic cockroaches and they form the basis of open food chains: feeding the fish that feed us. Knowing about them, where you find them and what make them tick is therefore important. This study looked at the copepods of SW Indian Ocean, and specifically at how their communities changed when moving from warm to cold water across the various ocean fronts towards South Pole. This study examined patterns, and drivers of patterns, at all spatial scales from metres through kilometres to hundreds of kilometres and has improved our understanding of this vital link in the food chain in the region.
ABSTRACT
Honeybees play a critical role in the world’s agricultural production and therefore are important for ensuring food security. However, *Paenibacillus larvae* the causative agent of American foulbrood (AFB) disease, has drastically reduced the population of honeybees, worldwide. Currently, there is a 40% loss of the native honeybee’s population in the Western Cape – *Apis mellifera capensis* since 2009. Due to the virulence, easy transmissibility, acquired antibiotic resistance and the resilience of the *P. larvae* spores, it has been difficult to control the disease. Therefore, two phage-based treatments are under investigation as potential alternatives to combat AFB disease affecting *A. mellifera capensis*. Two *P. larvae* strains were isolated from honeybee combs showing clinical symptoms for AFB disease. Whole genome sequence analyses of the *P. larvae* strains using Phaster; predicted more than six different intact temperate phage regions per strain. Electron microscopy has shown that the identified temperate phages exhibited a B2 morphotype of the *Siphoviridae* family. Novel *P. larvae* species specific virulent bacteriophages were isolated from sewage wastewater samples. Moreover, a semi-purified novel endolysin showing selective lytic activity against *P. larvae* has been characterized. The results suggest that phage therapy has the potential for future AFB disease treatment.
THESIS TITLE: PSYCHOSOCIAL FACTORS AFFECTING PEER INTERACTION AMONG FRANCOPHONE ADOLESCENT LEARNERS IN SELECTED SCHOOLS IN THE WESTERN CAPE, SOUTH AFRICA

ABSTRACT

The study investigates psychological factors that influence peer interaction among Francophone adolescent learners in the selected high schools in the Western Cape. The aim of the study is to determine the relationship between psychosocial factors (psychological factors: emotional regulation, aggressiveness, sympathy, empathy; social support; and cultural differences), and peer interactions through demographical details (gender, age, and grade level) among francophone adolescent learners in the selected high schools in the Western Cape. The sample size comprised of 83 participants (females = 52, females = 31) aged of 14 to 19 years old. The study establishes the feasibility of recruitment procedures and develops a new model instrument of psychometric properties to measure of psychosocial factors scale and peer interaction scale for francophone adolescent learners in the selected high schools. The participants in this study experience diverse challenges, which affect them emotionally, socially and psychologically. They have language-related challenges which obstruct communication, affect their smooth interaction with peers in school. They therefore feel isolated and rejected by their peers and this has a negative effect on their overall performance in class. The study sheds light on how to implement inclusive policies in education in South Africa and contributes to psychosocial well-being of adolescent learners from francophone countries. The study also provides preventive and intervention mechanisms for the participants. The results reveal both positive and negative factors. Some of the negative factors that affect peer interaction among francophone adolescent learners are: peer rejection and bullying while positive factors include: cooperative learning, sharing ideas, quality classroom climate, feeling a sense of school belonging, and peer support.
THESIS TITLE: MODELLING THE EFFECT OF ENTREPRENEURSHIP EDUCATION ON ENTREPRENEURIAL MINDSET, SKILLS AND INTENTIONS: EMPIRICAL EVIDENCE FROM UNDERGRADUATES IN NIGERIA

ABSTRACT
As a long-term strategy to curb rising youth/graduate unemployment in Nigeria, compulsory entrepreneurship education for undergraduates was introduced in 2008. The initiative aimed at fostering entrepreneurial skills, mindset and intentions that will motivate entrepreneurial choices upon graduation. This study therefore developed and tested a structured model to measure the effects of entrepreneurship education on entrepreneurial mindset, skills and intentions of undergraduate students in Nigeria. The outcome proved that entrepreneurship education is a potential tool for solving rising youth/graduate unemployment in a developing country. However, this potential could be significantly undermined by “entrepreneurial” climate of academic institutions in which entrepreneurship is taught.
THULI MTHEMBU

THESIS TITLE: INTEGRATION OF SPIRITUALITY AND SPIRITUAL CARE IN OCCUPATIONAL THERAPY EDUCATION

ABSTRACT

Understanding humans using the lens of an holistic approach requires occupational therapy educators, students and clinicians to acknowledge the interconnectedness of the mind, body and spirit, as well as the community at large. However, there are no guidelines to assist to integrate spirituality and spiritual care into occupational therapy education. A sequential exploratory mixed methods two-phase Design Based Research was used to identify the problem and develop guidelines to integrate spirituality and spiritual care into occupational therapy education. Data was collected through a systematic review, surveys, focus group discussions and modified Delphi study. This study has developed guidelines to integrate spirituality and spiritual care into occupational therapy education, which are informed by the transformative learning theories. Additionally, this study has generated significant contribution which has resulted in seven publications in accredited journals.
TSHIPENG MWENZE

THESIS TITLE: CONSTRAINING THE EMLACEMENT OF THE PLATREEF, A PGE DEPOSIT, IN THE NORTHERN LIMB OF BUSHVELD IGNEOUS COMPLEX (SOUTH AFRICA) USING RADIOGENIC ISOTOPE METHODS (E.G. RB/SR AND SM/ND)

ABSTRACT

The Platreef is a platinum group element (PGE) deposit in the Northern limb of the Bushveld Igneous Complex (BIC) of South Africa. The deposit is composed of mafic and ultramafic rocks that occur in between the Main Zone (MZ) of the complex and the country rocks. It has an unpredictable stratigraphy as a result of the multiple magmatic injections that have partly affected the distribution of the PGE and base metal sulphide mineralisation. However, up to this day, issues related to its formation remain unanswered. Samples were collected from 4 boreholes, and the whole-rock analysis for the major, trace and Sr–Nd isotope data were generated to identify the processes involved during the genesis of the Platreef and constrain its source and emplacement. The geochemical data show that the Platreef was derived from magmas of two different sources. The magmas were subjected to varying intensities of crustal contamination during their ascent, thus resulting in diverse degree of sulphide saturation and PGE styles of mineralisation. Furthermore the isotope data allow for magmatic replenishment which occurred in pulses while crystallization proceeded. In conclusion, the Platreef is a sill-like mafic and ultramafic body that was emplaced prior to the MZ magma.
UNATHI SIDWABA (PhD)

THESIS TITLE: ELECTROCHEMICAL POLYPRODOT DENDRITIC DNA APTAMER BIOSENSOR FOR SIGNALLING INTERFERON GAMMA (IFN-) TB BIOMARKER

ABSTRACT
The search for new and reliable tuberculosis (TB) diagnostic protocols intensifies as the TB bacteria continued to evolve into new strains. The T-cell interferon-gamma release assay (IGRA) currently used for latent TB diagnosis, is technically complicated and very expensive. A sophisticated interferon gamma electrochemical signalling procedure was articulated in this study as a basis for the development of an ultrasensitive DNA-aptamer biosensor for TB diagnosis. The IFN sensor exhibited much sensitive for TB diagnosis in clinical pleural fluid samples than the available commercial assays, such as IGRA. The aptasensor is suitable for early diagnosis and accurate prediction of negative results.
USISIPHO FELENI (PhD)

THESISTITLE: QUANTUM DOTS-AMPLIFIED ELECTROCHEMICAL CYTOCHROME P450 PHENOTYPE SENSOR FOR TAMOXIFEN, A BREAST CANCER DRUG

ABSTRACT
Inter-individual variability in the effectiveness of tamoxifen, the most prescribed breast cancer treatment drug, has created much concern in the management of the disease. This has led to the search for diagnostic tests for monitoring the rate at which patients respond to the drug. Commercially available genotype-based protocols is exorbitant and a patient response profile does not depend on genotype alone. In her study, Usisipho Felenei developed a smart electro-phenotype tamoxifen biosensor (b-Cancerphenosens) for determining a patient’s complete response profile.