



# South African Program Update

University of Missouri System and University of the Western Cape

January 2018

A report from the University of Missouri South African Education Program Committee:

- Dr. Joel Glassman, Chair, UMSL
- Dr. Niyi Coker, UMSL
- Dr. Lois Pierce, UMSL
- Dr. Greg Gelles, Missouri S&T
- Dr. Jeanie Hofer, Missouri S&T
- Dr. Francisca Oboh-Ikuenobe, Missouri S&T
- Dr. John Herron, UMKC
- Dr. Lawrence Dreyfus, UMKC
- Dr. Kevin Truman, UMKC
- Dr. Wilson Majee, MU
- Dr. Mark McIntosh, MU
- Dr. James K. Scott, MU
- Professor Rodney Uphoff, Director, UMSAEP



University of Western Cape Administration Building.

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## 2017: A YEAR OF TRANSITION

2017 was a year of transition both at the University of Missouri and at the University of the Western Cape. Dr. Mun Choi became the 24th president of the University of Missouri System. Formerly the provost at the University of Connecticut, President Choi took office in March and immediately faced significant

budget challenges. He tackled those challenges head-on and it is evident that his strong leadership will help move the University of Missouri in a positive direction. Last year's newsletter featured a story about President Choi's background. To read that story, to see past newsletters, and to learn more about the history of

the University of Missouri South African Education Program (UMSAEP), go to <https://www.umsystem.edu/president/southafrica>

2017 also saw Dr. Alexander Cartwright take over as chancellor of the Columbia campus. Like President Choi, Chancellor Cartwright is both an engineer and an experienced administrator. He was the provost of the State University of New York (SUNY) before moving to MU. Chancellor Cartwright has been warmly received by MU's faculty, staff and students. You will learn more about Dr. Cartwright later in this newsletter.

The year also saw a number of key departures at both institutions. Missouri University of Science & Technology Chancellor Cheryl Schrader left in May to become the president of Wright State University. Dr Christopher Maples, former President of Oregon Institute of Technology, was named interim chancellor. MU interim chancellor Hank Foley left in May to become the president of New York Institute of Technology (NYIT). UMKC Chancellor Leo Morton stepped down from his position in October and UMKC Provost Barbara Bichelmeyer is serving as interim chancellor while a search is underway for a new chancellor. And finally, MU provost Garnett Stokes accepted the presidency at the University of New Mexico and will be leaving in February 2018. All strongly supported UMSAEP over the years and we wish them all the best in their new endeavors.

At UWC, former Deputy Vice Chancellor (DVC) Ramesh Bharuthram stepped down in December. Ramesh is not retiring but just assuming new challenges. Since leaving his post as DVC, Ramesh has served as head of Special Projects overseeing international partnerships. Since coming to UWC in 2007, Ramesh played a critical role in promoting research excellence at UWC. He is so highly regarded in South Africa that in 2015 he was chosen as the first recipient of a lifetime achievement award by the Department of Science and Technology (DST) / SARIMA. He also has been a strong supporter of the UM/UWC partnership. Ramesh will be sorely missed by many colleagues at both institutions.

Leolyn Jackson and UMKC's Linna Place also will be sorely missed. Leolyn was UWC's Director of International Relations, a post he held since he was named to replace Professor Jan Persens in 2011.

Leolyn left UWC to become the director of the international office at Central University of Technology in Bloemfontein. Linna retired from her position as UMKC's Director, International Academic Programs. She expects to do a lot more traveling in the coming years.

We would like to welcome a few new people to key positions at UWC. Umesh Bata was named the Director of International Relations on Nov. 1. In April, Dr. Jose Frantz became UWC's DVC for Research and Innovation. She is familiar to many at UM. A new face, however, is Dr. Thabile Sokupa who now is the Head of Projects- Office of DVC Research and Innovation, Dr. Sokupa comes to UWC from the National Research Foundation.

One of the strengths of the UM/UWC relationship and the reason it has endured for over 30 years is that new leaders quickly come to understand the significance and value of this relationship. As many of you know, we celebrated our 30th anniversary in both Cape Town and in Missouri in 2016. Although it is appropriate to continue to celebrate the past, we also need to build upon those aspects of this partnership that have helped it flourish for so many years. To help remind us of achievements of the UM/UWC partnership and enable us to share our story with newcomers to both institutions, we created several videos focused on various aspects of our partnership. Please take a moment to look at this video. <https://www.youtube.com/watch?v=jU39UKR0czM&feature=youtu.be>

One of the primary reasons this partnership has done so well for so long in spite of many leadership changes, is that the leadership of both institutions has been consistently committed to the relationship. Second, both leaders and faculty members from each institution have respected and supported each other. Third, faculty members traveling to their partner institution have always been welcomed and warmly received by their hosts. As a result, both the traveler and the host have had their professional lives enriched by participating in these faculty exchanges. This newsletter includes a report by UWC's Dr. Jyoti Sharma that eloquently describes how meaningful her first visit to Columbia was to her professional growth. Her experience, albeit very special to her, is not

unique. Rather, most of the travelers have reported similar memorable experiences.

Faculty exchange visits not only have been personally rewarding for those who have participated in such a visit, but also very productive. We are currently gathering data from those who have traveled over the past 15 years and expect to complete a report highlighting some of the significant outputs of the UM/UWC partnership. From the information received so far, we have accomplished an incredible amount by working so well together.

Yet, there is even more that can be done. Both UWC and UM face significant financial challenges in the years ahead. Despite the challenges we each face, working together gives us a better chance to tackle critical problems and help find innovative solutions. We need to continue to use existing funding effectively and efficiently while trying to gain access to more external funding. For example, finding more funding to enable more graduate students and undergraduate students to experience what Dr. Sharma experienced should be one of our major goals. Hopefully, the next 30 years will see an increase in faculty and student exchanges as this marvelous partnership grows even stronger.

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## ABOUT ALEXANDER CARTWRIGHT CHANCELLOR, UNIVERSITY OF MISSOURI

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Dr. Alexander N. Cartwright began serving as the chancellor of the University of Missouri on Aug. 1, 2017. Previously, he was provost and executive vice chancellor of the State University of New York (SUNY), the largest university system in the United

States. In his role at SUNY, Dr. Cartwright developed a comprehensive completion model to meet SUNY's ambitious goal of ensuring that more New Yorkers earn the credentials they need to succeed. He launched a system-wide Educational Effectiveness and Strategic Enrollment process designed to support each campus in meeting improvement goals.

Dr. Cartwright is a prolific and highly influential scholar, producing more than 150 peer reviewed

journal publications and conference proceedings. He has received funding from numerous organizations, including the National Institutes of Health, National Science Foundation, Air Force Office of Scientific Research, Department of Defense, the Office of Naval Research and various industrial sponsors. Dr. Cartwright holds four patents and is a Fellow of the American Association for the Advancement of Science and the National Academy of Inventors. He has been recognized for, "outstanding research, teaching and mentorship in optics, for advancing science in New York, nationally, and internationally, and for strengthening diversity and inclusion in science."

Born in the Bahamas and raised in Iowa, Dr. Cartwright received both his bachelor's degree and doctorate in electrical and computer engineering from the University of Iowa.

Dr. Cartwright is married to Melinda Cartwright; they have two children: Alyssa and Andrew.

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## ABOUT DEPUTY VICE CHANCELLOR JOSE FRANTZ

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Professor J. Frantz was appointed as Deputy Vice-Chancellor - Research and Innovation on April 1, 2017.

Professor José Frantz joined the University of the Western Cape in 1996 as a lecturer and is currently Professor in the

Department of Physiotherapy. She obtained her doctoral degree in 2005 from the Department of Physiotherapy, University of the Western Cape and, at the time, was the first black female researcher to obtain a doctorate from this department. Frantz headed the department for three years and is currently the Deputy Dean of Research in the Faculty of Community and

Health Sciences.

Frantz's research focus is in the area of prevention of chronic diseases of lifestyle in young people through appropriate health education. Her doctoral focus was identifying the causes of physical inactivity in young people and the risk factors present sampling of young people in the Western Cape. Currently, she is involved in implementing and evaluating the effects of a health education program relating to risk factors for chronic diseases of lifestyle in schools in the Western Cape as part of the Life Orientation curriculum. Her teaching focuses on postgraduate research methods and evidence based practice. Frantz is currently the editor of the South African Journal of Physiotherapy, the Journal of Community and Health Sciences and co-editor for the African Journal of Health Professions Education. She is also a C-rated NRF researcher.

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## ABOUT DIRECTOR OF INTERNATIONAL RELATIONS UMESH BATA

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Mr. Umesh Bawa is a registered Clinical Psychologist and Senior lecturer in the Department of Psychology at the University of the Western Cape. He is the former coordinator of the Masters in Psychology training program for students in professional psychology at the university.

Mr. Bawa has also served as a senior team member on key community engagement research projects led by the University of South Africa's Institute for Social and Health Sciences. He is a member of the executive of the Psychological Society of South Africa (PsySSA), the professional organization of all psychologists in South Africa where he serves as Chair of the Ethics Committee.

Mr. Bawa has worked in the fields of violence rehabilitation, trauma and human rights in South Africa, Mozambique, Sierra Leone, Rwanda and

Chile. He has also served on the Council for the International Society for Health and Human Rights, and was until recent, the Director of the Children for Tomorrow-South Africa.



The project provides free psychological services for children traumatized by violence in impoverished communities in the Western Cape. His research and training interests include the psychological effects of violence on children, trauma counselling, the re-integration of ex-combatants and child soldiers in post-conflict countries, and safety and peace promotion.

# UWC STUDENT LEADERS TRIP TO MISSOURI

Student Leadership Development-International  
Perspectives

*SRC Educational Tour to Missouri, 22 January 2017*

## **Delegation**

1. Prof Pamela Dube, *DVC: SDS*
2. Mr. Khaya Magopeni: *SDS Executive Assistant & Student Governance*
3. Ms. Nolukholo Mabharwana: *SRC Deputy President*
4. Mr. Sibulelo Ganda: *SRC Secretary General*
5. Mr. Mnoneleli Mlobeli: *SRC Treasurer*
6. Mr. Phumezo Bongco: *Recreation and Cultural Officer*
7. Ms. Zizipho Royi: *Community Outreach Officer*

## **Background**

As part of enhancing the Student Leadership Development Programme and addressing SRC leadership development in particular, Student Development and Support has included an international perspective and/or internationalization at home component. Drawing from the goals of the Institutional Operation Plan (IOP) 2016-2020 and the concomitant SDS strategic framework and in the context of our understanding of student leaders as being at the forefront of change, and in particular the SRC as a primary role-player in student governance, an international perspective is crucial in enhancing students' holistic learning and to add value to the lived leadership experience of student leaders across countries.

At the time of the visit, UWC SRC members were still finding their feet as former frontline activists of the #FeesMustFall campaign. As supporters of the

campaign whose leadership responsibility requires them to look across structures and attend to all student voices, their transition has been quite challenging, also given the dynamics of their political party deployment. As much as the existing student leadership capacity development programme addresses particular educational, institutional as well as national issues and challenges, we believe that collaborative exposure to international perspectives is important for their development as change agents who would be able to lead and contribute positively to student experience on campus from a more broadly informed perspective. Some of the key innovative areas we wished to look into during the 10 day trip included community outreach efforts that look into outreach support both internal and external to the university, diversity and inclusion programmes, efforts to build bridges following a breakdown in relationships, student governance role in enhancing student life, as well as development support efforts that look at entrepreneurship or setting up of small businesses for students.



## Discussion

Below are salient highlights of the programme at each campus (see attached copies of detailed programmes) and the lessons shared, including recommendations on way forward:

### 1. St Louis Campus (UMSL), 22-26 January 2017

Hosts: Prof Joel Glassman, Associate Provost: Academic Affairs & Prof Curtis Coonrod, Vice Provost and Dean of Students

#### 1.1 Highlights



##### 1.1.1. Integration of Differently Abled Students

What stood out at St Louis campus throughout our stay at both the student residence hall where we were accommodated and at the student dining hall that we used for evening meals was the integration of differently abled students with the rest of the university community. We met with the students not as a club or association, and no particular attention was paid to them as differently abled and having to explain themselves, but interacted with them as part of the communities of students and staff we had conversation exchanges with in residence and in the dining hall. They engaged in recreational activities with our students for instance at residence hall reception where Pool tables were provided. This was also evident at the remarkable campus Recreation and Wellness Centre where special equipment for differently abled people was provided in the gym.

##### 1.1.2. Community Integration Context(s): Visit to St Louis Historical Monuments & to Ferguson



The visit to the St. Louis Gateway Arch and the Old Court House among others gave us a brief clear context to the historical dynamics of the surrounding cities and region especially in relation to questions of race and integration. The lunch with the Mayor of Ferguson, Mr. James Knowles III and meeting with the new Chief of Police, including the special guided tour by and with them both in Ferguson was the highlight of the day.

They also took us to the Community Centre and the City Hall chambers for Mayoral meetings where there were further discussions with the City Administrator and the Chief of Police. What came through were clear ongoing efforts albeit not always welcome to restore trust and rebuild relationships with the community following the tragic incident of the shooting of Michael Brown. There are for instance, special voluntary mediation training and conversation processes that include a steering committee that oversees outreach efforts in Ferguson.

As part of looking at entrepreneurship and ideas for setting up small business, we had the opportunity to meet two women who set up their own small businesses in Ferguson, respectively Natalie's Cakes and Cathy's Kitchen. The value add of meeting these ladies at their shops was also to hear how each had to rebuild their business again following the Ferguson protests and the role of the community and participation of the universities in the area including UMSL in some instances in placing orders for special events.

##### 1.1.3. Student Engagement Sessions

In between the campus tours, visits to the Student Engagement centre facilities and lecture discussions ranging from Public policy and Community Collaboration to the context for the formation of the Black Lives Matter movement there were various opportunities for students to engage directly with their student governance counterparts including affiliated structures that included the Pan- African Students



Association and Associated Black Collegians. The special tour to the campus Recreation and Wellness Centre highlighted the student leadership role in the conceptualization and construction of the facility as well as consensus on including a related levy in the tuition fees. A kind of action learning video titled 'Show me Democracy' was an

appropriate concluding highlight tour visit at UMSL in the way it portrayed academic staff involvement in enabling their students to apply their skills in real time, at public policy decision making level and in the community to solve pertinent policy implementation challenges. Our UWC students appreciated the lesson regards the collective role of the whole university community in seeking solutions within its means and resources over and above the role and expectations of the executive leadership to deliver solutions.

#### 1.1.4 Way forward

We agreed with my counterpart Prof Coonrod to explore within the provisions and available resources of our UWC-UM Agreement potential further exchanges that will enhance internationalization efforts for student leadership development. Further engagements between student leaders on specific areas of delivery will be facilitated via the relevant coordinators in our offices.

## 2. Columbia Campus (Mizzou), 26 January - 29 January 2017, Dr Cathy Scroggs, Vice Chancellor for Students & Frankie Minor, Director: Residential Life

### 2.1 Highlights

#### 2.1.1 Integration & Student Centredness efforts

The Mizzou campus stood out in terms of student centered extended physical facilities and services that acknowledge need for 'safe' or special spaces for diversity and inclusion, entrepreneurship skills

development and sports and recreation. The Centres for instance addressing Women, LGBTQ, Sexual Violence, Multiculturalism, Counselling and Wellness, are located in close proximity to one another and provide a one-stop shop integrative space. Like at the other campuses, student governance structures share open space offices, but at Mizzou they even have special consultative boardrooms that all students from 2 to about 10 persons can use for meetings and as study groups. Student proposals for these set ups and involvement in the establishment of all these facilities (including a spa at the world class recreation and wellness Centre!!) as well as consensus on pricing charges was highlighted.

The other highlights that resonated with our UWC students' needs were the one year entrepreneurship incubator programme where a student can develop a business idea and apply for space to set up a small business and if approved gets provided with start-up capital from sponsors and space in the Student centre to sell the products for a year.

#### 2.1.2 Tigers Food Pantry, Stripes, Clothes Bank

The Food Pantry model of Mizzou stood out as a model to explore replicating for a UWC Food Bank and further contact will pursued in this regard and UWC student input sought. This also includes exploring a campaign for used clothes that can assist for job interview purposes or generally when in need of appropriate clothing. Mizzou students also shared information on their Stripes transportation system which enhances student safety and security as students when in need of transport any time after hours can call on Stripes desk to assist. All these services are managed by students, for students and already charged for as part of the tuition levy agreed upon by students.

#### 2.1.3 Student Panel

UWC students had a chance to shine at a student panel organized by Faculty, Politics Department on issues of student governance and student protests. Mr. Magopeni and I were in a concurrent meeting with Dr. Scroggs but we received very positive feedback, including one or two lecturers already recruiting one of our students to study with them at Mizzou.

#### 2.1.4 Basketball Game

This was a remarkable showmanship of student identity with Mizzou Tigers. In fact the whole university community, family members and institutional leadership including the Board of Curators were there, even though they were all clear the Tigers would lose but gallantly. Indeed they lost to

South Carolina 53-63 but the stadium was live with excitement at a game they expected to be well played and indeed was! We had the opportunity share the President's suite and to meet President Middleton and spouse Dr Julie Middleton who was the first to support this idea of a student leadership exchange when we met during the 30th year celebrations at UWC and already issued an open invitation. We had a chance to talk about the tangible outcomes we would wish to see out of this programme as it further unfolds should this addition to the Agreement be supported. We also got to meet the Chairperson of the Board of Curators and some former and current members of Board. As only students in the suite, our students had a great opportunity to engage with the relevant university leadership as they in between howled and screeched to the game.

#### *2.1.5. Way forward*

Dr. Scroggs, the VC for Student Affairs will talk to her counterparts at UMSL and UMKC about taking the proposal to pursue this study tour and internationalization of student governance aspect forward to the Board of Curators' meeting this coming week. We are to stay in contact to work out a draft proposal with details.

### **3. Kansas City Campus (UMKC), 29 January- 1 February 2017. Prof Bichelmeyer: Provost, Prof Mel Tyler: VC for Student Affairs**

#### *3.1. Highlights*

##### *3.1.1 Community Integration Context(s): Visit to the Negro League Baseball Museum & the Jazz Museum, as well as Reception at the Diastole*

These visits on Sunday afternoon helped to contextualize some historical race and integration dynamics and highlighted the city and community's efforts to preserve these important milestones.

Our students also had the opportunity on Monday evening to interact with the university leadership, faculty and staff and some key role-players in our partnership, including the honorary Missouri Consul for South Africa. The Diastole where the event was hosted and where Mr. Magopeni and my apartments were located spoke to the role of leaving a legacy that generations can enjoy and grow from. We learnt about Dr E Grey Dimond who was the founder of the UMKC School of Medicine, and his devotion to the School, Medical Education and promotion of international partnerships was also evident in the book, art and artefacts collections at his premises, the Diastole. Our

UWC students were the only students at this event and were inspired by the evident purposeful life this Founder led.

#### *3.1.2 Student Engagement Efforts*

The UMKC programme was an appropriate conclusion to the trip in that it focused on presentations and discussions that ranged from the role of journalism and media during crises, to student engagement on Activism-balance-Collaboration as well as administration panel on Campus responses to Crisis (where responses to the Ferguson incidence and Mizzou student protests on race were discussed). President Middleton hosted this student and staff summit that ended with Ms. Angela Bennett, a former Board of Curators member engaging UWC students on their impressions of their trip and the University of Missouri system. Further engagements on diversity and inclusion and on learning and teaching to promote social justice were a further highlight of the programme.

What stood out above everything else for the UWC delegation was how UMKC swiftly responded to President Trump's executive order. The University community was invited on Monday morning already to gather at the auditorium in the Student Success Centre /Student Affairs as solidarity action and to give a space to international students, staff and faculty as well as the whole university community to express their concerns.

The Provost, VC for Student Affairs and other relevant executive leaders were present and committed to take the concerns forward as part of an action by university leaders.

#### *3.1.3. Way forward*

My counterpart, Prof Mel Tyler will follow up with his counterparts in the UM system for us to pursue mechanisms for best way to engage with each campus or all campuses on this proposed internationalization of student leadership aspect to our Agreement.

### **Concluding Remarks & Recommendations:**

The appreciation of this experience by the SRC delegation was evident throughout the whole trip. Their level of energy, involvement, excitement and interest in learning and sharing of experiences was consistent, as well as their resolute approach to wanting to represent UWC well and to show their pride at being from 'Bush' and in being South African. The value- add of this experience may not be immediately evident in the behavior and scope of



influence to the ongoing #FeesMustFall campaign but there's commitment to deliver as SRC leaders on projects and co-curricular activities that will enhance the student experience. The internationalization aspect of the Student

Leadership Development Programme is precisely meant to equip the students with a wealth of effective analytical thinking skills and with creative application of these skills. It is meant to broaden their perspectives even beyond immediate challenges and beyond the politics of their immediate leadership role. In the comments that some of them made there was realization that the political dictates & even assumptions regarding their roles limit their creative thinking but also that all it needs is courage and confidence in their role as well as a resolute approach to standing their ground when required to.

The legacy project they wish to pursue as part of setting up a Food Bank which SDS will oversee has been enriched by this experience and they are working on a plan together with SDS to solicit support. They acknowledge the existence of Ikamvaethu support programme and the need to continue its mandate but wish to drive the Food security aspect of it and set up a Food Bank during their term in office. They are keenly aware of the ripple effects of student hunger

and impact on academic performance and on overall student success.

It is recommended that EMC provides them an opportunity to present an own report on the trip and to put forward their proposal for the setting up of a Food Bank.

In order to leverage on existing resources, it is also recommended for the existing tripartite partnership of UWC-UM- Ghent to consider an addendum on internationalization pertaining to student leadership development. A student leadership summit for all 3 partners could be considered as well in addition to the periodic study tour exchanges. The details can be worked out and a proposal made on programmes by the relevant DVC counterparts once there is support for this inclusion. Lastly, we wish to acknowledge and express our gratitude for UWC support in this trip and for that leap of faith that it would, amidst the current challenges, be worth pursuing. We owe its success to this vote of confidence. The UM system colleagues were all very gracious in hosting us and went all out to provide very engaging and exciting programmes for us. This all speaks to the shared value we all have for this partnership.

Prepared by the DVS:SDS | 22 January 2018  
For more student reports, please go to <http://umurl.us/WPp55>

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## 2017 FACULTY EXCHANGES

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In 2017, as in every year since the inception of the program in 1986, faculty members from UWC and each UM campus participated in exchange visits. As past participants have noted in their reports, faculty members not only have been personally enriched by such visits, but many exchanges have also produced a publication or several publications, external grants, or teaching or curricular innovations.

The report done by Dr. Jyoti Sharma eloquently describes the professional growth she experienced as a result of her visit to MU and her work with Dr. Kattesh Katti and his team. The warm reception she experienced while working in Kattesh's lab and in her fruitful meetings with others at MU is not unique. Indeed, the hospitality and generosity she experienced are hallmarks of the UWC/UM

partnership and explain in large part why it is so special and has endured for thirty-one years. UM and UWC faculty, staff and students have shared knowledge about teaching and research and engaged in collaborative research and have done so in a spirit of true partnership. The UM/UWC partnership, therefore, empowers our faculty, staff and students to pursue knowledge collaboratively with the hope that this pursuit will improve their lives and the lives of the citizens of both countries.

Dr. Sharma's report reflects why this program has been so successful over the years. To read other 2017 reports and those from earlier years, go to our website.

<https://www.umsystem.edu/president/southafrica>

## Report of Dr. Jyoti Sharma

### Overview

I express absolute delight and deepest gratitude to the University of Missouri South African Education Linkage Program (UMSAEP) and the University of the Western Cape for supporting my research visit to University of Missouri, Columbia. I feel extremely honored and appreciative to have been selected for this award. This award will be an important impetus for me to continue my research in Green Nanotechnology and Cancer treatment.

The primary purpose of this trip was to work with our current collaborator, Prof. Kattesh Katti (Director, Green Nanotechnology Centre), to maintain and strengthen a *long-term* collaborative research between DST/Mintek *Nanotechnology Innovation Centre (NIC)* (Department of Biotechnology, UWC) and Institute of Green Nanotechnology and Cancer Nanotechnology Platform (Department of Radiology, MU). Prof Katti and his team at university of Missouri have performed innovative and pioneering research on the green synthesis of gold nanoparticles. The main objective of this research visit was to get training in green synthesis of nanoparticles. A collaborative

research grant proposal(UM-UWC) was submitted to Department of Science and Technology. During this research visit, experimental work was discussed with Prof Katti's research team, which will help us to refine the planning for executing the project. During my stay of four weeks in 2017, I visited Proteomics core, Cytology core labs, participated in a collaborative workshop and attended a scientific meeting. Additionally, my visit included presentations and discussions related to other scientific pursuits. UMSAEP award has provided me much needed motivation and career development through providing network opportunities with experts in the parallel research field. I was extremely delighted to showcase our research proposal to such an engaging group of people. I also connected with other researchers in the same field, which will open-up future collaboration opportunities. Being a part of MU community has been one of the best experiences of my life. I have gained a life enhancing experience that will forever enrich my personal and academic development.

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**Project Title:** Evaluating the anticancer activity of Gold Nanoparticles synthesised from Honey Bush using green synthesis methods.

**Aims of the Research:** The aims of the research, which is being carried out in collaboration with Prof Kattesh Katti at the University of Missouri were to synthesize, characterize and evaluate gold nanoparticles AuNPs from Honey Bush (HB---AuNPs).

The proposed work was divided into three segments.

*Segment 1:* The preparation of Honey bush extractions and assessment of Mangiferin content in the extracts.

*Segment 2:* The synthesis, characterization and evaluation of HB-AuNPs.

*Segment 3:* Testing of HB-AuNPs on various human cancer cell lines.

### Methodology and Results:

*Segment 1:* The preparation of Honey bush Extracts: Extracts of Honey bush plant materials were prepared in the laboratory of Prof Meyer (DST/MINTEK Nanotechnology Innovation Centre (NIC), Department of Biotechnology).

*Methodology:* The green/unfermented Honeybush (*Cyclopia intermedia*) (Family: Fabaceae; Tribe: Podalyriaceae), plant material was purchased by Rooibos Limited, Clanwilliam. Honey bush extracts were made using boiled distilled water (50mL of distilled water added to 5g of each plant powder). The extract was centrifuged at 3750 rpm for 2 hours. A stock solution of 64mg/ml was freshly prepared for each extract before the screening step.

*Segment 2:* The synthesis, characterization and evaluation of HB-AuNPs.

This part of work was performed in in the laboratories of Prof Meyer and Prof Katti (Green Nanotechnology Center, MU).

*Methodology:* HB-AuNPs were synthesized from Honey Bush extract as well as dried plant material. Various concentrations of extracts (64mg/ml to 0.005mg/ml) were screened for the synthesis of gold nanoparticles. A different method described by Prof Katti and his co---workers was also used to synthesize HB-AuNPs using the dried plant material instead of the extract for the synthesis. Once HB-AuNPs were synthesized they were further characterized with UV---

vis spectra and the The hydrodynamic size of the nanoparticles were measured using the Zetasizer.

### Results:

After successful screening of various concentrations of Honeybush plant material, 12mg/ml plant concentration was selected for synthesis of

nanoparticles and subsequent work. The synthesized nanoparticles were characterized using UV--vis spectroscopy. The surface plasmon resonance peak for the HB-AuNPs was at 536 nm (Figure i), indicating the reduction of Au<sup>3+</sup> to Au. The hydrodynamic size of HB-AuNPs was 146.3nm.

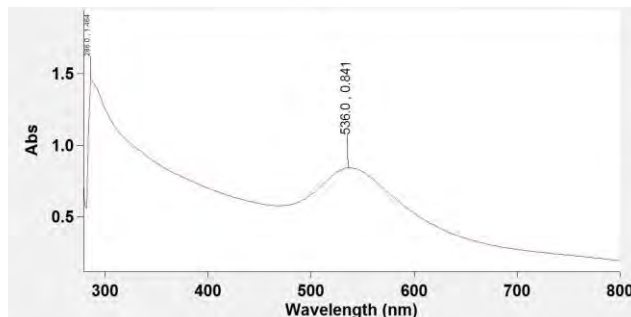


Figure (i): UV-Vis absorption spectrum of synthesized HB-AuNPs

Segment 3: Testing of HB-AuNPs on various human cancer cell lines.

Our main aim in this segment was to evaluate in vitro cytotoxicity of HB-AuNPs on various cancer cell lines.

### Methodology

#### Cell lines and culture conditions

The cells (PC3, PANC3, MIA PACA-1) were cultured and maintained in their respective media, supplemented with 10% fetal bovine serum and antibiotics (2% penicillin–streptomycin 100 IU ml<sup>-1</sup>). The cells were maintained in a monolayer culture at 37°C under a humidified atmosphere of 5% CO<sub>2</sub>. The cells were sub---cultured by trypsinization (0.025% trypsin and 0.0025% EDTA) and maintained in a cell culture laboratory at the Green Nanotechnology Center, MU. Cell number and viability were monitored by standard trypan blue dye exclusion procedures.

#### Cell treatment and cytotoxicity assay (MTT assay):

HB-AuNPs were evaluated for cytotoxicity against PC3, PANC3 and MIA PACA-1. Cells were seeded in 96 well plates (1\*10<sup>4</sup> cells/ml). After 24 hours, the medium was aspirated and cells were treated with HB-AuNPs for 24, 48 and 72 hrs. Various concentrations (200, 100, 50, 25, 12,5 and 6µg/ ml) of HB-AuNPs were used. At the end of the treatment period the medium was aspirated and medium containing MTT3-(4,5-dimethyl thiazol-2-yl)-2,5-diphenyl tetrazolium (MTT) salt (0.5 mg/ml) was added

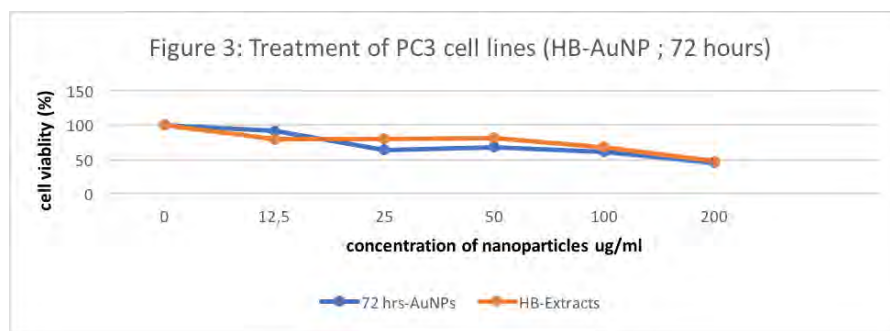
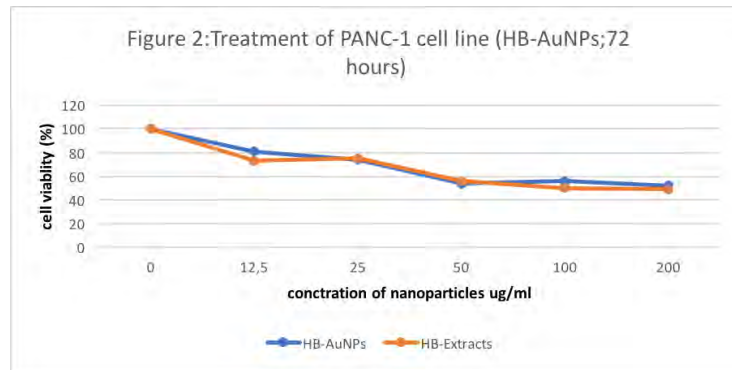
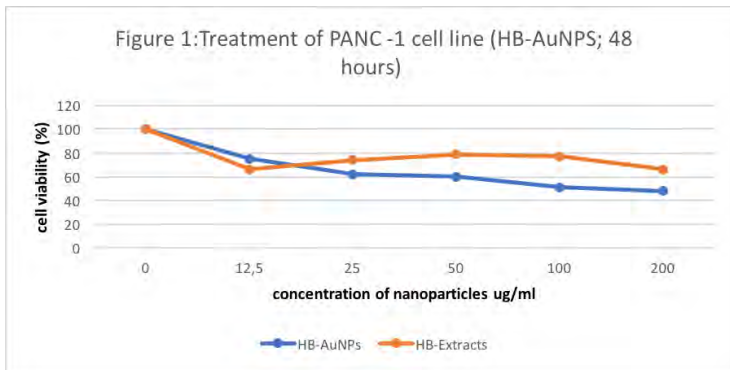
and cells were incubated for 4 hours at 37°C in a CO<sub>2</sub> incubator. The medium with MTT was then discarded and 100 µL of DMSO was added to dissolve the crystals. The absorbance readings of the purple blue formazan dye were measured at 570 nm. The experiment was carried out in triplicate and the average viability of the viable cells was calculated. A graph was plotted between the percentage cell viability and various concentrations. Positive and negative cytotoxicity controls were present in each plate. Negative controls (untreated cells) were set as 100% viability. To determine the cytotoxicity, % cell viability was calculated as per the following formula: Viability % = mean OD of test sample mean / OD of negative control \* 100.

### Results

Different cancer cell lines PC3 (Prostate cancer), PANC3 and MIA PACA---1 (Pancreatic) cancer cell lines were used to evaluate the anticancer activity of HB-AuNPs for 24, 48 and 72 hours. MTT cell proliferation assay has been used for the evaluation of cytotoxicity.

From the data, it is revealed that HB-AuNPs did not show any profound morphological changes in MIA---PACA-1 cell lines, even after 72 hours' treatment. No cytotoxicity was observed in MIA-PACA-1 cell lines as 80% of MIA-PACA-1 cells were still viable at highest concentration. Whereas, about 50% of PANC3 cells were viable after 48 hrs. This viability remained constant even after an extended period (72 hours) of treatment of HB-AuNPs (Fig 1 and 2). While in PC3 cells, growth inhibition was in 45% cells after 72 hours of treatment (Fig 3). A significant decrease in

cell viability of PANC3 and PC3 cells as compared to control cells was observed.



As a first step of gene expression analysis, primers have been designed to investigate the expression levels of nine genes in response to treatment of various cancer cell lines with HB- AuNPs. This part of work is carried out in University of Western Cape and is still under way.

Determination of total phenol content in plant extracts: Training to perform the determination of total phenols in the plant extracts using the Folin-Ciocalteu method was undertaken at UM.

### Training

The training undertaken are listed below: Online training:

- Chemical management online training 13/07/2017
- Introduction to laboratory safety
- Basic Training for Animal Care and Use at MU (20/07/2017)
- DOT training test (21/07/2017) Hands---on training:
- Introduction to laboratory safety (19/07/2017)
- Introduction to biosafety – (20/07/2017)
- ACQA/OAR Rodent Handling Workshops-03/08/ 2017

### Additional noteworthy activities

In addition to the key objectives outlined above, a formal presentation about proposed work in UM-UWC joint grant proposal was given to Prof

Katti's research team. Many experimental issues with respect to nanoparticle synthesis, characterization and their cytotoxicity were discussed in post-presentation discussion. These discussions will be very valuable for trouble shooting the experiments in lab.

I attended the undergraduate research summer forum on 27th July 2017. This event is a showcase of scholarly research activities conducted by undergraduate MU students. It was a deeply satisfying experience to communicate with young researchers as they showcased their research work.

MU Veterinary Health Center, provides state-of-the-art facilities for conducting research relevant to animal and human health concerns. Prof Katti gave me an opportunity to visit Veterinary health center and discuss DST/Mintek NIC research projects with researchers in Veterinary Health Center, which would be quite helpful for future research collaborations.

I attended a workshop animal handling and had my first ever experience with animal handling in an experimental set---up.

Through Prof Katti's efforts, I got a chance to visit various other labs (Proteomics core facility; Molecular Cytology Core Facility) at the UM campus. I was fortunate to discuss my research projects with Prof

Brain P. Mooney (Associate Director, UM Proteomics Center) and got to learn about their interesting current research work. I could discuss proposed objectives in my research lab and joint grant proposal. I could also get information about treatment, storage and shipping procedures of samples (if required) for proteomic analysis. I also could visit their lab and get information about the various instruments, laboratory methodology etc. I believe that this meeting will be quite instrumental and crucial for future collaborative work.

A meeting with Prof Alexander Jurkevich (Associate Director, Molecular cytology Core Facility), provided me with invaluable information about his fascinating research.

I could also join UM recreational activity centre, which was an exciting experience. My UM visit was really an enlightenment for both body and mind.

### **Summary**

My first experience with MU---UWC linkage program will have great impact on my career development. At UM campus, my experience as a researcher extends far beyond the Department of Radiology because of the strong collaborations that exist among the colleges across campus. It was quite interesting to do various lab trainings. There are many aspects that can be incorporated in our research labs as well. Our group and Prof Katti's group are working in parallel fields so this visit has been a source of useful feedback, valuable research ideas and insights into different methodological approaches. We aim to publish one research paper and a conference presentation from this collaborative research work generated from MU-UWC partnership. UMSAEP will surely contribute in capacity building of future young researchers in both universities. The partnerships like UMSAEP will help both institutions to achieve the goal of preparing their students to be real "global citizens".

Apart from research work, this unique visit also gave me an opportunity to explore a new country and to be dazzled by new culture and customs. I wish UMSAEP program to be continued forever!

### **Acknowledgements**

I would like to extend my sincere gratitude and appreciation to the Prof Rodney Uphoff (Professor Emeritus of Law and Director, UM) for organizing this visit, which was a platform for networking, exchange of valuable ideas lessons learning and to make a

strategic research plan in field of Green Nanotechnology under supervision of Prof Kattesh Katti.

I am eternally grateful to Ashley Rhode (Project Specialist, Office of the President, MU) for all the planning and arrangements for the trip.

I would also like to extend this opportunity to acknowledge Prof Ramashwar Bharuthram (Executive Director: Special Projects in the Office of the Vice Chancellor, UWC) for his continued support for postgraduate research. His constant efforts are not only helping promising young researchers to achieve their dreams, but are also likely to cultivate the new generation of scientists.

Words can neither qualify nor quantify Prof Kattesh Katti's encouragement, support and guidance. Thanks for opening my eyes to new stages of opportunity and strength. I will remain forever grateful for the knowledge imparted to me. It would be a great asset throughout my career. I am proud to be able to learn from you. I don't have adequate words to express my feelings for Mrs Kavita Katti for her kind hospitality. I admire her for kindness and support.

I would like to thank Dr Menka Khoobchandani, and Mr Velaphi Thipe. They are amongst the most thoughtful people I know. I will always remember the friendship they extended to me. Thank you for your kindness and taking care of me in every aspect to the best of your ability. Thank you for sharing my shopping adventure. Words are not enough to express you how grateful I am for the training sessions and practical tips in the lab. I hope I will be able to return the favor to you in future.

I would like to say thanks to Ms Liz Abbott (Coordinator, Animal Care), Ms Anna Hamilton (Coordinator Occupational Health and Safety Program) and Ms Sherrie E Neff, for organizing animal training for me.

I would like to express my sincere appreciation to the work done behind the scenes by the International Relations Office at UWC (Ms Debra Lamson, Mr Leolyn Jackson, Ms Hilda Wilson and Ms Rushni Salie).

I would also take this opportunity to thank Prof Martin Onani (Chemistry Department, UWC), who also visited MU while I was there. His presence in MU was

quite helpful for me getting acquainted with the new place.

I want to express my deepest gratitude to Prof Mervin Meyer to give me this wonderful opportunity. I am incredibly fortunate to have him as my Mentor. I truly appreciate and value everything I have learnt from

him, which will forever be a major contribution behind my success and achievements. I believe that I will be able to lead towards a successful career with his sincere support and mentorship. I have the utmost respect for him. He has been, and continued to be an excellent role model to his students.

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## 2017 STUDENT EXCHANGES

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### **Brianne L. Overton**

#### *Henry Mitchell Scholarship Report*



My life is forever changed by my experience in South Africa. I joined Dr. Tom Meuser's research project as a doctoral counseling student to assist in the facilitation of interviews and active participation in this mixed methods research project. The project was much larger than I initially thought. I was so excited to be involved in an international project and to learn from Dr. Tom Meuser, Dr. Nicci Roman, and Thuli Mthembu. As a Thanatologist, I have studied death, dying, and bereavement for a decade. There are not many opportunities in our counseling department to study in the field of death and dying, so when the recruitment email was sent out I was eager to learn more about the Legacy Project. Dr. Meuser and I met and began working together the same week. It's not often you meet someone who not only appreciates the field, but has made a lasting impact through his contributions to the field. I was in awe of all that he has accomplished in his career.

Once I received notification of the scholarship award to accompany Dr. Meuser on the research trip to the University of the Western Cape, the real work began. Before heading to South Africa, I was responsible for interviewing pairs for our Legacy Project in Saint Louis. After transcribing the interviews and meeting with our research team here, we were tasked with moving the project forward by analyzing our data. This would prove to be helpful during our trip with our

South African colleagues. We laid the foundation at UMSL and brought our work to UWC.

Our first stop was in Dakar, Senegal. When I opened the window and peered outside, I was overcome with emotions. It was more than just landing and being in Africa. As the tears streamed down my face I felt a sense of connectedness. The feeling of belonging, where everyone around me looked like me, was more overwhelming that I could have ever imagined. I felt like I belonged as if this place that I had only read about welcomed me with open arms. The feeling was indescribable and would carry me throughout our journey through South Africa. I arrived in Cape Town, South Africa on Saturday, February 3rd and my study abroad journey began. We made it to our guesthouse safely and rested up for our adventure. Our first full day we explored the neighborhood and drove down to the ocean. It was a beautiful day and a wonderful way to explore the city.

On Monday, we traveled to the University of the Western Cape to continue our work with our colleagues. We made it to the UWC and were now embarking on a new journey in the presence of our colleagues. After our introductions, we were provided a tour of the UWC. The campus is beautiful. There were visible signs and remnants of rioting that took place just weeks before our arrival to the buildings and campus. This was a such a surreal experience. This was the first of many reminders that even though we are worlds apart, we are still connected in different ways. I was reminded of walking through Ferguson, after Michael Brown was killed, and witnessing first-hand the effects of his death on the community. In this moment, I was reminded that it was not about being afraid and more about accepting and embracing the unknown. I asked a lot of questions about the riots and the students. Our colleagues provided me with information that was helpful and useful. After our tour,

we finished the day by analyzing our research and solidifying a plan for the remainder of our time at the UWC.

On Monday evening, we were invited to attend the musical *Miriam Makeba: Mama Africa*, by Dr. Angela Coker and Dr. Niyi Coker. The musical was phenomenal! The musical definitely set the tone for my two weeks in South Africa. To experience the life and legacy of Miriam Makeba through the telling of her story in Cape Town was a very enriching experience. As a counselor educator, it is important for me to experience cultures that are different than my own and to share those experiences. On my first day in Cape Town, I was able to visit and tour the UWC, explore the community surrounding the campus, and visit downtown for the production of *Miriam Makeba: Mama Africa*. This experience helped me to expand my cultural awareness, as a doctoral student in a counselor educator program, it is essential for me to continually grow and develop.

Our primary goal for this trip was to engage and collaborate with our colleagues to further the development and completion of this phase of our research. While in St. Louis, I facilitated and transcribed legacy interviews. As a counselor, it has been fascinating to me to explore this task with the older adults and their adult children. I was ecstatic when I learned that I would be given the opportunity to facilitate an interview with one of the South African pairs. This experience was so enriching as it allowed for more commonalities and themes to surface during our debriefing period. This opportunity provided a first-hand experience of the history and culture of Cape Town. This interaction was one of the highlights of the trip, as it allowed me to put my counseling skills to use while engaging in the interview process. Each time we met with our colleagues I learned something new about our research process and felt like a contributing member of the team. There have been times in my career where I've felt intimidated and not as an equal member of the team. This was certainly not the case with this project. In learning more about myself during this trip, I felt empowered to offer my opinion and my voice to our shared project.

I was in attendance for Dr. Meuser's presentation to the UWC faculty and students on his life review work. His presentation was well received and the question and answer segment was even more intriguing. On our final meeting together, we hosted Dr. Roman and Thuli at our guesthouse. During this meeting, we finalized a plan going forward of how we would move

through the next phase of our project. Thuli and Dr. Meuser coordinated dates for Thuli's travel to the University of Missouri – St. Louis (UMSL) and am excited to continue our work together.

During the trip, I had the opportunity to visit several museums and historical sites – Robben Island, Stellenbosch museums/churches/community, Cape of Good Hope, Peninsula tour to Kirstenbosch and Hout Bay, Table Mountain, District Six Museum, and a safari. Cape Town is absolutely beautiful. Engaging with community members and tourists at each place was an enriching experience. Early in the trip I visited a doctor for symptoms of a sinus infection. During the visit, the doctor and I discussed my reason for the visit to South Africa. After discussing the Legacy Project with him, he inquired about my career path. We talked about grief counseling and how I want to continue educating others about death and dying through a counseling lens. Before leaving his office, he bid me farewell and collaboration to offer grief counseling to his patients. This is just one of many examples of the discussions and conversations that I engaged in while in South Africa.

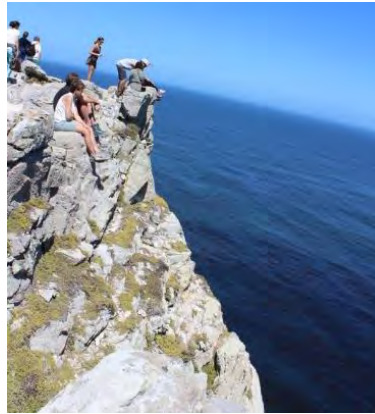
Visiting Robben Island, for me, was another highlight of my trip. Today I cried. I was moved to tears listening to a former prisoner tell his story and the story of #466/64 Nelson Rolihlahla Mandela. I was thankful for the tourist that hurried to keep up with the tour guide as I sat in front of the door to his cell in silence to reflect on his story and his legacy. This moment in time I will forever cherish.



This moment in time stood still. As a person who identifies as an African American female, I reflected upon my place in this world. What does it mean to be me at this very moment in time? Which aspects of the trip will I recall when teaching or educating others about diversity and cultural awareness and competence in the field of counseling? How do I describe my time in Cape Town, South Africa as more than an enriching experience?

During my time in South Africa I was afforded an opportunity of a lifetime. Through this enriching opportunity I meet new people and built life-long relationships with a group of extraordinary people. I am extremely grateful to the UM UWC partnership and the Henry Mitchell Scholarship fund for making this experience possible. Thank you Dr. Meuser, for allowing me to join this project and for valuing my

skills and my voice. This trip has helped me grow beyond what I could have ever imagined in terms of educational experience, cultural immersion and competency, and awareness of the self and others. My life is forever changed by my experience in South Africa. I am grateful to all involved that made this possible.



*Visiting Cape of Good Hope*



*Working away on a beautiful day outside*



*Research meeting with Dr. Roman and Thuli*



*Aquila Game Reserve*



**Johan Fourie**  
3<sup>rd</sup> Year Social Work Student



### **APPLICATION, PREPARING & ARRIVING**

In the second year of my Social Work studies, the University of the Western Cape awarded me the prestigious Henry Mitchell Scholarship and a life changing opportunity to exchange my second semester studies to the University of Missouri, in Columbia, Missouri, USA. This opportunity came after the University extended a call for applications and I had made a successful application. The application process was tedious, competitive, demanded a steadfast commitment and biblical patience as there were many phases to the process. However, through it all, I persevered as the University of Missouri's inclusive policies towards LGBTIQ identifying persons and its globally acclaimed academic status impressed upon me a commitment to affiliate with the University.

Post the aforementioned application and administrative processes, I left South Africa on Friday, August 11th, 2017 and arrived in Columbia Missouri on Saturday, August 12th, 2017. Arriving in the USA and at my residence felt surreal and I was overwhelmed with emotions as I only then truly realized that I had made it – a first generation college student and a descendant of a working-class family on a prestigious scholarship is in the US. Who would've imagined. I also instantaneously realized the responsibility that weight upon me to academically succeed. A responsibility and pressure that continued to heavily weight upon me throughout my semester at the University of Missouri.

#### *Orientation & Registration Week*

On Monday, August 14th, 2017, orientation for all incoming international students began. During that

week of orientation several induction workshops were conducted with the students to foster an understanding of American society and help students better acclimate. Also, part of orientation week, we had to register for our courses and mine was a bit challenging. Most of the classes at the time of our registration were already full and we had to write to the course instructors for permission to enroll in their classes. I also had double the course load that a normal undergraduate student would take at the University of Missouri

which further complicated and escalated my distress at the time. However, upon referral to the International Admissions and Registration Office, the matter was resolved. I was given



space in all my seven courses and had agree to academic probation. Irrespective of the challenges I experienced with my registration, I still thoroughly enjoyed orientation week. I met amazing people from all over the world – China, Japan, Korea, Denmark, Russia, Paris, London, Mexico, Spain, Nigeria, Zimbabwe, Kenya, only to name a few. I also met a two South African and former UWC students who had come to the University of Missouri to pursue their postgraduate degrees. Many of the people I had met during orientation week became good acquaintances and people who I occasionally had joined for supper or lunch at the University Dining halls. Moreover, the two South African students became my good friends and safe space.

#### *The Academics*

The week after orientation, classes commenced. I formally met my course instructors and was introduced to my classmates. The course instructors and my classmates were welcoming, compassionate, and truly made me feel at home. Instant differences that I noticed was that the classes were much smaller than what I was used to as we were approximately 30 to 35 students per class. The lecturing style was also

very different as most of the classes did not have PowerPoint presentation slides and I had to learn but to actively listen, write comprehensive notes based on



what I heard, distinguish what is relevant, and still participate in class discussions. A further difference that I noticed and that instantly triggered my anxiety was the spelling and

pronunciation of the English words as well as their Standard Grading scale. I believed that there was no way that I was going to achieve A symbols at the University of Missouri because its percentages for that is much higher than South Africa's. Following my observation and adjustment to the differences, I committed and started the work to achieve the purpose of my exchange to the University of Missouri. Soon after classes have commenced, I had my first exam sitting. Anxiously, overwhelmed, distressed, and with little confidence I prepared for the weeklong sitting. Nonetheless, I successfully completed the exam session as I passed all my assessments. Passing the assessment period boosted my confidence, gave me a sense of potential, and a glimpse into the three exam sessions that were to follow throughout the semester. However, as the semester progressed, it became more challenging to manage my course load. I had submissions every week, wrote every month, and still had to prepare to participate in class discussions for participation marks. I must admit that I was challenged to my core, overworked, overwhelmed, and socially alienated because all my energy and my time was spent on managing my course load or being anxious about my workload. Nonetheless, I persevered and held onto my course load as the thought of repeating my sophomore year was not an option. I submitted all my work, studied, worked hard, and wrote all my assessments even when I had no confidence that I will pass. Amazingly with the publication of my final results, I scored a 3.33 GPA and I made into the Golden Key International, the Honour Society at Mizzou as well as onto the Dean's List: Arts & Science. To say that I was overwhelmed with emotions would be an underestimate. What I realized through this is that when we know what we want, sacrifice for

it, and diligently work towards it, we will achieve whatever we put our mind to.

### *Social Life, Church, Thanksgiving*

My social life was barely non-existent but every now and then I had one. Prof Uphoff, chairperson of the UM/UWC exchange programme, and his wife, Marsha Uphoff, once a month invited myself and Jade (LLM student) for dinners at their family home in Columbia. Marsha cooked for us and the discussions at the dinner table were always interesting as it varied from politics, religion, academia, equity, racism and even the feasibility of free higher education in South Africa. In addition to the Uphoffs, a South African family who have been living in the US for twenty years also occasionally invited Jade and I as well Veli (PhD student) to their family home for brunch, lunch, and supper. Likewise, Jeff Carson and his wife, Angela, whom I met during Orientation week became good friends of mine and they occasionally met up with me for coffee or lunch. Each of these families were so kind, generous, and sincere. I will forever be grateful unto them because if they had not force me to come to their homes I would have been more lonely and distressed than I was prior to meeting all of them. I pray for them and their families every night and that God shall give unto them three-fold then what they gave me. Their friendship, their interest, and genuinely caring about my well-being.



Similarly, I pray for the church I attended in Columbia. Urban Empowerment Ministries was my spiritual home and every week I looked forward to attending their Sunday services. I always left inspired, encouraged, and with hope that I will overcome the emotions and strain I felt at the time. The church and its engaging services were part of the things that kept me sane. I pray for them too and I will forever be grateful. Lastly, the International Centre at the University of Missouri placed international students with domestic staff, students, and alumni for

Thanksgiving. I was placed with Ms. Chrissy Houton, a staff member, and her family and what a perfect match! It was my first Thanksgiving experience and they went out of their way to make it special. I ate the traditional Thanksgiving meal and got say what I was thankful for. An experience I was grateful for especially because they were so welcoming and happy to have me at their home.

#### *My Recommendation*

In reference to experience at the University of Missouri, I have several recommendations for future applicants. One, that the application of students who will have to enroll in more than 12 credit hours (4 courses/modules) at the University of Missouri need further discretion. As I previously mentioned, such a course load is demanding, takes away from participating in cultural activities, travelling, or networking. Moreover, it affects one's psychosocial well-being, which can negatively affect one's academic performance and takes away from it being a holistic learning experience. Secondly, that pre-departure orientation and preparation (academic, emotional, and spiritual counselling) be given to students as it will better prepare students for acclimation in their hosting country as well to perform academically. Lastly, that a thorough breakdown of the financial responsibilities that students are to endure in their hosting country (tax, co-payments to health insurance, meal plans, residence hall, stationary, etc.) should be given so that they are adequately prepared for those responsibilities and expenses. I firmly believe that if this support is given to students, it addresses future needs and give students a fair fighting chance to really succeed as many of the other challenges are either then bearable, not added onto, or completely diminished.

#### *Word of Thanks*

Before, I conclude my reflection, I would like to note that the University of Missouri, completely changed my life. Prior to leaving South Africa, I often felt disregarded, without a purpose, and that I was unaccomplished. Even though I was academically performing. However, being at the University of Missouri, I discovered my own strengths, potential, and now know what I can achieve. I have a sense hope, purpose, I feel accomplished, validated, and that the world is my oyster. I am also not as critical anymore of myself and don't feel a need any more to compensate because I am an LGBTQI identifying person. All of this because the University acknowledged my identity, gave me safe space to be,

to stand in my truth, and refined my intellectual abilities. I now know that I can survive and achieve anywhere in the world. Based on this experience, I am planning on returning to the US in 2020 through the prestigious Fulbright Scholarship.



Lastly, a special word of thanks to Ms. Debra Lamson and her colleagues at my home University, The University of the Western Cape. Ms. Lamson believed in my potential when she selected me for the program and supported me throughout the entire journey. Similarly, thanks to Prof Uphoff, Mr. David Currey, Ms. Kristen Colbretch, Ms. Carol from Reslife, The LGBTQI Resource Centre, my professors and everyone who supported me and looked after me at the University of Missouri. Also thanks to all my South African sponsors and everyone who accompanied me on this life changing experience. I salute and pray for you all.

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## NEWS IN BRIEF

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### *2018 UMSAEP Awards*

The UMSAEP Committee convened in Columbia on September 1, 2017, and met via video conference with Ramesh Bharuthram from the University of the Western Cape to select participants for the 2018 faculty exchange. The committee authorized UMSAEP awards to eight UWC faculty members and nine UM faculty members.

UWC faculty receiving UMSAEP Linkage awards (UM collaborator in parentheses)

- Priscella Baker (Sheila Grant, MU)
- Leslie Petrik (Lana Alagha, Missouri S&T)
- Quentin Williams (Stephanie Shonekan, MU)
- Wessel Le Roux (Sam Halabi, MU)
- Shaun Prather (James Noble, MU)
- Isioma Ile & Mulu Dinbabo (Wilson Majee, MU)
- Gerard Filies (Lea Lowery & Rosemary Hogan, MU)
- Kailash Patidar (Xianping Li, UMKC)

UM faculty receiving UMSAEP Linkage awards (UWC collaborator in parentheses):

- Kara Moskowitz, UMSL (Leslie Witz & Patricca Hayes)
- Kathie Records, UMSL (Michelle Anipatin)
- Haley Horstman Kranstuber, MU (Athena Pedro & Jenny Rose)
- Samuel Otten, MU (Raj Govender)
- Laura Schopp, MU (Jose Frantz)
- Michelle Teti, MU (Brian van Wyk)
- Amanda Grimes, UMKC (Barry Andrews)
- John Kevern, MS&T (Jaco Nel & Leslie Petrik)

UM faculty receiving an UMSAEP Partnership award (UWC hosts in parentheses):

- Meera Chandrasekhar, MU (Mark Herbert)

### *Chemistry Workshop*

A UM-UWC Carbon Capture and Utilization Workshop was held at UWC from June 5 – 9, 2017. The workshop was organized by Dr. Salam Titinchi Professor, Department of Chemistry University of Western Cape

and by Prof Wesley H. Bernskoetter, Associate Professor, Department of Chemistry University of Missouri-Columbia. Both UWC and UMSAEP provided funds to support the workshop which was designed to unite researchers with existing programs in the areas of carbon capture and utilization (CCU) technologies. Dr Titinchi hosted the workshop which was attended by a team of nine UM researchers. In addition to Prof. Bernskoetter, UM attendees were:

Prof. Jerry Atwood (Chemistry-MU)  
Prof. Sheila Baker (Chemistry-MU)  
Prof. Wesley Bernskoetter (Chemistry-MU)  
Prof. John Kevern (Civil Engineering-UMKC)  
Graduate Student Elizabeth Lane (Chemistry-UMC)  
Prof. Paul Nam (Chemistry-Missouri S&T)  
Prof. Fateme Rezaei (Chemical Engineering-Missouri S&T)  
Graduate Student Andrew Roberts (Civil Engineering-UMKC)  
Prof. Ali Rownaghi (Chemical Engineering-Missouri S&T)

A contingent of South African researcher from across the country joined for three days of talks and discussions (please see the attached book of presented abstracts). The forced closure of the UWC campus on Wednesday June 7 due to a major storm and the outbreak of a flu virus among several UM system participants somewhat affected the amount of time the researchers were able to spend together. Nonetheless several productive collaboration have already stemmed from the joint venture, despite these challenges:

1. Profs. John Kevern and Leslie Petrick have begun an effort to study how geopolymers produced from coal combustion waste might be used to mitigate acidic drainage from landfill sites. They submitted a separate UMSAEP proposal on this topic that was funded for 2018.

2. Profs. Leslie Petrik, Ali Rownaghi and Fateme Rezaei have begun joint experiments study new hollow fiber and other 3D printed carbon capture absorbents for capabilities with models for South African coal combustion waste streams. They hope to apply for funding for this work once initial data are collected.

#### *UWC Students in Missouri*

2017 witnessed the largest number of UWC students ever traveling to Missouri. In addition to the student leaders group that traveled to Missouri in January, eight other UWC students were in Missouri this year.

In May, UWC law student Lyn Lawrence became the 16th UWC law student to receive an LLM (masters of law) in dispute resolution at the MU School of Law. In August, UWC law student Jade Morris became the 17th recipient of the Ivan Rugema Fellowship. The fellowship was named after the second UWC law student to enroll in the LLM program who tragically died while a lecturer at the UWC law faculty.

The UWC LLM graduates have been remarkably successful upon returning to South Africa and other parts of Africa. Two clerked for the South African Constitutional Court, the highest court in South Africa. A number have taught or are teaching at UWC. Several are working for some of the most prestigious law firms in South Africa.

Generous gifts from Fred White, Geoff Oelsner and Robert Lande have supported this fellowship in the past. The MU law school is currently seeking other funding to enable it to continue bringing UWC law students to Columbia.

Two UWC graduate students Bianca Gordon and Tracey Calverts-Joshua came to Columbia to participate in the University of Missouri School of Medicine's summer research program. The students worked on their own research project under the guidance of a faculty mentor and presented their results at the end of the six week program. MU's Dr. Jerry Parker has been instrumental in supporting this program and enabling UWC students to participate for the past six years.

As part of an ongoing collaboration between UWC's Dr. Marshall Keyster and MU's Dr. Antje Heese and

Dr. David Mendoza-Cozati, two UWC grad students, Lee-Ann Niekerk and Arun Gokul are spending 8 months at MU. Dr. Keyster had spent three months working in Dr. Mendoza-Cozati and Dr. Heese's labs in the fall of 2016 as part of an UMSAEP award. MU's Interdisciplinary Plant Group, by UMSAEP, and by Dr. Keyster's research grant, has funded Lee-Ann and Arjun's visit.

Another South African graduate student, Veli Thipe received a Fulbright fellowship and has been working in MU's Dr. Kattesh Katti's lab since 2015. Veli was a student of Dr. Katti when he was a Masters student in a Nanoscience program hosted at the UWC. Dr. Jyoti Sharma whose report is featured in this newsletter also worked in Dr. Katti's lab.

Finally, UWC undergraduate student Johan Fourie was awarded a Henry Mitchell Scholarship to study in the fall semester at MU. His report reflects the life-changing experience he had while in Columbia. The 2018 Henry Mitchell fellow is Phindulo Mavhina. She just started at UMSL this month.

#### *UM and UWC Visitors*

UM visitors to South Africa in 2017 include the following: Rodney Uphoff, Amy Schmitz, Dave Renz, Mike Wood, Randy Smith, Michelle Teti, Lana Alagha, Elizabeth Chang, Ty-Ron Douglas, Laura Schopp, Suchi Guha, Carstens Ullrich, Wes Bernskoetter, Jerry Atwood, John Kevern, Elizabeth Lane, Sheila Baker, Andy Roberts, Paul Ki-souk Nam, Ali Rownaghi, Tom Meuser, Wilson Majee, Meera Chandrasekhar, Doug Steinhoff, Maria Fidalgo, Candace Kuby, Mansoo Yu, Kathryn Chval, Chris Fulcher, Frank Bowman, David Mitchell, Enid Schatz, Bob Sharp, Felix Fritschi, Walter Gassman, Trupti Joshi, Ruthie Angelovici, Emily Mahler, Lee Voth-Gaeddert

UWC visitors in 2017 include the following: Vivienne Bozalek, Tapas Chatterjee, Courtney Davids, Marshall Keyster, Jyoti Sharma, Martin Onari, Anita Padmanadbhanunni, Kailash Patidar, Jo-Celene de Jongh, Lisa Wegner, Pamela Dube, Khaya Magopeni, Arun Gokul, Lee-Ann Niekerk, Ashwill Klein.

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## UM/UWC FACULTY VISIT SUMMARY

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	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
<b>UM Faculty</b>	4	6	7	14	11	12	10	11	11	7	9
<b>UWC Faculty</b>	4	10	11	18	17	25	10	13	13	7	8
<b>Total</b>	8	16	18	32	28	37	20	24	24	14	17

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
<b>UM Faculty</b>	13	14	9	7	4	7	7	7	9	22	7
<b>UWC Faculty</b>	2	7	3	5	6	6	4	4	10	1	9
<b>Total</b>	15	21	12	12	10	13	11	11	19	23	16

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	TOTAL
<b>UM Faculty</b>	7	15	20	39	11	18	35	19	40	36	448
<b>UWC Faculty</b>	7	7	14	6	16	5	12	25	44	13	342
<b>Total</b>	14	22	34	45	27	23	47	44	84	49	790

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## MITCHELL SCHOLARSHIP APPLICATION DEADLINES ANNOUNCED

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Emma Mitchell (UMSL) and Johan Fourie (UWC) were the recipients of the Henry Mitchell Scholarships this past year. Selected for the upcoming year is Phindulo Mavhina (UWC).

The UM application deadline for the Mitchell Scholarship for study at UWC for the fall 2018 semester is March 1, 2018. Classes start at UWC for the fall semester on July 23, 2018.

The application deadline for the winter 2019 semester at UWC is September 15, 2018.

An application form is available for downloading at [https://uminfopoint.umsystem.edu/media/aa/southafrica/pgmstudent/Henry\\_Mitchell\\_Scholarship\\_Application.pdf](https://uminfopoint.umsystem.edu/media/aa/southafrica/pgmstudent/Henry_Mitchell_Scholarship_Application.pdf)

A completed application should be sent to the international office on your campus.

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## INTERNET RESOURCES ON SOUTH AFRICA

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Independent Online News: <http://www.iol.co.za/>  
 UMSAEP: <http://www.umsystem.edu/ums/departments/aa/southafrica>  
 The University of the Western Cape: <http://www.uwc.ac.za>