2015: A challenging year

Both the University of Missouri and the University of the Western Cape have faced significant challenges in 2015. The year began with a visit by then MU Chancellor R. Bowen Loftin and UM System Executive Vice President Hank Foley to UWC to welcome Tyrone Pretorius as he assumed his new position as UWC's 7th Rector and Vice Chancellor. That February 16, 2015 marked Rector Pretorius' official inauguration ceremony at UWC. It was a visit was highlighted by an excursion to the Square Kilometer Array (SKA), a massive radio telescope project to be built in an isolated arid area in northwest South Africa. UWC astrophysicists are playing a pivotal role in this project. When completed, the collection of telescopes will be able to survey the sky more than ten thousand times faster than ever before. grand event attended by government officials, university administrators from across South
Africa, and many past and current members of the UWC community. Rector Pretorius gave a compelling address spelling out his vision for UWC.

At the end of March, Rector Pretorius, former Deputy Vice-Chancellor Ramesh Bharuthram and Larry Pokpas, UWC’s Institutional Planner, traveled to Columbia for a short visit to meet with Chancellor Loftin and MU faculty. It was a homecoming of sorts for the Rector who traveled to Columbia in 1988 as one of the first UWC faculty members to receive an UMSAEP award. Rector Pretorius had lunch with Professors Mary and Joe Johnston who had hosted him during his earlier visit to MU.

2015 also witnessed a significant increase in the number of applications for UMSAEP awards. In 2015, we received 28 applications for the 2016 awards. That compares with only 15 applications received for the 2015 awards and 17 applications for the 2014 awards. The UMSAEP committee funded 17 projects for 2016, compared to 12 in 2015 and 12 in 2014.

October and November proved to be difficult months for both universities. Student protests on the MU campus ultimately led to the resignations of UM System President Tim Wolfe on November 9, 2015. Later that same day, MU Chancellor Loftin resigned. The UM Board of Curators subsequently named Michael Middleton to serve as Interim President and Dr. Hank Foley to serve as Interim MU Chancellor. Interim President Michael Middleton is no stranger to our friends at UWC. President Middleton was one of the first UM faculty to travel to UWC on an UMSAEP award in 1989. He has been back several times, including 2011 when he taught in the MU Law School study abroad program at UWC.

UWC also saw student protests in October and November. The protests were nationwide as university students across South Africa rallied against proposed tuition hikes. Eventually President Jacob Zuma relented and announced that there would be no tuition increase. It appeared that peace had been restored, but some students accompanied by other activists disrupted final exams and forced UWC to close. Police had to be called in and the protestors caused significant property damage to the UWC campus. Exams for graduating students had to be held off campus and exams were delayed until January for returning students. It is unclear at this point whether more protests will be held but they seem likely as activists are clamoring for free tuition and a rescinding of student debt.

2016 marks the 30th anniversary of the establishment of the University of Missouri South African Education Program. We will honor our 30 year partnership with UWC in a day-long celebration to be held on the UWC campus on May 26. Interim President Middleton and his wife, Dr. Julie Middleton, will lead the UM delegation to UWC. On September 27, President Middleton will host a celebration in Columbia. Details of that event will be forthcoming.
Profile of Interim President Michael Middleton and of Interim MU Chancellor Hank Foley

Michael A. Middleton, J.D.
Interim President of the UM System, Deputy Chancellor Emeritus and Professor Emeritus of Law

B.A., University of Missouri-Columbia, 1968
J.D., University of Missouri-Columbia, 1971

Information from UM website: http://www.umsystem.edu/president/about_the_president

Michael A. Middleton was appointed interim president of the University of Missouri System on November 12, 2015, by the University of Missouri Board of Curators. Middleton previously served as deputy chancellor of the University of Missouri-Columbia and is a professor emeritus in the MU School of Law.

Middleton joined the faculty of the MU School of Law in 1985 after an illustrious career with the federal government in Washington, D.C., where he was first a trial attorney in the Civil Rights Division of the Department of Justice. In 1977, he was appointed assistant deputy director of the Office for Civil Rights within the former U.S. Department of Health, Education, and Welfare.

After serving as director of the Office of Systemic Programs for the Equal Employment Opportunity Commission (EEOC) and as principal deputy assistant secretary for Civil Rights at the U.S. Department of Education, Middleton was appointed associate general counsel of the EEOC’s trial division. He returned to his alma mater from St. Louis, where he was director of the EEOC’s St. Louis District Office. Beginning in 1997, Middleton served as the interim vice provost for Minority Affairs and Faculty Development at MU. A year later, he accepted the position of deputy chancellor, a role he held until his retirement on August 31, 2015.

Middleton is married to Dr. Julie N. Middleton, director of Organizational Development and Extension Professional at MU. Together, they have three children and seven grandchildren.
Henry C. “Hank” Foley, Ph.D.
Interim Chancellor
University of Missouri (MU)

Information from the MU website: http://chancellor.missouri.edu/about/

Dr. Henry C. “Hank” Foley, interim chancellor of the University of Missouri, has served as the UM System executive vice president for academic affairs, research and economic development and MU senior vice chancellor for research and graduate studies.

Since his appointment with the UM System in July 2013, Foley has worked with a variety of campus leaders, including the campus chancellors, provosts and chief research and economic development officers. He has led the system’s strategic planning efforts, provided system-wide leadership in academic programs, promoted economic development and advanced research collaborations and enhanced funding. He also has led institutional research, student access and success, academic program review and eLearning functions of the system.

In his dual role, at MU Foley served as the senior vice chancellor for research and graduate studies. He has had overall responsibility for research, graduate studies and entrepreneurship. In his role, he has overseen the operations of compliance activities, internal grants and programs, sponsored programs, technology management and industry relations, as well as various campus centers (i.e. MU Research Reactor (MURR), Christopher S. Bond Life Sciences Center, Dalton Cardiovascular Research Center, International Institute of Nano and Molecular Medicine, and the Interdisciplinary Center on Aging, as well as the Research Core Facilities). Foley is a tenured professor of chemistry at MU and is an adjunct professor of chemical and biochemical engineering at Missouri University of Science and Technology.

Foley is a fellow of the American Association for the Advancement of Science, a fellow of the Industrial and Engineering Division of the American Chemical Society and a fellow of the National Academy of Inventors. He is a member of the Cosmos Club in Washington, D.C., and of several honorary societies, including Sigma Xi, Phi Lambda Upsilon and Sigma Pi Sigma. For his scholarly work he has been recognized with the New York Metropolitan Catalysis Society’s Excellence in Catalysis Award, the Philadelphia Catalysis Club’s Annual Award, the Leo C. Friend Award from the I&EC Division of the American Chemical Society, the Research Innovation Recognition Award from Union Carbide Corporation, the Presidential Young Investigator Award from the National Science Foundation, the Thiele Lecture in Chemical Engineering at the University of Notre Dame, the Distinguished Departmental Lecture in Chemical Engineering at the University of Utah and the Henry E. Bent Lecture in Chemical Engineering at the University of Missouri. He has authored more than 120 refereed archival journal articles. He is an inventor with 16 patents and is the author of the textbook, Introduction to Chemical Engineering Analysis Using Mathematica, published in 2003. Graduate and undergraduate students he has mentored have prospered in industry and in academia.
PUBLIC AND COMMUNITY HEALTH: BHS IN SOUTH AFRICA

Contributed by Richard Oliver and William Palmieri

This past year was the first offering of a trip to South Africa designed for undergraduate students in the MU School of Health Professions (SHP). This for-credit internship focused on an increasing understanding of how public interventions are implemented in under-resourced communities in the Cape Town area. The faculty leader was Rich Oliver, Dean Emeritus of the School of Health Professions, with major support from Will Palmieri, MU Study Abroad Coordinator and Emily Mahler, SHP Student Services Coordinator. Eighteen students were selected to participate in this inaugural trip designed to maximize our close ties to UWC and the history of cooperation embodied by our unique history with South Africa.

With key assistance from Rod Uphoff and our colleagues in the UWC Faculty of Community of Health and Sciences (Jose Frantz, Anthea Rhoda, Rina Swart, Firdouza Waggie and Gerard Files), a phenomenal study program was planned and executed. With their assistance we not only worked out key housing and transportation issues for this large group of students but we were put in contact with Lindsay Pietersen, Director of Won Life (http://www.wonlife.org.za/) a registered non-profit organization working in the community of Fisantekraal.

Won Life became our host project site from August 3–14, 2015. This site was able to accommodate the entire group of students, make work assignments as well as provide lunch to the entire team. Lindsay, Lance Turner (Operations Manager) and the entire Won Life staff were exceptional role models and demonstrated the importance of providing support in communities where resources and critical services are limited. Tasks such as painting and refurbishing classrooms in the local Trevor Manuel Primary School, participating in activities with older students at the nearby high school or tutoring children in Won Life’s Literacy Center made this trip extremely valuable and rewarding for everyone on this trip. Our UWC colleagues also welcomed us for several visits to campus as well as visits to other community projects to join UWC students as they participated in their community outreach projects.

Plans are already underway to offer this trip again in 2016. Based on the large number of early applications, this trip will fill quickly. Lindsay Pietersen and her Won Life colleagues have graciously agreed to host the group in 2016. Lindsay hopes to visit MU sometime in April 2016 since Won Life was so impressed by our students and their successful efforts in raising significant funds on their return to support the work of Won Life. Lindsay will...
also be able to meet with the next group of students selected for the 2016 trip as well as give a public lecture on the important role non-profit organizations play in supporting children and families in underserved communities such as Fisantekraal. The hope is these trips and our connections to Won Life will serve as the basis for long term and lasting relationships that will continue to support this special trip well into the future.

University of Missouri / University of the Western Cape Plant Science Symposium

Contributed by Robert E. Sharp

MU’s Interdisciplinary Plant Group (IPG) and the University of the Western Cape (UWC), Cape Town, held a joint Plant Science Symposium at UWC from June 15-18, 2015. The symposium aimed to further advance the long-standing academic exchange program between MU and UWC, and brought together plant scientists with research interests in plant abiotic and biotic stresses (caused by non-living and living factors, respectively) and their impact on food security and environmental sustainability. The symposium also sought to promote interactions between MU/UWC and the University of Pretoria, the University of Cape Town, and Stellenbosch University in areas of research that relate to the activities of the South African Department of Science and Technology-National Research Foundation Center of Excellence in Food Security (CoE-FS; http://www.uwc.ac.za/Faculties/EMS/COEFS/Pages/default.aspx), which is headquartered at UWC and which generously co-sponsored the symposium.

The IPG (http://ipg.missouri.edu/) is a community of 60 faculty-led research teams at MU, with members belonging to several divisions/departments in four colleges as well as the United States Department of Agriculture-Agricultural Research Service (USDA-ARS) Plant Genetics Research Unit. Established in 1981, the IPG fosters interdisciplinary research and education to generate creative and transformative discoveries in the field of plant biology. As part of MU’s Food for the 21st Century Program, the IPG’s overarching goal is to generate the knowledge required to achieve global food, water and health security. “The joint symposium provided an outstanding opportunity to link up with colleagues in South Africa, and to put our minds together and make more rapid progress in these critical areas of global concern,” explained Prof. Bob Sharp, IPG’s Director.

Presenting plant science knowledge against the backdrop of food security is also in keeping with the interests of the CoE-FS, a virtual center that aims to undertake research, build capacity and kick-start activities that would promote a sustainable food system. “It was a chance to bring together people in these highly specialized fields in one place to talk about what is a very important topic,” said Prof. Julian May, the Center’s director. “International partnerships are important to what we’re trying to do in the
Center; they allow us to access resources that are not necessarily available to South Africans.”

The symposium developed from interaction between Dr. Sharp and Ndiko Ludidi, associate professor and deputy head of the Department of Biotechnology, and also group leader of the Plant Biotechnology Research Group at UWC, Zhanyuan Zhang (Director of the Transformation Core Facility) and Mel Oliver (Research Leader, USDA Plant Genetics Research Unit) at MU. The interaction started in 2014 when Dr. Ludidi visited MU on a University of Missouri South African Education Program (UMSAEP) award to develop collaborations in the area of plant responses to drought.

A total of 12 participants from MU, including two graduate students and one postdoc, attended the symposium, with generous co-sponsorship provided by Interim Chancellor Hank Foley and Deans Tom Payne (College of Agriculture, Food and Natural Resources) and Mike OBrien (College of Arts and Science). Faculty participants were: David Braun (Biological Sciences), Felix Fritschi (Plant Sciences), Walter Gassmann (Plant Sciences), Antje Heese (Biochemistry), Paula McSteen (Biological Sciences), David Mendoza (Plant Sciences), Mel Oliver (USDA), Scott Peck (Biochemistry) and Bob Sharp (Plant Sciences). MU graduate student and postdoctoral participants were: Isaiah Taylor (Biological Sciences and graduate student representative on the IPG Executive Committee), Jacob Washburn (Biological Sciences), and Amanda Durbak (Biological Sciences and postdoc representative on the IPG Executive Committee).

The collaboration around plant science brings a host of prospects for joint research ventures, networking and exchange opportunities for scientists from the various institutions. An immediate outcome is that Dr. Marshall Keyser, Lecturer in the Department of Biotechnology at UWC, has been awarded a UMSAEP grant to visit Drs. Heese and Mendoza at MU for three months in fall 2016, to initiate collaborative research in the regulation of heavy metal uptake and transport. This collaboration will also extend to Drs. Gassmann (heavy metal transporters) and Peck (plasma membrane proteomics) at MU. Collaborations and materials transfer have also been initiated between Dr. Robert Ingle at the University of Cape Town and Drs. Heese, Gassmann and Peck (immune signaling pathways against bacterial and fungal infections) and Mendoza (nickel transporters) at MU. Additional collaborations being discussed include Dr. Johann Rohwer at Stellenbosch University with Drs. Braun and Mendoza at MU (modeling of sucrose transport), and Dr. Ludidi at UWC with Drs. Peck and Sharp at MU (proteins involved in nitric oxide signaling in drought-stressed plants). Another noteworthy interaction is that Dr. Oliver at MU and Dr. Jill Farrant of the University of Cape Town will co-chair the biennial Gordon Research Conference on Salt and Water Stress in plants, to be held in 2018 (location to be determined).

These collaborative studies will yield crucial results for future joint grant proposals to domestic and international funding agencies to pursue these and other important areas of plant science research. Further, interaction with the CoE-FS will be beneficial for developing multi-disciplinary approaches to the complex biological, social and economic issues involved in food security concerns. Another exciting idea, which was proposed by the graduate student and postdoc participants of the symposium, is the possibility of developing a program to place interested young MU scientists in research
groups in South Africa to provide an invaluable experience for orienting their future work on agricultural issues. "Many young MU scientists are interested in enhancing their knowledge of topics such as technology transfer and field applications for the type of basic research that we work on," said Isaiah Taylor and Amanda Durbak. In the reverse direction, hosting students and postdocs from UWC or other institutions in IPG labs would benefit the programs in South Africa because of MU's strength in fundamental plant biology and its established program of scholarly and professional development for young scientists, such as regular visits by top scientists, and a student and postdoc centered seminar series.

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**UMSAEP Community Leadership Program Launched**

*Contributed by Mary Leuci and Letitia Johnson*

The UWC Community Engagement Unit and the MU Extension Community Development program, in cooperation with the South African NGO Coalition (SANGOCO) developed an international community leadership development program that focuses on community engagement, sustainable development and long-term capacity building. Two years in development, the pilot was launched during 2015. The program integrates classroom training with two-week practicum study exchanges and participant project planning. Based largely on transformational leadership theory, the program is infused with the southern African philosophy of Ubuntu, the belief that a universal bond connects all of humanity: "I am because we are."

Ten people were selected to participate in the pilot program, five from the Cape Town area and five from around Missouri. The group, chosen for their demonstrated commitment to bettering their communities, includes people from different professions and backgrounds, including a youth minister, a farmer, a writer, a gender-based violence opponent, a bus driver, and others. Each participant developed an action plan, working alone or in partnership with other members of the group, for incorporating what they learned through the program and practicum experience into their home communities. Having built some solid friendships across borders, participants are also helping out each other. For example, a teacher in Jamesport, Missouri, is working with her students on a book drive for a literacy program in Cape Town.

The development and pilot of the international community leadership program was funded by the University of Missouri South Africa Education Program (UMSAEP), MU Extension and UWC. The program team is pursuing sustainable financing to continue the program, likely on a biennial basis.

The community leadership program is the latest collaboration of the sub-partnership between MU Extension and UWC. Previously the team produced a series of webinars that focused on...
approaches to issues common to both countries, such food insecurity, youth at risk, and community leadership.

Questions about the community leadership program or the webinar series can be directed either to Professor Priscilla Daniels, director of Community Engagement at UWC, or Dr. Mary Leuci, assistant dean and MU Extension Community Development.
TEAM LEADERSHIP

Mary Simon Leuci
Community Development Program
Director/Asst. Dean, CAFNR
University of Missouri Extension

Priscilla Daniels
Director of Community Engagement
University of the Western Cape

Damaris Kiewiets
Chair, SANGOCO
and Community Liaison Officer
Community Engagement Unit
University of the Western Cape

Tracy-Ann Adonis
Researcher
Community Engagement Unit
University of the Western Cape

TEAM MEMBERS

Letitia Johnson
Regional Community Development Specialist
University of Missouri Extension

Cornel Hart
Research Consultant
University of the Western Cape

Connie Mefford
Regional Community Development Specialist
University of Missouri Extension

Leisure time - learning to make apple pies at Peggy Jean's Pies in Columbia

2015 Faculty Exchanges

In 2015, as in prior years, UM and UWC faculty members participated in a number of productive exchanges. The following example highlights the kind of collaborations that have been the hallmark of this partnership:

REPORT ON RESEARCH VISIT TO MISSOURI UNIVERSITY OF SCIENCE AND TECHNOLOGY, ROLLA, USA

By: Leslie Petrik

BACKGROUND

I visited University of Missouri Science and Technology at Rolla for a short term (1 month) visit from 21 April to 21 May 2015.

In the last three years, several UM researchers have collaborated with me and the Environmental and Nano Science (ENS) group at University of the Western Cape (UWC). Prof. Kwame Awuah-Offei, associate professor of mining engineering at Missouri University of Science & Technology has collaborated with the ENS extensively on sustainable production of energy critical materials and environmental life cycle assessment. He hosted a researcher from the ENS in 2013 and in 2014 offered...
a short course at UWC on the basics of life cycle assessment (LCA), where he introduced participants to the basics of life cycle assessment, which is used to evaluate the cradle-to-grave environmental impacts of products and services. Currently joint publications are in the process of being written based on modeling of data generated by ENS research.

The Environmental Research Centre (ERC) at UM integrates biological and physical systems involving emerging contaminants in natural and engineered systems. Dr. Kimball and Prof. Joel Burken from the ERC at UM had collaborated with me to submit a National Science Foundation Partnerships for Enhanced Engagement in Research (PEER) proposal previously in 2014 which was not successful and we wanted to work together to develop a further proposal to PEER. The collaboration between ERC and ENS researchers was envisaged to explore the beneficial use of fly ash, which is an area that the ENS and Dr. Jianmin Wang of the ERC have done significant work. The ERC also has significant experimental capability that could be of benefit to ENS researchers.

OBJECTIVES OF VISIT

Collaboration between ERC, MRC and UWC researchers, aims to leverage expertise at Missouri S&T and UWC to advance knowledge. The exchange will also further improve the collaboration between Missouri S&T and University of Western Cape. Specific objectives were:

a) Proposal development
My visit was expected to lead to developing research proposals for collaborative projects in two possible areas, namely:

(1) Beneficial use of fly ash for geopolymer and zeolite production. The planned interaction was to develop a joint proposal to optimize foamed and non-foamed geopolymers and/or zeolites for specific applications (with Dr. Joel Burken and members of ERC).

(2) Resource recovery and waste minimization in the areas of base and precious metal recovery. The planned interaction was to develop a joint proposal:

To characterize mine waters for a better understanding of their chemical composition; to quantify and identify the toxic elements and radionuclides and the form (isotopes) in which they exist using neutron activation analysis (NAA); to synthesize novel ligands for the selective extraction of radionuclides and toxic elements from mine water containing other metals ions (with Dr. Michael Moats and members of the School of Mining).

b) Collaboration
Dr. Michael Moats, Associate Professor of Metallurgical Engineering, Materials Research Centre Investigator, Department of Materials Science and Engineering, Missouri University of Science and Technology had expressed an interest to explore the possibility of collaboration in the field of extractive metallurgy. Additionally, discussion of past and current research in the areas of base and precious metal recovery were planned.

c) Tour of facilities
During my visit, it was also planned to tour the Materials Science and Engineering Department and the Materials Research Centre facilities.

d) Presentations
I was scheduled to present seminars to both departments regarding our research, with an invitation to researchers at the University of Missouri-Columbia.

OBJECTIVE SUCCESSES

Most of the objectives have been achieved and further plans are in progress to apply for joint funds on the basis of the discussions held at MST.

a) Facilitation
The success of the visit was due to the input from everyone to ensure effective planning and scheduling of the available time to meet and discuss these and other relevant topics with colleagues at Missouri S&T Rolla. Dr Rodney Uphoff ensured that all parties were in communication all along and that the scheduling was progressing. Ms. Debbie Lamson and Ms. Hilda Andrews of UWC and Ms. Brenda Dennis of UM facilitated all travel and accommodation and transport details most effectively and Ms. Dennis very kindly provided me...
with utensils for cooking. The ERC and Prof. Joel Burken assisted to organize the visit (motel reservations, schedules etc.) and arranged for me to present two seminars, with an invitation to researchers at the University of Missouri-Columbia. The School of Mining through Prof. Awuah-Offei provided me with office space and computer support during my stay and Dr. Kyle Bahr (Postdoctoral student of Prof. Awuah-Offei) facilitated all logistical arrangements and ensured that all meetings ran without a hitch and taught me to drive on the wrong side of the road! Meetings were arranged by ERC’s Ms. Denise Ray between myself and ERC researchers as well as other UM researchers, particularly those in the Materials Research Centre and Energy Research and Development Centre.

b) Seminars
During the visit I gave two well attended seminars, the first entitled, “Nano in Water” on May 5, 2015 at Engineering Management and the second entitled, “A journey through catalyst synthesis, characterization and application” on May 6, 2015 at Bertelsmeyer Hall. The seminars were well received and elicited some interesting discussion thereafter.

c) Interaction and synergies for proposal development
The visit to University Missouri Columbia on May 4 was facilitated via Profs. Joel Burken and Mike Greenhief, during which visit the following faculty met with me to discuss their research, and the UM/UWC collaboration, namely, Dr. Gary Baker, Prof. Silvia Jurisson, Dr. Justin Walensky, Prof. Michael O’Brien, Dr. Christine Costello, Dr. Sheila Baker, Prof. Hank Foley, Prof. Jerry Atwood, and Dr. Maria Fidalgo as well as Prof. Bill Folk and Prof. Ed Kaiser. Topics of mutual interest that were identified for further development into proposals included supramolecular chemistry, fate and transport of nanoparticles in the environment, CO₂ capture, applications of carbon spheres.

At Missouri S&T in Rolla I met with the following faculty during the month of my stay, namely Dr. Jeannie Hofer, Prof. Matt O’Keefe, Prof. Richard Brow, Prof. Melanie Mormile, Dr. Craig Reisner, Dr. Lana Alagh, Prof. Yue-wern Huang, Dr. Xinhua Liang, Dr. Manathi Nath, Dr. Amitava Choudhury, Prof. Muthanna Al-Dahhan, Dr. Fateme Rezaei, Dr. Ali Rownaghi, Prof. Klaus Woelk, Prof Yinfa Ma, Dr. Mohammed Elgawady, Dr. Jianmin Wang, Prof. Fatih Dogan and PhD student Ipek Yucelen, Dr. Tony Arnold, Dr. Catherine Johnson, Prof. Venkat Allada. Topics of mutual interest that were identified for further development into proposals included: Imogolite nanotubes for base catalysis; materials, solid oxides for high temperature fuel cell and battery applications; atomic layer deposition, toxicology of nanomaterials and of metal oxides, fate of persistent pollutants, reactor design and tracer tomography; switchable nanofibres, gas separation, NORMs in shale waters; metal organic frameworks; etc.

d) Tours of facilities
I had tours of the following facilities: the Nuclear Reactor, ERC and MRC facilities; Mineral processing facilities, Chemical and Biological Engineering, Department of Chemistry, and the Solar House Village and also attended the seminar of Fei Chen-PhD in Environmental Engineering. Prof. Allade arranged for me to meet for one hour with post graduate students in the leadership programme. It is hoped that my visit will encourage the faculty at Columbia and Rolla to apply to the exchange programme to visit UWC. When visiting these colleagues I undertook to assist to facilitate their visits to UWC and link them up with prospective UWC colleagues.

PLANNING AND PREPARATION
The planning and preparation for the trip went smoothly both from UWC and MST side and all logistics and arrangements worked out excellently. I did not have any challenges in this regard.

VALUE OF THE UM/UWC EXCHANGE PROGRAMME
The visit was most interesting and much more was achieved than originally planned in that other opportunities for future interaction have been identified. The value of the UM/UWC Exchange Programme is that academics and students from completely different continents and cultures were able to relate and develop an insight into the research being done at the two institutions.
the visit many opportunities for collaboration between UM and UWC faculty were identified and these can hopefully be pursued in the coming months as is set out below in Table 1.

<table>
<thead>
<tr>
<th>COLUMBIA</th>
<th>Research area/discussion/interaction</th>
<th>Comment / Potential contact at UWC</th>
</tr>
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<tbody>
<tr>
<td>Michael Greenleif</td>
<td>Proteomics</td>
<td>Bangani Ndimbé, Ndiko Ludidi</td>
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<td>Gary Baker, Sheila Baker</td>
<td>CO₂ capture, applications of photoluminescent carbon spheres, green nano,</td>
<td>Salam Titinchi</td>
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<td>Justin Walensky</td>
<td>Actinide Chemistry</td>
<td>? Chemistry dept</td>
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<td>Prof. Michael O'Brien</td>
<td>Exchanges of students</td>
<td>GRE exam barrier to African students to study in USA</td>
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<td>Hank Foley</td>
<td>Air quality; Catalysis</td>
<td>M. Davies Coleman;</td>
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<td>Silvia Jurisson</td>
<td>Radiopharmaceutical Chemistry</td>
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<td>Sheila Baker</td>
<td>Radiopharmaceuticals and tracers</td>
<td>Physics? Leslie Petrík</td>
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<td>Christine Costello</td>
<td>LCA impacts of biofuels and greenhouse gas emissions</td>
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<td>Gerry Atwood</td>
<td>Supramolecular chemistry; Calixerenes</td>
<td>Leslie Petrík; Martin Onani; Salam Titinchi</td>
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<td>Maria Fidalgo</td>
<td>Fate and transport of nanoparticles in the Environment</td>
<td>Edmund Poole and Leslie Petrík</td>
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<th>ROLLA</th>
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<tr>
<td>Jeannie Hofer</td>
<td>Exchange modalities</td>
<td>Support of student or post doc exchanges</td>
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<tr>
<td>Venkat Allada</td>
<td>Exchange modalities</td>
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<td>Melanie Mormile</td>
<td>Microbial H₂ generation</td>
<td>Marla Tuffin</td>
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<td>Matt O'Keefe</td>
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<td>Kwame Awuah-Offei</td>
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<td>Joel Burken</td>
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<td>Ludidi, Ahmed Mohammed; Wilfred Mabusea; Leslie Petrík</td>
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<td>Lana Alagha</td>
<td>REE recovery; coal processing –communion and flotation</td>
<td>Leslie Petrík; Earth sciences</td>
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<td>Yue-wern Huang</td>
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<td>Amitava Choudhury</td>
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<td>NORMs in shale waters; gas separation; kinetics</td>
<td>Leslie Petrík; Robby Lindsay</td>
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<td>Waste conversion; Catalysis; Hollow fibres</td>
<td>Leslie Petrík</td>
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<td>Jianmin Wang</td>
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<td>Catherine Johnson</td>
<td>Sensors for pollutants in blast sites</td>
<td>Emmanuel Iwuooha and Priscilla Baker</td>
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Given the opportunity to participate in the exchange again, I would very gladly do so based upon a specific research work plan. What I liked most about the program was the willingness of so many faculty at UM to meet with me and discuss their research. The knowledge and experience gained will be utilized to work towards joint proposals to various funding agencies so as to make possible true international collaborative research which the current exchange programme has facilitated and publish together and also possibly co-supervise. Future endeavours will entail efforts to find joint funding opportunities for research in the areas of collaboration as identified in our discussions. The programme provides an excellent opportunity for staff exchange and it would be excellent if a stronger possibility could be created for post graduate student exchange.

CHALLENGES

The programme was very intense and it is not possible to follow up on all the interesting opportunities that were explored together. Ideally it would be hugely beneficial to UWC for the academic staff at both institutions to interact more frequently and I will assist to connect UWC staff with the people I met at Rolla and Columbia.

One of the challenges was that most of the faculty at UM were very busy at the time of my visit because of the term end and were involved in exams and marking thus had limited time to allocate to the interaction. Ideally the visit should have taken place during a less intensely busy time at UM but because of the different scheduling of semesters at UM and UWC this was difficult to achieve. UWC benefits from the interchange by gaining an insight into the world class research being done by faculty at UM and UM gains from the exchange by interacting with other cultures and hearing about problems and research solutions outside the USA paradigm. South Africans are very familiar with USA culture because of its pervasive influence everywhere, whereas USA citizens appear to have few insights into causes of prevailing conditions in Africa. I felt that opportunities for discussions ranging beyond science and for building bridges with Africa were somewhat lost as not many UM faculty expressed interest in learning more about our country and continent. The most interesting engagement in this regard was the opportunity to meet for one hour with post graduate students in the leadership programme, as arranged by Dr Allade, but one hour was hardly sufficient to create common ground or give the students much of an insight into Africa.

ACKNOWLEDGEMENTS

I acknowledge the financial support of the UM/ UWC Exchange Programme and the support of Prof Rod Uphoff, Leelyn Jackson and their teams for all the planning and arrangements. I especially would like to express my gratitude to Prof Joel Burken and his family for the interesting cultural activities and kind hospitality. My sincere thanks to Prof. Awuah-Offei for initiating this interaction and hosting me, and to his post graduate students as well as Dr. Kyle Bahr, for the interesting insights into their post graduate research. Many thanks to Dr. Kyle Bahr, and PhD students Mark Boateng and Angelina Anani for the interesting excursions. I also thank Prof Michael Moats for the interesting discussions we had. Most of all I would like to express my thanks to everyone I met who took the time to give me an insight into their research.

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NEWS IN BRIEF

Linkage Awards

The UMSAEP Committee convened in Columbia on August 27, 2015, and met via video conference with UWC Institutional Planner Larry Pokpas and Leelyn Jackson, UWC Interantional Director, to select participants for the 2016 faculty exchange. The committee authorized UMSAEP awards to eight UWC faculty members and ten UM faculty members.
UWC faculty receiving UMSAEP awards (UM hosts in parentheses):
- Rachel Fanelwa Alayi (Sheila Grant, MU)
- Jo-Celene de Jongh (Lea Brandt, MU)
- Mulugeta Dinzabo and Abdulrazak Karriem (Chris Fulcher, MU)
- Maria Florence (Mansoo YU, MU)
- Marshall Keyster (Antje Heese and David Mendoza-Cozati, MU)
- Mervin Meyer (Kattesh Katti, MU)
- Theophilus Muller (Suchi Guha, MU)

UM faculty receiving UMSAEP awards (UWC hosts in parentheses):
- Joel Burken, Missouri S&T (L.F. Petrik)
- Joel Epstein, UMSL (Nicolette Roman)
- Maria Fidalgo, MU (Leslie Petrik)
- Michele Foster, UMKC (Chris Stroud)
- Andrew Hurley, UMSL (Ciraj Rasoon)
- Catherine Johnson, Missouri S&T (Emmanuel Iwuoha)
- Wilson Majee, MU (Karien Jooste)
- Daniel McIntosh, UMKC (Romeel Dave’)
- Enid Schatz, MU (Lucia Knight)
- Matthew Taylor, UMSL (Nicolette Roman)

UM and UWC Visitors


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**UM/UWC Faculty Visit Summary:**

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**Mitchell Scholarship Application Deadlines Announced**

Rebecca Miller (MU) and Sean Patrick Farnham (UWC) were recipients of Henry Mitchell Scholarships the past year. Selected for the upcoming year is Jennifer Culver (UMSL).

The UM application deadline for the Mitchell Scholarship for study at UWC for the fall 2016 semester is March 1, 2016. Classes start at UWC for the fall semester on July 13, 2015.

The application deadline for the winter 2017 semester is September 15, 2016.

An application form is available for downloading at http://www.umsystem.edu/ums/departments/aa/southafrica/request.shtml#3. A completed application should be sent to the international office on your campus.

**Internet Resources on South Africa**

- UMSAEP: [http://www.umsystem.edu/ums/departments/aa/southafrica](http://www.umsystem.edu/ums/departments/aa/southafrica)
- The University of the Western Cape: [http://www.uwc.ac.za](http://www.uwc.ac.za)