

UMSAEP Post Visit Summary Report
Visit Dates 20 October-1 November 2013
Submitted by Professor Gail D. Hughes
UWC Faculty of Science

Background:

The intent of the UMSAEP grant is to stimulate grant opportunity and continue research in natural product/herbal science; further advance student exchange; and expand course development. However, the overarching purpose was to broaden the PURE (Prospective Urban Rural Epidemiologic) South African Traditional Herbal Medicine (THM) research project with collaborators, explore and determine potential for research funding and scientific output. There has been an existing relationship between UM-Columbia and UM-Kansas City and UWC SAHSMI, specifically with Professor Hughes.

In preparation for the visit, Skype and teleconferences were held in addition to email correspondence; and an itinerary generated (see attached). Both University of Missouri campuses—Columbia, Professor Bill Folk and Kansas City were engaged. As a note, this was follow-up meeting to the visit in April 2013.

Objectives:

- Stimulate and strengthen research collaboration specifically thru grant activity, particularly for PURE-THM project; and future joint research projects between faculty with natural products/herbal science interests;
- Continued promotion of student exchange via biomedical summer programme; and provide international learning experience for UWC and UM postgraduate students;
- Continue and expand bi-directional teaching opportunities.

Visit Summary and Accomplishments:

As per the original grant submitted: 1) two visits were accomplished by Professor Hughes—10-20 April 2013(see reported already submitted for details) and 30 October-1 November 2013; 2) collaborative NIH grant was submitted in Quarter 1 2013 between U of Missouri (Professor Bill Folk) and UWC entitled” Bridging Traditional and Biomedicine for HIV Prevention, Treatment and Care” which was a response to NIH RFA for Global Partnerships Social Sciences AIDS Research. This grant was reviewed but not funded(1.6 M USD); 3)Identification of grant initiatives was accomplished through assistance and support of School of Health Professions-former Dean Rich Oliver and grant writer Mark Childs—listing of government and other types of grant opportunities were provided; 4) Additional grant submitted with collaboration with Professor Bill Folk-- NRF SA, Indigenous Knowledge

Systems: The IYEZA Project: South African Botanical Medicines for Diabetes & Hypertension in Eastern & Western Provinces; and 5) other initiatives— a) Professors Hughes and Folk had discussions on research opportunities for post doc fellowship for Dr. Charles Nwuche(Nigeria)—HIV Research Trust and former doctoral student at UM-Columbia and applicant to UWC, Nomsa Mda; and b) U of Missouri-Kansas City School of Pharmacy with Professor Rafia Rasu, economic evaluation of traditional medicines in PURE THM project, and postgraduate student training—UMKS, doctoral student John Hill and UWC post-doctoral student, Dr. Seyi Aboyade.

A. Scientific Output

- NIH grant submitted(see earlier progress report); collaboration with Professor Bill Folk;
- NRF grant submitted in November 2013 and awaiting review, this is collaboration on traditional herbal medicine research with Professor Bill Folk. (abstract* listed at end of document);
- Invited presentation by UM-KS School of Pharmacy on 30 October(see attached flyer);

Gail D Hughes: Advancing the potential for botanical medicines for primary health care in South Africa. Presentation at School of Pharmacy, University of Missouri, Kansas City, USA, 30 October 2013.

- Collaborative research with Professor Rafia Rasu at UM KS School of Pharmacy. Accepted presentation at APHA in Boston, Mass. On 4 November 2013 entitled "*Role and Importance of Economic Evaluation of Traditional Herbal Medicine Use for Chronic Non-Communicable Diseases*".

Conference presentation:

Gail D Hughes, Oluwaseyi Aboyade, Rafia Rasu. American Public Health Association (APHA) Boston, November 2013, Role and Importance of Economic Evaluation of Traditional Herbal Medicine Use for Chronic Non-Communicable Diseases.

- Professor Rasu contributed the development of economic evaluation component to PURE-THM questionnaire. Finally, PURE THM questionnaire is proposed to be launched in Bangladesh in quarter 2/3 2014 with assistance of Professor Rasu. In addition, drafted manuscript based on collaborative research efforts and presentation at APHA.

B. Research Synergy(Additional) and Mentoring

- Continued collaborative research and mentoring discussions with Dr. LaShaun Johnson at School of Health Professions (formerly post- doctoral student) and now on faculty at Creighton University and research mentoring with recent doctoral graduate, Dr. Fiona Asigbee.

C. Course Development (UM-Columbia and KS)

- Working with Professor Arif Ahmed and Mike Woods coordinators of the Global Health course for UMKS multidisciplinary professional students and planning and preparation for May 2014. There were discussions that SAHSMI /I continue to serve as collaborator/instructor.
- Meeting with Lisa Saffron from School of Health Professions to discuss collaborative teaching effort for Introduction to Epidemiology blackboard course at UM-Columbia Public Health program and to serve as international site mentor/faculty for UM-Columbia public health and work collaboratively on the MU international experience for graduate public health students.

D. Other

- **PURE-THM study**—the questionnaire was completed, pre tested and translated. The study went into the field in October 2013. In addition, PURE THM study will be adapted and expanded to Bangladesh hopefully in Qtr. 2/3 2014 with research efforts by Prof Rasu.

Summary

Overall, the objectives of the UMSAEP were achieved with tangible results and outcomes for continued collaborative research. Two grants were submitted with Prof William Folk—1 NIH(USA) and 1 NRF(SA); research opportunities utilizing postgraduate students—UM KS—doctoral student(John Hill) and UWC SAHSMI— post doctoral student, Dr. Seyi Aboyade; scientific presentations; and initiation of the PURE THM project. Finally, efforts of the UMSAEP encouraged research collaborations; scientific output, mentorship, grantsmanship and provided for future and potentially sustainable research.

There are remaining funds from the UMSAEP, approximately \$1,000.00 USD and requesting that these funds be carried over into 2014 for associated UMSAEP activities as stipulated in the grant proposal.

***NRF research grant abstract summary**

Abstract

The IYEZA (Xhosa: 'medicine') project investigates the use of botanical African Traditional Medicines (ATM) and practices for hypertension and diabetes and will chemically characterize the plant extracts and mechanisms of action of the identified ATM. This project will use a mixed-methods approach, combining qualitative and quantitative research methods, will run for three years and comprises of three phases: cross-sectional epidemiological survey; key informant interviews; and identification and characterization of ATM botanicals. Phase 1 is a quantitative survey which will identify ATM commonly used within the community for treating any NCD and specifically for hypertension and diabetes. Phase 2 is the key informant interview and will identify and describe ATM botanical(s) recommended by TM practitioners for treating these NCDs in the community. From the information gathered in phase 1 and 2, a list of ATMs which are frequently used to treat these NCDs will be generated. Those ATMs which are most frequently used and experienced as beneficial, will undergo further bioassay analysis in phase 3. The knowledge generated by the bio-assay phase will be derived from acknowledged best practice laboratory methods. The study population will be a random 20% of the total sample of adults (N =2000) sampled in the PURE study from Western Cape-Langa and Eastern Cape-Mt Frere. Existing data captured from PURE study questionnaires and additional information with a structured questionnaire addressing adults' knowledge, attitudes, beliefs and use of ATM will be used. The knowledge generated by this study will be formal and explicit. Data analyses will yield descriptive and exploratory epidemiological profile of hypertension/diabetes and traditional medicine use; and quantification of bioactive compounds. This study will use prior and existing collaborations (MUTHI, PURE, TICIPS) as foundation for this project.

Professor Gail Hughes UM Schedule

Meeting Schedule for University of Missouri-Columbia and Kansas City 29 October-1 November 2013

| Wednesday, 30 October 2013 – University of Missouri-Kansas City | | |
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| <u>Time</u> | <u>Meeting</u> | <u>Venue</u> |
| 12:00 – 12:50 | UM Pharmacy presentation Mtg with Mike Woods(Arif Ahmed) | 5301 Health Sciences Building in Kansas City, MO |
| 13:00 – 14:00 | Lunch | 5301 Health Sciences Building in Kansas City, MO |
| Thursday, 31 October 2013 – University of Missouri-Columbia | | |
| 10:00 – 10:30 | Director of Distance Education, Louise Miller | Office 827, 8 th Floor, Lewis Building |
| 10:30 – 11:30 | Lisa Saffran, Associate Director, MU Master of Public Health | Office 827, 8 th Floor, Lewis Building |
| 13:15 – 14:15 | Deborah Noble-Triplett, Assistant Vice President for Academic Affairs, University of Missouri | Venue to be determined |
| 15:30 – 16:30 | Bill Folk, Professor of Biochemistry, University of Missouri. | Office 202, Schlundt Annex |
| Friday, 1 November 2013 – University of Missouri-Columbia | | |
| 9:00 am | Mtg with Professor Rod Uphoff | School of Law |
| 09:30 – 10:30 | Rich Oliver, former Dean, MU School of Health Professions; Associate Professor of Pathology and Anatomical Science | Office 507, Cornell Hall |
| 11:00 – 12:00 | Fiona Asigbee, Public Health/Health Education, Doctoral Candidate, 2013 Talent Management Office of Human Resources University of Missouri System | Will meet at 507 Cornell Hall to go to Panera Bread (Located on 102 S. 9 th St, Columbia) |

NOTE: Depart on 2 November to Boston Massachusetts for APHA meeting.

