GEORGE ISANDA OMWENGA

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Education

2004 Ph.D.

Department of Biological Sciences

University of North Texas, Denton, Texas, USA

<u>Dissertation</u>: Callus Development and Organogenesis in diverse explants of Cowpea (*Vigna unguiculata* (L.) Walp.)

1995 M.S.

Department of Crop Sciences

University of Nairobi, Nairobi, Kenya

<u>Thesis</u>: *Phaseolus vulgaris* cv. Rosecoco-GLP-2 seed contamination and infection by *Colletotrichum lindemuthianum* (Sacc and Magn) Bri & Cav., and implications on disease incidence and severity.

1990 BS

Faculty of Agriculture, University of Nairobi, Nairobi, Kenya

Experience

2006-2012 Assistant Professor,

Somerset Community College, Somerset Campus 808 Monticello Street, Somerset, Kentucky, 42501

Courses taught include Anatomy and Physiology I &II with Laboratory, Essentials of Anatomy and Physiology (one semester anatomy) with Laboratory, Medical Microbiology with Laboratory, Microbes and Society, Introduction to Biology, Principles of Biology I laboratory and Human Ecology. I have web-enhanced my courses since spring 2007 semester. I have taught course overload since 2008 and also summer courses. Supervised research projects on isolation of natural products from plants and fungi for Principles of Biology I and Organic chemistry students.

I was a master faculty academic advisor. Member of several committees at SCC including the Curriculum Development Committee, College Diversity committee, member Student Academic Progress Committee, chair of the division Biology section in the Mathematics and Natural sciences division, Student Orientation Committee, and Student Activities Committee.

I was proctor/grader for the annual Math Counts (math competition for middle school students) and facilitator for the annual Science Olympiad (middle/high school science competition) and a

presenter at SCC Earth Day. I also served on internal division committees as required including two position hiring search committees for biology (2) faculty.

1998-2004 Teaching Assistant

Department of Biological Sciences University of North Texas, Denton, Texas, USA

Taught Plant Biology and Plants and Society Laboratories. Developed assignments, taught laboratory curriculum and techniques, graded assignments and exams.

1996-2004 Ph.D. Student

Department of Biological Sciences University of North Texas, Denton, Texas, USA

Biotechnology research directed toward the tissue culture and transformation of cowpeas (Vigna unguiculta) in a laboratory with direction toward studying plant tissue culture and effect of phytoestrogens on modulation of the estrogen receptor. Investigated tissue culture and regeneration protocols for selected cowpea genotypes. Initiated callus development and root organogenesis. Learned techniques of transformation vector construction and delivery to produce transgenic plants.

Supervised high school students with the upward bound maths and science program during the summer semesters for three years on plant tissue culture. While in the laboratory, gained experience in research directed toward transformation of plants with genetically engineered *Agobacterium tumefaciens* for the introduction of new genes into the plant genome. Conducted *in vitro* culture of cowpea explants. Evaluated selectable marker genes and foreign gene expression in transformed tissues utilizing paper and gel electrophoresis techniques. Analyzed DNA using restriction enzyme digests and Southern blot analysis.

1993-1996 Divisional Agricultural Extension Officer

Ministry of Agriculture, Kitale, Kenya

Performed agricultural extension services at the divisional level. Interpreted agricultural information to be passed to farmers, collected data on agricultural activities at the division and wrote reports for the district agricultural office. Supervised and coordinated training for agricultural staff under my supervision and performed any other duties as assigned by the district agricultural officer.

Awards

Recipient of an University of North Texas internal Research Award for *in vitro* culture of cowpeas (\$3,500.00).

Presentations

Callus Development and Somatic Embryogenesis in diverse explants of cowpea [Vigna unguiculta (L.) Walp]. George Omwenga and Don W. Smith . Presented at the Spring 2004 meeting of the Texas Society for Mircoscopy, Houston, Texas, April 22-24, 2004.

In vitro Callus and Root Formation from Diverse Explants of Cowpea (Vigna unguiculata (L.) Walp. George Omwenga and Don W. Smith. Presented at the Spring meeting of the Texas Society for Mircoscopy, Houston, Texas, October 28-30, 2002

Rapid *in vitro* propagation of *Albizia falcataria*, a leguminous tree. Ghosh, N., George I. Omwenga, and Don W. Smith. Presented at the 76th Annual Meeting of the Southwestern and Rocky Mountain region of the American Association for the Advancement of Science, Denton, Texas March 25-28 2001.

Professional Affiliations

The Society of the Sigma Xi Texas Society for Microscopy Kentucky Academy of Sciences The Kentucky Native Plant Society

REFERENCES

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