

Shange R. omics to assess the ecology of microbial
1st Annual 2iE-Tuskgee Summer School: Water, Energy,
Environment and Food Security in a Changing Climate. Ouagadougou, Burkina Faso. June 2012.

Shange R. and R.O. Ankumah. 2012. Assessing the structure and membership of soil microbial communities cultivated under an industrial poultry production system. In: ASA Southern Regional Branch Meeting 2012. Birmingham, AL.

Jones S., **Shange R.**, and R.O. Ankumah. 2012. Assessing soil functional status across an agroecosystem using soil phosphatase enzymes. In: ASA Southern Regional Branch Meeting 2012. Birmingham, AL.

Keith J., Odom L.J., Ankumah R.O., and **R. Shange**. 2012. Influence of Transgenic (*D4E1*) and Non-Transgenic Cotton on Soil Phosphodiesterase Activity Over a Growing Period. In: ASA Southern Regional Branch Meeting 2012. Birmingham, AL. (*Award-winning presentation:*

Shange R. (2011) Assessing the impacts of agricultural land use on the structure and composition of soil microbial ecosystems: a multiple case study in coupled human-natural systems. Tuskegee University, Tuskegee, AL.

Shange (Shirk) R. (2006). The Political Reality of Modern Biology. Howard University, Washington, DC. (Unpublished Manuscript)

GRANTS & FUNDED PROJECTS

Co-PI (10%). Tuskegee University-Black Belt Photoirrigation Project (TU-2BP). Natural Resource Conservation Service-USDA Conservation Innovation Grant program. Total Direct Costs: \$1,868,523. **PI:** Walter Hill, Ph.D.

Participating Faculty (5%). *Decesion pending.* Tuskegee University Jobs Accelerator Project. Rural Development-USDA Rural Jobs Accelerator Challenge. **PI:** Walter Hill, Ph.D.

COURSES TAUGHT

Genetics
Cell and Genetic Biology
Math, Computers, and Bioscience
Introduction to Soil Science Lab
Molecular Cell and Genetic Biology Lab
Environmental Biology Lab (Team Taught)
Introduction to Human Biology (for non-majors)
General, Organic, and Biochemistry (for non-majors)

PROFESSIONAL ASSOCIATION MEMBERSHIPS

Ecological Society of America
Soil Science Society of America
American Society for Microbiology
Alabama Academy of Science

AWARDS/ACHIEVMENTS

U.S. Fish and Wildlife/Wildlife Society Faculty Fellow (Summer 2012)
Tuskegee University/University of California at Davis CREATE-IGERT Trainee
in biotechnology/environmental sustainability, October 2008
66th Profession Agriculture Workers Conference Graduate Student Oral
Presentation Competition: Third Place, December 2008
Ronald E. McNair Graduate Fellow (2004)

SOFTWARE/COMPUTING COMPENTENCIES

Bioinformatic software packages/algorithms:
Related to microbial ecology:
MOTHUR, Ribosomal Database Project Pyrosequencing Pipeline,
QIIME, FastUnifrac
More generalized tools that can be used with many biological systems:
Geneious, JBrowse, Velvet Assembly, NCBI Databases, UCSC Genome
Browser, and other on-line applications.

