



Angela Obiageli Eni
2015 AWARD Fellow

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Position	Senior Lecturer
Institution	Covenant University, Ota
Country	Nigeria
PhD	Molecular and Cell Biology, University of the Witwatersrand, 2008
Mentor	Dr. Robert Asiedu, Director, Research for Development International Institute of Tropical Agriculture (IITA)
Research Area	Increase of cassava and yam tuber yields and quality through characterization of viruses infecting these crops, and development of appropriate diagnostics for certification of planting materials.

Angela Obiageli Eni has a flair for languages and besides English, she can speak Hausa, Igbo, and Yoruba. “This is such a good thing when you are out in the field working with farmers,” she says. Eni has used these skills to communicate with farmers while carrying out field surveys on tuber crops in the West African region.

After completing her BSc in Botany, Eni worked at the IITA, where she was first exposed to the electron microscope. She worked under Jackie Hughes, a virologist who inspired her to become one. “She did her work with passion and I wanted to be like her,” she says. Eni describes the role of a virologist as that of a middleman linking farmers to breeders through certifying planting materials.

For her PhD research, Eni travelled to Benin, Ghana, and Togo to study viruses affecting yams. “The virus symptoms are usually on the leaves, causing discoloration and insufficient photosynthesis. This means that the amount of food that is produced for storage is less, resulting in tuber yield losses,” she explains. She conducted molecular studies and made fresh antibodies to optimize diagnostics for one virus that was contaminating most fields in mixed infection with others.

Eni’s post-doctoral research focused on developing industry preferred starch-rich cassava varieties with multiple resistance to the African, East African, and South African Cassava Mosaic Viruses. “I made a tripartite vector targeting resistance to these three viruses,” she says. To boost cassava production in the region, she plans to have the transformation techniques developed through this work transferred to national research stations.

Currently, Eni is working on the West African Virus Epidemiology (WAVE) project aimed at addressing diseases affecting root crops in six countries. Through WAVE, Eni and her colleagues plan to characterize cassava viruses, their vectors, and alternative hosts to improve diagnostic tools and crop productivity. She is also involved

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AWARD is a career-development program that equips top women agricultural scientists across sub-Saharan Africa to accelerate agricultural gains by strengthening their research and leadership skills through tailored fellowships. AWARD is a catalyst for innovations with high potential to contribute to the prosperity and well-being of African smallholder farmers, most of whom are women.

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in awareness creation campaigns to inform farmers about the viruses affecting their root and tuber crops. “It is important to ensure that farmers are well-schooled,” she says. “Farmers think they are doing a good thing when giving planting materials to friends across borders, but they are spreading viruses instead of love.” Her goal is to become a renowned professor of plant virology in a position to influence agricultural policies. “I would like to see my research contribute to increased productivity for smallholder farmers to ensure that they can sell their surplus and meet other needs,” she notes. Eni is looking forward to seeing one of her diagnostic kits being used for certification of planting materials.

Through AWARD, Eni plans to tap into networking opportunities to enable her to win grants to conduct quality collaborative research to benefit smallholder farmers. She has also benefited from mentorship by top scientists, and would like to share her skills through teaching. “I have been privileged to get hands-on experience, which makes it easier to teach,” she says.

Eni observes that many bright girls end up working in homes and farms because they lacked opportunities to further their studies. She plans to start a self-sustainable education funding scheme to increase the proportion of girls who proceed to tertiary education, particularly those from rural backgrounds. To do this, Eni plans to establish centers within institutions of higher learning where students can acquire skills such as baking and hairdressing to allow them to provide products and services to fellow students while studying and in turn generate funding to sustain the project.

The lecturer is proud of her students’ achievements and wants to continue sharing knowledge to better lives through teaching and research. “The investment we make in other peoples’ lives is what matters,” says Eni.