



2014 AWARD Fellow
Olufisayo Atinuke Kolade



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Position	Research Administrative Manager
Institution	Africa Rice Center (AfricaRice)
Country	Nigeria
PhD	Environmental Biology (Molecular Genetics), University of Ibadan (UI), Nigeria, 2013
Mentor	Morufat Oloruntoyin Balogun, Tissue Culture Specialist, International Institute of Tropical Agriculture (IITA); Plant Geneticist, UI
Research Area	Marker development, gene discovery, and disease- and pest-resistance breeding of rice varieties to improve yields, promote food security and reduce poverty, while protecting the environment.

Olufisayo Atinuke Kolade grew up in western Nigeria where she was exposed to gardening at a young age. “We had a kitchen garden and I liked to help with the harvesting,” she says. This influenced her decision to pursue a degree in botany, and later a career that has included studies on cassava, yam, cowpea, and rice.

Kolade’s national youth service at IITA exposed her to cytogenetics—the study of chromosomes. She was involved in a project targeting the selection of cassava hybrids for increased yields. “I realized that I could have an input into agriculture and help improve people’s livelihoods,” she says. This prompted her to move away from pure botany to study molecular biology.

She undertook her MSc studies while working at IITA, as part of a project researching anther culture of cassava, a breeding technique for improving crops for yield and other desirable qualities.

Kolade changed crops to cowpea for her doctoral research and studied the molecular characterization of transposable elements. “These are called jumping genes because they move around in plants and animals and can cause variation,” she explains. “The genes can be used positively to induce planned variations, such as inducing resistance to a particular pest.” Natural resistance is desirable because it protects the environment and guarantees a good yield.

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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.

AWARD is generously supported by the Bill & Melinda Gates Foundation, the United States Agency for International Development, and the Alliance for a Green Revolution in Africa. For more information, visit www.awardfellowships.org

Currently, Kolade is a member of two research projects at AfricaRice, where she is a research administrative manager. One team is breeding rice to introduce genes that can resist rice yellow mottle virus, which causes yellowing of leaves, stunted growth, and sterility, and can cause losses of up to 80 percent of the crop in the field. The disease mainly affects rice in Africa.

The other project is on mapping genes—identifying the gene responsible for a trait—for resistance to African rice gall midge. This insect pest, which affects mainly rain-fed and irrigated lowland rice and occurs only in sub-Saharan Africa, is common in the lowland ecologies of Nigeria. The team has identified resistant rice varieties, and is trying to identify the gene(s) responsible for the resistance. The plan is to introduce this gene or genes to susceptible varieties.

Apart from conducting research, Kolade has trained researchers from national agricultural research institutes in Africa on basic molecular techniques. She plans to use her experiences as an AWARD Fellow to mentor junior female staff members, helping them to be more focused in their work and to attain higher levels in their profession.

Kolade also expects the program to help her achieve her goal of becoming the director of a Nigerian research institute, and contributing significantly to resistance breeding of rice using molecular tools.

“I want to improve the livelihoods of smallholder farmers in Nigeria by developing better crop varieties,” she says. “If I am director of a research institute, I will be able to influence policy and make research more gender responsive.”

Encouraged by the career-development training that she has received through AWARD, Kolade is enthusiastically pursuing her revised road map. “I have already learned how to create my future, and not just leave it to chance,” she says. “Being an AWARD Fellow will help me to increase my visibility and confidence, which will serve to promote the image of my institution.”