



2014 AWARD Fellow

Victoria Olusola Adetunji

Position	Senior Lecturer
Institution	University of Ibadan (UI)
Country	Nigeria
PhD	Veterinary Public Health, UI, 2007
Mentor	Professor Gabriel Olaniran Adegoke, Department of Food Technology, UI
Research Area	Employment of applied microbiology tools to isolate and control food-borne pathogens and to determine the factors affecting survivability of bacteria pathogens to promote food safety.

Adetunji won a Junior Fulbright Scholarship in 2005—one of only eight scholarships awarded in Nigeria that year—to conduct PhD research at University of Georgia.

Victoria Olusola Adetunji grew up on a university campus in northern Nigeria where she was influenced by her father's part-time livestock-keeping activities. "We kept pigs and poultry in our compound at the university, and vets used to come and treat the animals," she says. This prompted her to study veterinary medicine.

Adetunji—the firstborn in her family—worked hard to be an example to her siblings, winning a Junior Fulbright Scholarship in 2005 to conduct some of her PhD research at the University of Georgia. "There were more than 100 applications from UI alone the year I won the scholarship," she says. Only eight scholarships were awarded in Nigeria that year.

Adetunji's PhD research was on the public health aspects of *wara* cheese processing in southwestern Nigeria. *Wara* is a locally produced soft, white, unripened cheese traditionally made using a coagulant sourced from a plant, *Calotropis procera*. Adetunji worked on this product because, despite being produced to preserve milk, *wara* has a short shelf life due to its poor microbial quality.

"I found that using lemon juice as a coagulant reduces food spoilage and food poisoning organisms in the cheese better than the traditional method," she explains "It is also easy to get lemons because they are available in the market; *Calotropis* is not marketed—farmers must collect it in the bush."

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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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production to determine what it costs, in terms of cash and inputs, to produce pigs as an income-generating activity. For her MSc studies, she worked on dermatophilosis of cattle, a skin disease that reduces the value of hides, to determine the prevalence of the disease among different breeds. “I found that some breeds are very tolerant of the disease and concluded that these are the best for the hide and skin industry,” she says.

In her current research, Adetunji is using applied microbiology tools to isolate and control food-borne pathogens—organisms that cause disease. She is specifically studying biofilm control in food-processing environments to determine factors affecting survivability of bacteria pathogens on meat and milk products. She is studying the effect of two organisms, *Escherichia coli* 0157:H7 and *Listeria monocytogenes*, which cause food intoxication and food poisoning in humans, as they can be transmitted from animals via milk and meat.

“I am doing this research to find solutions to food-borne outbreak diseases, which are underreported in Nigeria,” Adetunji explains. “I want to improve the safety and shelf life of the food products and protect consumers from disease.”

Adetunji conducts part of her research in abattoirs, where she meets women who go there to collect animal blood. They cook and sell the blood and also process it into blood meal for animal feed. “I teach them the proper way to collect blood to reduce contamination,” she explains.

Adetunji expects that the increased networking opportunities she gains through the AWARD Fellowship will help her harness the extension services she wants to render to smallholder farmers. She also hopes that her interaction with other fellows and mentors will link her with scientists and organizations with similar work interests.

Adetunji’s long-term vision is to patent a new type of cheese based on *wara*—one that has a longer shelf life, and that tastes and smells better. “Using the skills I learn as an AWARD Fellow, I plan to organize women to pool their milk and make this new cheese together, so they can save money and reduce wastage,” she says.