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VISITING SCHOLAR AT MSU TOXICOLOGY LABORATORY- A DREAM COME TRUE

Oluwatoyin Ademola
Federal University of Agriculture, Abeokuta, Ogun State, Nigeria

As a food science student studying mycotoxins in local Nigerian foods, I very badly wanted to understand mycotoxins and to see how to detect them in foods. Mycotoxins are a great challenge with food commodities in Nigeria and their detection remains an important factor in food safety research. Though significant research attention has been directed towards finding the status of mycotoxins in food commodities generally, limited resources are available for mycotoxin analysis in Nigeria. Most of the equipment for mycotoxin testing in Nigeria are not as sensitive (sensitive, sophisticated and efficient) as those in other parts of the world. My tenure at MSU as a Nigeria Agricultural Policy Project Scholar has provided me the unique opportunity for exposure to and use of, sophisticated equipment for mycotoxin analysis.

My visit to the Toxicology Laboratory at Diagnostic Center for Population and Animal Health in MSU was revealing and fulfilling. It was one of my dreams as a student studying mycotoxins coming true. I was in a lab with the appropriate equipment and I was now able to understand how exactly the tests I had read about are done. The toxicology laboratory was a sight to behold!

My introduction to the learning section was led by one of the toxicology personnel, Malgorzata Johnson. She took me for a tour around the laboratory, briefed me about laboratory ethics, and showed me how different equipments are used. I got introduced to some other staff in the section during the tour. The equipment I worked with, was the Liquid Chromatography Mass Tandem Spectrometer (LC-MS). It is one of the most sensitive, expensive, reliable and accurate instruments of its kind. It uses a multi-mycotoxin method as it can detect several mycotoxins with a spectrum of metabolites. A manual containing the test procedures was given to me and reading through, made it easy for me to follow and comprehend the process of analysis.

The analysis was carried out in stages, the first stage lasted hours and it involved the sample extraction and evaporation process. The second stage was done overnight and involved running the samples on the LC-MS instrument. The process included labelling of food samples; weighing of the samples in different specimen cups; addition of measured reagents; extraction; evaporation; and running in LC-MS instrument.

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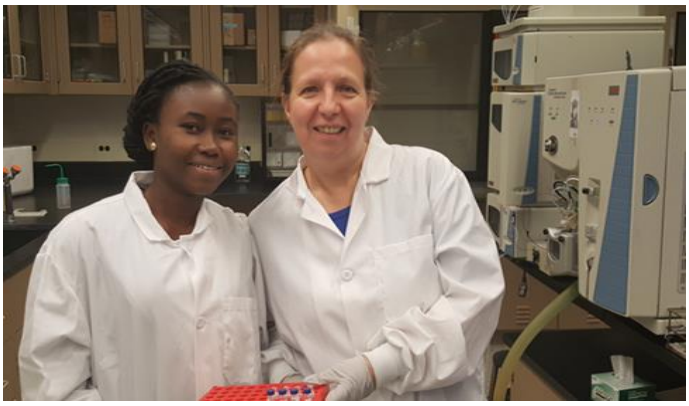

I was thrilled to go through this process and I learnt so many things complementing the knowledge I gained from readings, textbooks and the internet. I now better understood the terms used in mycotoxin analysis and each of the steps taken when the analysis is carried out.

The author is an M.Sc. student in the Department of Food Science and Technology at the Federal University of Agriculture, Abeokuta, Ogun State, Nigeria. Her supervisor is Adewale Olusegun Obadina (Ph.D.) While at Michigan State University, Dr. Saweda Liverpool-Tasie provided guidance on her program and on this Highlight.

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