



**Folasade Mayowa
OLAJUYIGBE**

**Home Country
Nigeria**

**Degree
PhD in Applied Biochemistry**

**Expertise
Biocrystallography**

**Research Focus
Biocrystallographic Studies of
Drug-Resistant Mutants
of HIV Protease**

**Host University
University of Trieste, Italy**

**Fellowship Awarded
2006**

Folasade Mayowa Olajuyigbe obtained her PhD in applied biochemistry in 2009 as part of a sandwich program of the Centre of Excellence in Biocrystallography, Department of Chemical Science, University of Trieste, Italy and the Department of Biochemistry, Federal University of Technology, Akure, Nigeria.

Her PhD research focused on the long-term success of anti-retroviral therapies – drugs that are hindered by the emergence of viral strains that exhibit resistance to protease inhibitors. Using state-of-the-art X-ray crystallography techniques, Folasade investigated the molecular basis of drug resistance with ritonavir, a US Food and Drug Administration approved inhibitor, along with a newly designed small inhibitor, FP3, and an irreversible covalent binding HIV protease inhibitor, EPX. She presented the results of her PhD research at Trends in Enzymology 2008, an international conference held in Saint Malo, France, where she won Best Poster and Young Investigator awards. She recently published a paper in *ACS Medicinal Chemistry* on modification of HIV-1 protease through carbamylation, where implications of carbamylation process in vitro and in diseases are discussed.

Folasade is now a lecturer in the Department of Biochemistry at the Federal University of Technology, Akure in Nigeria, where she teaches both undergraduate and graduate courses and supervises research projects at both levels.

Her research interests include protein structure and function, especially for proteolytic enzymes of infectious organisms that are targets for drug design and discovery. She works on HIV-1 protease and enzymes from the malaria parasite, *Plasmodium falciparum*. Folasade uses methods and techniques in molecular biology, enzymology and X-ray crystallography to answer specific questions on active-site interaction that lead to specific binding and efficient catalysis which provide new and useful information for drug discovery and optimization.

