



## **Mary ADJEIWAAH**

**Home Country:** Ghana

**Degree:** PhD in Radiation Physics

**Expertise:** Advanced Medical Imaging Technologies

**Research Focus:** Quality Assurance of MR scanners for Radiotherapy

**Host University:** Umea University, Sweden

**Fellowship Awarded:** 2015

Mary Adjeiwaah was born and raised in Offinso, a town in the Ashanti region of Ghana. Her father was a teacher and her mother also taught before becoming a businesswoman. Although her parents were not rich they paid for her to go to a private primary school, after which she attended the prestigious St. Louis girls' senior high school in Kumasi. After graduating, Mary taught science and mathematics at a local primary school.

Mary attended the Kwame Nkrumah University of Science and Technology (KNUST), in Kumasi, Ghana, where in 2006 she gained a BSc in Physics, specializing in Medical Physics. She spent her summer vacations on internships at the Radiotherapy and Radiology department of the Komfo Anokye Teaching Hospital in Kumasi. During her studies she won an award for the best female student in the department three times, and became a teaching assistant following graduation. Mary received a scholarship to study at the Royal Institute of Technology in Stockholm, Sweden, where in 2009 she gained an MSc in Medical Engineering (Imaging). Her thesis focused on the use of ultrasound in breast cancer screening.

Successful radiotherapy depends on targeting cancerous tissue with an optimal dose of ionizing radiation. Technologies such as magnetic resonance imaging (MRI) improve the differentiation of normal and pathological tissues, and can help to guide dose delivery in radiotherapy. Mary's research aims to understand the potential quality assurance parameters of MRI in optimizing treatment planning workflows. At the end of her studies she will come up with quality control procedures needed to facilitate the safe usage of MRI to improve the effectiveness of radiotherapy.

After completion of her PhD studies, Mary hopes to take up a faculty position at KNUST, where the only female professor at the university has retired. She expects her new knowledge will help contribute to the diagnosis and treatment of cancer in Ghana and across the world.