

PAUL I OKAGBARE

TITLE: RESEARCH ASSISTANT

CONTACT INFORMATION:

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BRIEF HISTORY OF EDUCATION:

Ph.D. Candidate (Chemistry), and Research Assistant (January 2005 till date)

M.S, Analytical Chemistry, University of Ibadan, Nigeria, (2001)

B.S, Industrial Chemistry, Delta State University, Nigeria, (1997)

Research Scope

Paul's research focuses on two areas;

First; development of high throughput analytical method for early cancer diagnosis by utilizing microelectrodes integrated onto microfluidic devices fabricated on Poly(methylmethacrylate) to probe the electrical properties of metastatic carcinomas as well as hematopoietic cells for quantitative screening of peripheral blood for Circulating Tumor Cells (CTCs). This will be synchronized with a second project below for molecular profiling and characterization of epithelia cells (metastatic carcinomas)

Second; developing highly multiplexed analytical methods for high throughput genomic analysis using fluorescence multiplexing approach that involves spectral discrimination in multi-channel (nano-channel) polymer-based microchips. This new technology will be applied in multi-scale DNA sequencing, single molecule detection, and molecular profiling as well as in drug discovery especially for high throughput immunoassay and mobility shift assay with capabilities for simultaneous multi-sample analysis in micro-devices fabricated in poly (methylmethacrylate), PMMA.