

## PROFILE

Highly motivated biomedical engineer with strong interpersonal skills and a demonstrated ability to lead and synthesize information from various disciplines. Outstanding leadership and service to university, student and professional organizations. Committed to the improvement of US and global healthcare delivery systems.

## EDUCATION

### **DUKE UNIVERSITY, Durham, NC**

*PhD, Biomedical Engineering, expected May 2008.* Concentration in Tissue Engineering, Certificate in Biomolecular and Tissue Engineering

**BUSINESS COURSEWORK:** Economics and Management of the Pharmaceutical Industry; Dynamics of Bargaining; Biotechnology; Management of Drug Discovery

### **DUKE UNIVERSITY, Durham, NC**

*MS, Biomedical Engineering, "In Vitro Optimization of Cell Seeding Methods to Improve Patency of Synthetic Vascular Grafts"*

### **HOWARD UNIVERSITY, Washington, DC**

*BS, Chemistry, with minor in Mathematics and Allied Health, May 2001. Magna Cum Laude, Phi Beta Kappa*

Awarded Legacy, Trustee, American Chemical Society, and Monsanto Scholarships

## HONORS & AWARDS

NIH Research Grant Award (2004-Present); Duke Endowment Fellowship (2001-2004); American Chemical Society Scholars (1999-2001); Howard University Honors Program (1997-2001); Legacy Scholarship (1997-2001); Monsanto Scholar (1999)

## RESEARCH EXPERIENCE

### **DUKE UNIVERSITY, Durham, NC**

*Graduate Student Research Associate* 2001-Present

- Developed novel system to enhance endothelial cell adhesion to synthetic vascular grafts at short time points
- Authored and assisted principal investigator in preparation of grant applications and conference presentations
- Mentored six undergraduate students through completion of senior thesis projects

### **MERCK & COMPANY, West Point, PA**

*Medicinal Chemist Intern* Summer 2001

- Synthesized multi-cyclic quinones to test for VEGF inhibition and anti-tumor activity in dogs and rabbits
- Utilized multiple parallel synthesis techniques to develop *ortho*, *meta*, and *para* substituted derivatives of compounds that showed good activity in biological assays
- Integrated *pharmacokinetic* and *pharmacodynamic* data to create a compounds for high throughput screening

### **ASTRAZENECA, Wilmington, DE Summer 2000**

*Medicinal Chemist Intern*

- Synthesized various alkylated derivatives using Lithium Diisopropylamine and Sodium *bis*(trimethylsilyl)amide under anhydrous conditions
- Monitored and purified reactions using flash chromatography, TLC and HPLC techniques
- Gained competence using Mass Spectroscopy and NMR Spectroscopy to characterize synthesized compounds

### **MONSANTO, St. Louis, MO Summer 1999**

*Research Assistant*

- Designed and implemented experiments to determine the reaction kinetics of an agricultural compound
- Used determined kinetics in conjunction with NMR and HPLC data to determine reaction mechanism
- Utilized reaction mechanism to determine optimum reaction conditions for eliminating unwanted derivative

## LEADERSHIP EXPERIENCE

### **DUKE UNIVERSITY, Durham, NC**

*Technology and Corporate Relations Committee for Duke Start-Up Challenge 2006-2007*

- Identified technologies across the university with potential marketability
- Solicited and formed teams on behalf of the IP holder to develop a business plan and enter into the competition
- Wrote and presented proposals to university and private sector donors to raise prize money for the competition

### **BOOST Mentor 2004-2007**

- Guided three 6<sup>th</sup> graders through science experiments for a science fair competition
- Lead hands on science demonstrations once a month in the middle schools associated with the program

### **Head Teaching Assistant 2003-2004**

- Designed laboratories for Introduction to Biomaterials and trained TAs on instructing the lab to undergraduate biomedical engineering students
- Assisted professor in designing lesson plans, problem sets and exams, and would also lecture during his absence

## **SELECTED PUBLICATIONS and PEER REVIEWED ABSTRACTS with PRESENTATIONS**

C.C. Anamelechi, E. Clermont, M.A. Brown, G.A. Truskey, and W.M. Reichert. Streptavidin Binding and Endothelial Cell Adhesion to Biotinylated Fibronectin. *Langmuir Vol. 23 Is. 25 (2007) 12583-12588*

M.A. Brown, C.S. Wallace, C.C. Anamelechi, E. Clermont, W.M. Reichert, and G.A. Truskey. The Use of Mild Trypsinization Conditions in the Detachment of Endothelial Cells to Promote Subsequent Endothelialization on Synthetic Surfaces. *Biomaterials 28 (2007) 3928-3935*

C.C. Anamelechi (Presenter), E. Clermont, G.A. Truskey, and W.M. Reichert. Endothelial Cell Adhesion on Teflon-AF using Biotin Functionalized Fibronectin. Society for Biomaterials Conference, Chicago, IL. April 2007

C.C. Anamelechi (Presenter), E. Clermont, G.A. Truskey, and W.M. Reichert. In Vitro Optimization of Cell Seeding Methods to Improve Endothelial Cell Attachment to Synthetic Vascular Grafts. American Heart Association Conference, Chicago, Ill. Nov. 2006

C. C. Anamelechi (Presenter) and W.M. Reichert. Strength of Fibronectin Adsorption to Polymer Materials. Society for Biomaterials Conference, Pittsburgh, PA. April 2006

C.C. Anamelechi, G.A. Truskey, and W.M. Reichert. Mylar and Teflon-AF as Cell Culture Substrates for Studying Endothelial Cell Adhesion. *Biomaterials 26 (2005) 6887-6896*

C. C. Anamelechi (Presenter), M. Wang, M. Brown, A. Chilkoti, G.A. Truskey, and W.M. Reichert. Biotinylated Fibronectin Used with RGD-SA Streptavidin Incubated Cells Improved Cell Adhesion on ePTFE Vascular Graft Constructs. American Heart Association Conference, Dallas, TX. November 2005

C. C. Anamelechi (Presenter), M. Wang, L. Lee-Houghton, G.A. Truskey, and W.M. Reichert. In Vitro Characterization of Endothelial Cell Adhesion on Teflon-AF. Gordon Research Conference, Plymouth, NH. July 2005

C. C. Anamelechi (Presenter), G.A. Truskey, and W.M. Reichert. Teflon-AF and Mylar as Model Vascular Surfaces for Studying In Vitro Cell Adhesion. Biomedical Engineering Society Annual Conference, Philadelphia, Pa. October 2004

C. C. Anamelechi (Presenter) and W.M. Reichert. Optimizing In Vitro Cellular Adhesion on Polymer Surfaces. Biomedical Engineering Society Annual Conference, Nashville, TN. October 2003

C. C. Anamelechi (Presenter) and W.M. Reichert. Cellular Adhesion to Substrates as a Function of Shear Stress. Society for Biomaterials Conference, Reno, NV. April 2003

## **INVITED TALKS**

C. C. Anamelechi (Presenter), L. Lee-Houghton, G.A. Truskey, and W.M. Reichert. Teflon-AF as a Model Tissue Culture Material for Studying Endothelial Cell Adhesion. Biomedical Engineering Society Conference. Baltimore, MD October 2005

C. C. Anamelechi (Presenter), G.A. Truskey, and W.M. Reichert. Mylar and Teflon-AF as Model Surfaces for Endothelial Cell Adhesion to Synthetic Vascular Grafts. Southeastern Regional Meeting of the American Chemical Society (SERMACS) Nov. 2004

C. C. Anamelechi. Cellular Adhesion on Model Vascular Substrates. Center for Biomolecular and Tissue Engineering (<http://bte.egr.duke.edu>) February 2004

## **PROFESSIONAL MEMBERSHIPS**

American Chemical Society (2001-2008); Society for Biomaterials (2004-2008); Biomedical Engineering Society (2003-2008); Council for Entrepreneurial Development (2007-2008)

## **SELECTED ACTIVITIES & INTERESTS**

Duke University Fuqua Consulting Club; President of Bouchet Society; President of Black Graduate and Professional Students Association (BGPSA); President's Council on Black Affairs (PCOBA); Habitat for Humanity; Duke University Martin Luther King Jr. Holiday Planning Committee; Society for Duke Fellows (SDF); Farsta FC; President of the American Chemical Society Student Affiliates (ACSSA); Member of Big Brother Program