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EDUCATION

Postdoctoral Fellowship, Biomedical Engineering 2008-2011
Johns Hopkins University, School of Medicine, Baltimore, MD
Research Advisor: Aleksander Popel
Quantitatively characterizing and computationally modeling VEGFR in ischemia and cancer.

Ph.D., Bioengineering 2002-2008
California Institute of Technology (Caltech), Pasadena, CA
Research Advisor: Henry Lester
Committee Members: Scott Fraser, Bob Chow, and Changhuei Yang
Applied single-molecule fluorescence, FRET, and TIRF to resolve the structure and trafficking of the GABA transporter, GAT1.

S.B., Chemical Engineering & Minor in Biomedical Engineering 1998-2002
Massachusetts Institute of Technology (MIT), Cambridge, MA
Research Advisor: Robert Langer (1998-2001)
Devised experimental strategy for incorporation of adenoviruses & adeno-associated viruses in a liposome gene therapy system, and created a mathematical model of viral release from the liposome-viral complex. Introduced a fluorescent marker onto a γ-cyclodextrin based gene delivery vector. Improved the microencapsulation of an anti-tumor drug using a novel polymer.

PATENT

Morales, R, Sherin, RS, **Imoukhuede, PIU**, Burke, D, Gomez, M, Ramirez, DL, Castaneda, A (2003). Construction set for building structures (A63H 033/08 ed, U.S. Patent 6,641,453). United States of America: Academy of Applied Science.

PUBLICATIONS

1. Weddell J, **Imoukhuede PI** (2018) Computational systems biology for the VEGF family in angiogenesis; *Encyclopedia of Cardiovascular Research and Medicine; Encyclopedia of Cardiovascular Research and Medicine,* Sawyer, D. B., Ed. Elsevier: Oxford; pp 659-676; doi:10.1016/B978-0-12-809657-4.99548-6.

2. Cross K, **Imoukhuede PI**, Mendenhall R, Clancy K, Amos J (*accepted)* The Double Bind of Race and Gender: A Look into the Experiences of Women of Color in Engineering; *2017 American Society for Engineering Education Conference Proceedings.*

3. Weddell JC, Chen S, **Imoukhuede PI** (2017) VEGFR1 promotes cell migration and proliferation through PLCγ and PI3K pathways; *npj Systems Biology and Applications;* doi:10.1038/s41540-017-0037-9.

4. Mamer SB, Chen S, Weddell J, Palasz A, Wittenkeller A, Kumar M, **Imoukhuede PI** (2017) Discovery of

High-Affinity PDGF-VEGFR Interactions: Redefining RTK Dynamics; *Scientific Reports;* 7: 16439; doi:10.1038/s41598-017-16610-z; PMID: 29180757.

5. Hedhli, J.; Czerwinski, A.; Schuelke, M.; Ploska, A.; Sowinski, P.; Hood, L.; Mamer, S. B.; Cole, J. A.; Czaplewska, P.; Banach, M.; Dobrucki, I. T.; Kalinowski, L.; **Imoukhuede, P.**; Dobrucki, L. W., (2017) Synthesis, Chemical Characterization and Multiscale Biological Evaluation of a Dimeric-cRGD Peptide for Targeted Imaging of alpha V beta 3 Integrin Activity, *Scientific Reports*, 7(1): 3185; doi: 10.1038/s41598-017-03224-8; PMID: 28600529.

6. Weddell JC & **Imoukhuede PI** (2017) Integrative meta-modeling identifies endocytic vesicles, late endosome and the nucleus as the cellular compartments primarily directing RTK signaling; *Integrative Biology*; Apr 24., doi: 10.1039/c7ib00011a; PMID: 28436498.

7. Chen S, Weddell J, Gupta P, Conard G, Parkin J, **Imoukhuede PI** (2017) qFlow cytometry-based receptoromic screening: a high-throughput quantification approach informing biomarker selection and nanosensor development; *Springer Protocols: Methods in Molecular Biology;* 1570:117-138; doi: 10.1007/978-1-4939-6840-4_8; PMID: 28238133

8. Ansari A, Patel R, Schultheis K, Naumovski V, **Imoukhuede PI** (2016) A method of targeted cell isolation via glass surface functionalization; *Journal of Visual Experiments* (115), e54315, doi: 10.3791/54315; PMID: 27684992.

9. Rosch DM & **Imoukhuede PI** (2016) Improving Bioengineering Student Leadership Identity via Training and Practice within the Core-Course; *Annals of Biomedical Engineering;* 44(12):36063618 PMID: 27364627.

10. Chen S, Guo X, Imarenezor O, **Imoukhuede, PI** (2015) Quantitation of VEGFRs, NRP1, and PDGFRs on endothelial cells and fibroblasts reveals serum, intra-family ligand, and cross-family ligand regulation; *Cellular and Molecular Bioengineering;* 8(3):383.

11. Lee Montiel FT, Li P, **Imoukhuede PI** (2015) Quantum dot multiplexing for the profiling of angiogenic receptors; *Nanoscale*; 7(44):18504-18514; PMID: 26377627.

12. Weddell J, Kwack J, **Imoukhuede PI**, Masud A (2015) Hemodynamic Analysis in an Idealized Artery Tree: Differences in Wall Shear Stress between Newtonian and Non-Newtonian Blood Models; *PLoS One*, 10(4): e0124575; PMID: 25897758.

13. Amos J, Vogel T, **Imoukhuede Pl** (2015) Assessing teaming skills and major identity through collaborative sophomore design projects across disciplines; *American Society for Engineering Education Conference Proceedings;* June 14; 26.245.1.

14. Ansari A, Lee Montiel FT, Amos J, **Imoukhuede PI**, (2015) Secondary Anchor Targeted Cell Release; *Biotechnology and Bioengineering*; 112(11):2214-2227; PMID: 26010879.

15. Wang H, Yang X-F, Cannella AL, **Imoukhuede PI**, Qin X, Choi E, Xi H, Cueto R, Zhou Nelson J, Sha X, Li X, Lopez-Pastrana J, Ferrer L, Li YF, Xiong X (2015) Inhibition of caspase-1 activation in endothelial cells improves angiogenesis: A novel therapeutic potential for ischemia; *Journal of Biological Chemistry*; 290 (28):17485-94; PMID: 26037927.

16. Weddell J, **Imoukhuede PI** (2014) Quantitative Characterization of cellular membrane-receptor heterogeneity through statistical and computational modeling. *PLoS ONE,* 9(5): e97271; PMID: 24827582.

17. Roxworthy B, Johnston MT, Lee Montiel F, Ewoldt RH, **Imoukhuede PI,** Toussaint KC (2014) Plasmonic Optical Trapping in Biologically Relevant Media. *PLoS ONE,* 9(4):e93929; PMID: 24710326.

18. Chen S, Ansari A, Sterrett W, Hurley K, Kemball J, Weddell J, **Imoukhuede PI** (2014) Current State of the Art and Future Directions in Systems Biology. *Progress and Communication in Sciences*, 1(1): 12-27.

19. **Imoukhuede PI,** Popel AS. (2014) Quantitative fluorescent profiling of VEGFRs reveals tumor cell and endothelial cell heterogeneity in breast cancer xenografts. *Cancer Medicine*, 3(2):225-244; PMID: 24449499.

20. Lee Montiel F, **Imoukhuede PI** (2013) Engineering quantum dot calibration beads for the profiling of cellular heterogeneity. *Journal of Materials Chemistry B,* 1:6434-6441.

21. **Imoukhuede PI,** Dokun AO, Annex BH, Popel AS (2013) Hindlimb ischemia induces temporal changes in VEGFR1 and VEGFR2 levels on endothelial cell expression in mouse muscle. *AJP-Heart and Circulatory Physiology,* 304: H1085-H1093; PMID: 23376830

22. **Imoukhuede PI**, Popel AS (2012) Expression of VEGF receptors on endothelial cells in mouse skeletal muscle. *PLoS ONE,* 7(9): e44791; PMID: 22984559.

23. **Imoukhuede PI**, Popel AS (2011) Quantification and Cell-To-Cell Variation of Vascular Endothelial Growth Factor Receptors. *Experimental Cell Research,* 317, 955-965; PMID: 21185287.

24. Finley SD, Engel-Stefanini MO, **Imoukhuede PI,** Popel AS (2011) Pharmacokinetics and pharmacodynamics of VEGF-neutralizing antibodies. *BMC Systems Biology,* 5:193.

25. **Imoukhuede PI**, Moss FJ, Michael DJ, Chow RH, Lester HA (2009) Ezrin mediates tethering of the gamma-aminobutyric acid transporter GAT1 to actin filaments via a C-terminal PDZ-interacting domain. *Biophysical Journal,* 96, 2949-2960; PMID: 19348776.

26. Moss FJ, **Imoukhuede PI**, Jankowski JJ, Lester HA (*2009*) GABA transporter function, oligomerization state, and anchoring: correlates with subcellularly resolved FRET. *Journal of General Physiology,* 134,489-521.

27. Moss FJ, **Imoukhuede PI,** Just H, Lester HA (2009*)* GABA Transporters: Structure, oligomerization, trafficking and pharmacology determine neuronal excitability. *Encyclopedia of Basic Epilepsy Research*, 3, 1389-1397.

28. Drenan RM, Nashmi R, **Imoukhuede PI**, Just H, McKinney S, Lester HA (2008). Subcellular trafficking, pentameric assembly and subunit stoichiometry of neuronal nicotinic ACh receptors containing fluorescently-labeled α6 and β3 subunits. *Molecular Pharmacology,* 73, 27-41; PMID: 17932221.

29. Crumpler E, **Imoukhuede P**, Keawphalouk M, Landa J, Langer R (1999). Controlled release of 9-chloro-2-methylellipticinium acetate from a biodegradable polymer: Release kinetics, in vitro and in vivo effects on cellular growth. *Polymer Preprints*, 40, 605-606.

ARTICLES IN CONFERENCE PROCEEDINGS

1. Craine A, Fang YC, **Imoukhuede PI** (2017) Quantification of Angiogenic Receptors on Circulating Endothelial Cells, Biomedical Engineering Society (BMES) Annual Meeting (Phoenix, AZ).

2. Fang Y, Chen S, **Imoukhuede PI** (2017) Quantification of VEGF Receptors on Circulating Endothelial Cells, 1st Annual Bioengineering Graduate Student Symposium (Urbana, IL).

3. Chen S, Harley B, **Imoukhuede PI** (2017) Multiplexed quantification of angiogenic receptors on endothelial cells and glioblastoma xenografts via qFlow cytometry and Qdot-nanosensors, 3rd Annual Midwest Tumor

Microenvironment Meeting at Washington University (St. Louis, MO).

4. Mamer S, Castleberry C, **Imoukhuede P** (2017) What's in a name? Would a growth factor by any other name bind VEGFRs just as strong? Gordon Research Conference: Physical Science of Cancer. Galveston, TX.

5. Ansari A, Chen S, **Imoukhuede PI** (2016) Enabling gentle and rapid spiral microfluidic-based cell isolation via flow rate, antibody, and buffer optimization. IEEE Engineering in Medicine and Biology Society (EMBS) Micro and Nanotechnology in Medicine Conference. Waikoloa, HI.

6. Weddell JC & **Imoukhuede PI** (2016) Integrative Meta-Modeling Ranks RTK Signaling and Identifies Connection Between Nuclear Translocation and Extracellular Ligand Concentrations. American Institute of Chemical Engineers (AIChE) Annual Meeting. San Francisco, CA.

7. Weddell JC & **Imoukhuede P** (2016) VEGFR1 Mediates Cell Migration through Activation of PI3K and PLCγ. American Institute of Chemical Engineers (AIChE) Annual Meeting. San Francisco, CA.

8. Ansari A & **Imoukhuede P** (2016) Gentle Cell Capture and Release: PLL Stabilization of the Secondary Anchor Targeted Cell Release System. American Institute of Chemical Engineers (AIChE) Annual Meeting. San Francisco, CA.

9. Chen S & **Imoukhuede P** (2016) Enabling multiplexed single-cell mapping of receptors via quantum dot (QD) nanosensors. International Vascular Biology Meeting. Boston, MA.

10. Mamer, SB, Wittenkeller A, **Imoukhuede PI** (2016) VEGF-A splice variants bind VEGFR1 and VEGFR2 with differential affinities. International Vascular Biology Meeting. Boston, MA.

11. Fang Y, Chen S, Ansari A, **Imoukhuede PI** (2016) Identifying Patient Responsiveness to Anti-Angiogenic Drug Through Angiogenic Biomarker Quantification. BMES Midwest Regional Conference. Champaign, IL.

12. Weddell J, Chen S, Mamer S, **Imoukhuede PI** (2016) Merging Quantitative Experimental Biology and Computational Biology to Control Angiogenesis, NIH-NIDDK: Network of Minority Health Research Investigators Midwest Regional Meeting, Case Western Reserve University. Cleveland, OH.

13. **Imoukhuede PI** (2016) Quantitative + Computational Biology: Towards Directed Control of Neovascularization, Biomedical Engineering Society Annual Meeting. Minneapolis, MN.

14. **Imoukhuede P** (2016) Computational Analysis of Growth Factor Regulation of Angiogenesis, Gordon Research Conference: Signal Transduction in Engineered Extracellular Matrices. Biddeford, ME.

15. **Imoukhuede P** (2016) qBio + cBio = sBio: Advancing Knowledge on Biomarkers, Drugs, & Disease, Midwestern Quantitative Biology (MidQBio) Seminar. Urbana, IL.

16. Chen S & **Imoukhuede PI** (2016) Quantum dot-enabled Quantitative Single-cell Proteomics. 4th Midwest Quantitative Biology Symposium. Indianapolis, IN.

17. Chen S & **Imoukhuede PI** (2016) Enabling Multiplexed Single-cell Measurement of Angiogenic Receptors via Quantum dot (QD) Nanosensors: A High-throughput Quantification Approach. Biomedical Engineering Society Annual Meeting. Minneapolis, MN.

18. Weddell JC & **Imoukhuede PI** (2016) PI3K and PLCγ pathways regulate VEGF-A--VEGFR1-mediated cell migration. Biomedical Engineering Society. Minneapolis, MN.

19. Weddell JC & **Imoukhuede PI** (2016) Meta-modeling reveals that tyrosine kinase receptor signaling is primarily directed by endocytic vesicles, late endosomes, and the nucleus. Biomedical Engineering Society. Minneapolis, MN.

20. Ansari A, Chen S, **Imoukhuede PI** (2016) Towards fast & gentle cell isolation: integrating microfluidics & Secondary Anchor Targeted Cell Release. Biomedical Engineering Society Annual Meeting. Minneapolis, MN.

21. Mamer S, Wittenkeller A, **Imoukhuede P** (2016) Pro- and Anti-angiogenic VEGF-A Splice Variants Bind VEGFRs with Differential Affinities. Biomedical Engineering Society Annual Meeting. Minneapolis, MN.

22. Weddell J, **Imoukhuede P** (2016) Meta-Modeling Reveals that Tyrosine Kinase Receptor Signaling is Primarily Directed by Endocytic Vesicles, Late Endosome, and the Nucleus. Biomedical Engineering Society Annual Meeting. Minneapolis, MN.
23. Weddell J, **Imoukhuede P** (2016) PI3K and PLCγ Pathways Regulate VEGF-A--VEGFR1-Mediated Cell Migration. Biomedical Engineering Society Annual Meeting. Minneapolis, MN.
24. Kumar D, Chen S, **Imoukhuede P** (2016) Trypsin Upregulates Membrane PDGFR Localization. Biomedical Engineering Society Annual Meeting. Minneapolis, MN.
25. Erstling J, Jensen C, Schad S, Wall M, Mamer S, Chen S, **Imoukhuede PI** (2016) Quantifying Quantum Dot Nanosensor Binding Affinities to Angiogenic Receptors via SPR-Based Assay. Biomedical Engineering Society Annual Meeting. Minneapolis, MN.
26. Chen S & **Imoukhuede PI** (2016) Enabling Multiplexed Single-cell Measurement of Angiogenic Receptors via Quantum dot (QD) Nanosensors: A High-throughput Quantification Approach. Individualizing Medicine 2016: Advancing Care through Genomics. Rochester, MN.
27. Chen S & **Imoukhuede PI** (2016) Towards precision medicine: enabling multiplexed single-cell mapping of angiogenic receptors via quantum dot (QD) nanosensors. Global Engage 2nd Digital Pathology Congress. Philadelphia, PA.
28. Chen S & **Imoukhuede PI** (2016) Enabling high-throughput single-cell quantification of angiogenic receptors via quantum dot (QD) nanosensors. 14th Annual CNST Nanotechnology Workshop. Urbana, IL.
29. Ansari A & **Imoukhuede PI** (2016) Titration of PLL Stabilizes Cellular Environment of Secondary Anchor Targeted Cell Release System. 14th Annual CNST Nanotechnology Workshop. Urbana, IL.
30. Ansari A & **Imoukhuede PI** (2016) A Method of Targeted Cell Isolation via Glass Surface Functionalization. Midwestern Quantitative Biology (MidQBio). Urbana, IL.
31. Yadavalli B, Schultheis K, Patel R, Ansari A, **Imoukhuede PI** (2016) Optimizing flow rate and Surface Components for the SATCR System. ResearcHStart Symposium. Chicago, IL.
32. Schultheis K, Patel R, Ansari A, **Imoukhuede PI** (2016) Optimization and calibration of a microfluidic device for clinical pathology. Illinois Summer Research Symposium. Urbana, IL
33. Erstling J, Mamer, S, Chen S, Jensen C, Schad S, Wall M, **Imoukhuede PI** (2016) Quantification of binding affinities between quantum dot nanosensors and angiogenic receptors via surface plasmon resonance-based assay. Illinois Summer Research Symposium. Urbana, IL.
34. Al-Qadi K, Chen S, Ansari A, **Imoukhuede PI** (2016) Surface Receptor Quantification on Isolated Cells. Illinois Summer Research Symposium. Urbana, IL
35. Grubb N, Weddell JC, **Imoukhuede PI** (2016) Confirming computational models of anti-angiogenic treatments with enzyme linked immunosorbent assays. Illinois Summer Research Symposium. Champaign, IL.
36. Schultheis K, Patel R, Ansari A, **Imoukhuede PI** (2016) Calibration and optimization of a microfluidic device for clinical pathology. Undergraduate Research Symposium. Urbana, IL
37. Palasz A, Mamer SB, **Imoukhuede PI** (2016) Computational Modeling of Generalized RTK Dimerization Kinetics. University of Illinois at Urbana-Champaign Undergraduate Research Symposium (Urbana, IL).
38. Mamer S & **Imoukhuede P** (2015) Identification and Quantification of Novel VEGF-PDGF Cross-Family Binding. Biomedical Engineering Society National Meeting. Tampa, FL.
39. Mamer S & **Imoukhuede P** (2015) Computational Modeling of Generalized RTK Dimerization. Biomedical Engineering Society National Meeting. Tampa, FL.
40. Weddell J, **Imoukhuede P** (2015) Systems Biology and Angiogenesis: Developing Integrative Models of VEGFR1 Activation in Hypoxic Environments, NIH-NIDDK: Network of Minority Health Research Investigators 13th Annual Workshop (Bethesda, MD).

41. **Imoukhuede PI** (2015) Predicting Tumor Response by Integrating Quantitative VEGFR1 Profiling with Kinetic Modeling, Society for Mathematical Biology Annual Meeting (Atlanta, GA).
42. Rosch D, **Imoukhuede P** (2015) Teambuilding & Leadership Interventions Improve Undergraduate Bioengineering Students Leadership Self-Construal, Biomedical Engineering Society Annual Meeting (Tampa, FL).
43. Chen S, Guo X, Imarenezor O, **Imoukhuede P** (2015) Quantification of PDGFRs on Fibroblasts Reveals Serum, Intra-Family Ligand, and Cross-Family Ligand Regulation, Biomedical Engineering Society Annual Meeting (Tampa, FL).
44. Wittenkeller A, Mamer S, **Imoukhuede P** (2015) VEGF-A Splice Variants Bind VEGFR2 with Differential Affinities. Biomedical Engineering Society National Meeting. Tampa, FL.
45. Weddell J & **Imoukhuede P** (2015) Integrative Modeling Identifies VEGFR1 as an Essential Regulator of VEGF-Induced Migration. Biomedical Engineering Society Annual Meeting. Tampa, FL.
46. Ansari A & **Imoukhuede P** (2015) Secondary Anchor Targeted Cell Release Integrated Spiral Mixer for the Selective Isolation of Cell Types. Biomedical Engineering Society National Meeting. Tampa, FL.
47. Chen S & **Imoukhuede P** (2015) Quantitation of angiogenic receptor levels and heterogeneity in fibroblasts-endothelial co-culture. Biomedical Engineering Society National Meeting. Tampa, FL.
48. Chen S, **Imoukhuede P** (2015) Fixation Affects Angiogenic Receptor Levels on Endothelial Cells and Fibroblasts, in vitro. Biomedical Engineering Society National Meeting. Tampa, FL.
49. Schultheis K, Sridharan A, Ansari A, **Imoukhuede P** (2015) Optimizing Cell Capture Via Surface Functionalization. Biomedical Engineering Society National Meeting. Tampa, FL.
50. White R, Chen S, **Imoukhuede P** (2015) Towards multiplexed quantitative flow cytometry: optimizing nanosensor binding saturation. Biomedical Engineering Society National Meeting. Tampa, FL.
51. Mathias B, Guo X, Chen S, **Imoukhuede P** (2015) Characterization of microvascular endothelial cell-fibroblast co-culture: quantifying receptors & sprouting. Biomedical Engineering Society National Meeting. Tampa, FL.
52. White R, Chen S, **Imoukhuede P** (2015) Towards multiplexed quantitative flow cytometry: optimizing nanosensor binding saturation. Council on Undergraduate Research: Research Experiences for Undergraduates Symposium. Arlington, VA.
53. Chen S & **Imoukhuede P** (2015) Quantitative profiling of angiogenic receptors on human dermal fibroblasts. International Year of Light Workshop. Urbana, IL.
54. Guo X, Chen S, **Imoukhuede P** (2015) Fibroblasts-endothelial co-culture and its surface receptor quantification. Vasculata. Charlottesville, VA.
55. Naumovski V, Ansari A, **Imoukhuede P** (2015) Optimization of a secondary anchor targeted cell release microfluidic device. Illinois Summer Research Symposium. Champaign, IL.
56. Ezzat A, Ansari A, **Imoukhuede P** (2015) Using Western Blots Technique to Study Cancer Cell Behavior. Nano@Illinois Summer RET Symposium. Champaign, IL.
57. Weddell JC & **Imoukhuede P** (2015) Developing mechanistic models of adapter-receptor interactions to predict cell response. Society for Mathematical Biology Annual Meeting. Atlanta, GA.
58. Mamer S & **Imoukhuede P** (2015) Quantitative and Computational Analysis of Novel VEGF-PDGF Cross-family Binding Kinetics in Angiogenic Cell Signaling. Center for Nanoscale Science and Technology 13th Annual Workshop. Urbana, IL.
59. Imarenezor O, Guo C, **Imoukhuede P** (2015) Levels of Cell Confluence Influence PDGFR-alpha and PDGFR-beta Angiogenic Receptor cell Surface Localization. Undergraduate Research Symposium. Urbana, IL.
60. Storm A, Woods W, **Imoukhuede P** (2014) Examining The Partitioning Of Angiogenic Receptors In Vitro. Biomedical Engineering Society National Meeting. San Antonio, TX.
61. Guo X, Imarenezor O, Chen S, **Imoukhuede P** (2014) PDGFRα and PDGFRβ Cell Surface Levels Are Positively Correlated with Cell Confluency In Vitro. Biomedical Engineering Society National Meeting. San Antonio, TX.
62. Ansari AA, **Imoukhuede PI** (2014) Novel Tunable Functionalized Surface for the Isolation of Tumor

Associated Cells. Biomedical Engineering Society National Meeting. San Antonio, TX.

63. Weddell J, Kwack J, Masud A, **Imoukhuede P** (2014) Quantitative Analysis of Hemodynamics in a Novel Standardized Geometry Reveals Inconsistencies between Newtonian and Non-Newtonian Constitutive Models. Biomedical Engineering Society National Meeting. San Antonio, TX.
64. Chen S, **Imoukhuede P** (2014) Quantitative Profiling of Angiogenic Receptors on Human Dermal Fibroblasts. Biomedical Engineering Society National Meeting. San Antonio, TX.
65. Mamer S, **Imoukhuede PI** (2014) Quantification of VEGF/PDGF Ligand-Receptor Kinetics using Surface Plasmon Resonance. North American Vascular Biology Organization Vasculata. Seattle, WA
66. Ansari, A.A., **Imoukhuede PI** (2014) Engineering a Novel Capture and Release Method for Isolating Cells from Cell Mixtures. North American Vascular Biology Organization Vasculata. Seattle, WA
67. Chen S., **Imoukhuede PI** (2014) Quantification of platelet-derived growth factor receptors on human dermal fibroblasts using high-throughput flow cytometry. North American Vascular Biology Organization Vasculata. Seattle, WA
68. Weddell, JC, Kwack, JH, Masud, A, **Imoukhuede P** (2014) Quantitative characterization of membrane VEGFR heterogeneity to predict anti-angiogenic therapy efficacy. North American Vascular Biology Organization Vasculata. Seattle, WA.
69. Imoukhuede PI (2014) Systems Biology: Merging Experiment with Computation, Frontiers in Bioengineering Symposium (Urbana, IL).
70. Mamer S., **Imoukhuede PI.** (2014) Quantitative Analysis and Computational Modeling of PDGFR-VEGFR Crosstalk. CMMB IGERT and M-CNTC Annual Symposium. Urbana, IL.
71. Lee Montiel FM, **Imoukhuede PI** (2014) Systems Biology and Angiogenesis: Engineering Nanosensors and Calibration Standards for Angiogenic Receptor Mapping. National Institutes of Health Network of Minority Health Research Investigators 12th Annual Workshop. Bethesda, MD.
72. Kumar D, **Imoukhuede P** (2014) Quantification of Gene Expression in Angiogenic Receptors and Ligands using qPCR. University of Illinois Urbana Champaign Undergraduate Research Symposium. Urbana, IL.
73. Mathias B, Guo X, Imarenzor O, **Imoukhuede P** (2014) Quantitative Flow Cytometry of Angiogenic Growth Factor Receptors in the EA.hy926 Cell Line. University of Illinois Urbana Champaign Undergraduate Research Symposium. Urbana, IL.
74. Kumar M, Cowman T, Mamer, S, **Imoukhuede P** (2014) Quantitative Analysis and Computational Modeling of PDGFR-VEGFR Crosstalk. University of Illinois Urbana Champaign Undergraduate Research Symposium. Urbana, IL.
75. Storm A, Woods, W, **Imoukhuede P** (2014) Methods of Investigating the Subcellular Localization of VEGFR-3 in HUVECs. University of Illinois Urbana Champaign Undergraduate Research Symposium. Urbana, IL.
76. Conard G, Gupta P, Parkin JM, **Imoukhuede P** (2014) Quantitative Flow Cytometry Analysis of Angiogenic Growth Factor Receptors. University of Illinois Urbana Champaign Undergraduate Research Symposium. Urbana, IL.
77. Weddell J, Kwack J, Masud A, **Imoukhuede P** (2013) Interpreting the effect of heterogeneity and hemodynamics on tumor angiogenesis using a multi-scale model of anti-angiogenic therapy. Biomedical Engineering Society National Meeting. Seattle, WA.
78. Lee Montiel FM, **Imoukhuede PI** (2013) Advancing quantum dot nanosensors and calibration beads for quantitative cellular profiling. Biomedical Engineering Society National Meeting. Seattle, WA
79. Gupta PK, Conard G, Parkin J Montiel, FL, **Imoukhuede P** (2013) Quantitative Flow Cytometry Analysis of Angiogenic Growth Factor Receptors. Biomedical Engineering Society National Meeting. Seattle, WA.
80. **Imoukhuede PI** (2013) Advancing computational modeling and quantitative receptor profiling of vascular pathologies, Frontiers in Systems Biology, Georgia Tech (Atlanta, GA)

81. Braswell S, **Imoukhuede PI** (2013) Linking Mechanobiology & Cellular Heterogeneity in Angiogenesis. UIUC: Center for Nanoscale Science and Technology Workshop. Urbana, IL.
82. Lee Montiel FM, **Imoukhuede PI** (2013) Engineering quantum dot calibration beads for the profiling of cellular heterogeneity. UIUC: Postdoctoral Symposium Beckman Institute. Urbana IL.
83. Weddell J, Kwack J, Masud A, **Imoukhuede P** (2013) A Multi-Scale Model of Tumor Angiogenesis & the Effect of Heterogeneity & Hemodynamics on Anti-Angiogenic Therapy. Georgia Tech: Frontiers in Systems and Synthetic Biology (FSSB13). Atlanta, GA.
84. Lee Montiel FM, **Imoukhuede PI** (2013) Engineering Quantum Dot Calibration Beads for the Profiling of Cellular Heterogeneity. Georgia Tech: Frontiers in Systems and Synthetic Biology (FSSB13). Atlanta, GA.
85. Lee Montiel FM, **Imoukhuede PI** (2012) Engineering a multiplex biosensor for the quantification of cell receptors in mammalian cells. UIUC: Biophotonics Summer School. Urbana, IL.
86. Lee Montiel FM, **Imoukhuede PI** (2012) Engineering a multiplex biosensor for the quantification of cell receptors in mammalian cells. UIUC: BioSensing BioActuation BioNanotechnology Summer Institute. Urbana, IL.
87. **Imoukhuede PI** (2012) Systems Biology in Angiogenesis. Minority Faculty Development Workshop. Georgia Institute of Technology. Atlanta, GA.
88. **Imoukhuede P**, Dokun A, Annex B, Popel A (2011) Quantification of VEGF Receptor Expression in Hindlimb Skeletal Muscle under Normal and Ischemic States, Biomedical Engineering Society Annual Meeting, (Hartford, CT).
89. **Imoukhuede PI** Popel AS (2011) Quantitative Characterization of Endothelial VEGF Receptors. NAVBO Workshops in Vascular Biology. Hyannis, MA.
90. **Imoukhuede PI**, Popel AS (2011) Quantitative Experimental Characterization of Angiogenic Receptors for Systems Biology. Multiscale Modeling Consortium Systems Biology Meeting. Bethesda, MD.
91. **Imoukhuede PI**, Popel AS (2011) Quantifying the basal and pathological surface expression of VEGFRs on endothelial cells. Gordon Research Conference. Newport, RI.
92. **Imoukhuede PI**, Popel AS (2009) Determination of vascular endothelial growth factor receptor balance on human macrovascular and microvascular endothelial cells. National Heart Lung and Blood Institute Cardiovascular Diversity Research Supplement Awardee Session. Orlando, FL.
93. **Imoukhuede PI**, Popel AS (2009) Quantifying the surface density of receptors regulating angiogenesis. Biomedical Engineering Society Annual Meeting. Pittsburgh, PA.
94. **Imoukhuede PI**, Popel AS (2009) Endothelial cell surface density of angiogenic receptors. Merck Research Laboratories. West Point, PA.
95. Pantoja R, Srinivasan R, Moss FJ, Kadambi S, **Imoukhuede PI,** Lester HA (2009) Characterizing nicotine induced α4* nAChR upregulation with fluorescence microscopy. Biophysical Society National Meeting. Boston, MA.
96. **Imoukhuede PI** (2008) Quantitative fluorescence reveals novel protein-protein interactions and transporter density on vesicles, Merck Research Laboratories (Boston, MA).
97. **Imoukhuede PI**, Moss FJ, Michael DJ, Chow RH, Lester HA (2008). Ezrin mediates tethering of the γ-aminobutyric acid transporter GAT1 to actin filaments via a C-terminal PDZ interacting domain. Merck Research Laboratories. West Point, PA.
98. **Imoukhuede PI**, Moss FJ, Michael DJ, Chow RH, Lester HA (2007). Trafficking and lateral mobility of the γ-aminobutyric acid transporter, GAT1, visualized using FRAP and TIRF. Biophysical Society National Meeting. Baltimore, MD.
99. Drenan RM, Nashmi R, **Imoukhuede PI**, Just H, Lester HA (2007) Subcellular trafficking, pentameric assembly and subunit stoichiometry of neuronal nicotinic ACh receptors containing fluorescently labeled α6 and β3

subunits. Emerging Frontiers in Basic Research and Clinical Science. San Diego, CA.

100. Moss FJ, **Imoukhuede PI**, Jankowsky JL, Hu, J., Quick M, Michael DJ, Chow R, Lester HA (2006) GAT1: Fluorescent constructs reveal motifs for correct transporter trafficking and dimerization, and reveal its lateral mobility. The GABAergic System. Cold Spring Harbor, NY.

101. **Imoukhuede PI,** Moss FJ, Michael DJ, Chow RH, Lester HA (2006). Quantifying the dynamics of the γ-aminobutyric acid transporter, GAT1, at the membrane surface and the GAT1 vesicle with confocal microscopy and total internal refection fluorescence microscopy. American Society for Cell Biology National Meeting. San Diego, CA.

102. Moss FM, **Imoukhuede PI,** Jankowsky JL, Lester HA (2005). Fluorescent mGAT1 constructs for correct trafficking & dimerization, Society for Neuroscience National Meeting. Washington, DC.

103. **Imoukhuede PI,** Moss FJ, Jankowsky JL, Lester HA (2005). Fluorescent mGAT1 constructs for correct trafficking and dimerization, National Institute of Drug Abuse: Frontiers in Addiction Research. Washington, DC: National Institutes of Health.

104. **Imoukhuede PI,** Moss FJ, Jankowsky JL, Lester HA (2005). Fluorescent mGAT1 constructs for correct trafficking and dimerization, Kavli Nanoscience Institute Symposium. Pasadena, CA: Kavli Nanoscience Institute.

105. **Imoukhuede PI,** Crumpler ET, Langer R (2000). Oxidation and biotinylation of the 2,3 positions of iodo-γ-cyclodextrin, American Chemical Society National Meeting. San Francisco, CA: American Chemical Society.

106. Crumpler ET, Venkataraman G, **Imoukhuede PI,** Langer R (2000). Design of tasp-based non-viral delivery vectors: Template assembled porating peptides, American Chemical Society National Meeting. San Francisco, CA.

107. Crumpler ET, **Imoukhuede P,** Kitchens K, Keawphalouk M, Landa J, Langer R (1999) Controlled release of 9 chloro-2-methylellipticinium acetate from a biodegradable polymer: release kinetics, *in vitro*, and *in vivo* effects on cellular growth, American Chemical Society National Meeting. New Orleans, LA.

INVITED LECTURES/SEMINARS

1. *Growth Factor Receptor Signaling and Cancer: New Mechanisms and Insights,* Cancer Center Faculty Seminar, University of Illinois (Urbana, IL) 2017
2. *Design of BIOE201: Conservation Principles in Bioengineering,* Teaching Computation in the Sciences Using MATLAB, Carleton College (Northfield, MN) 2017
3. *Multiplexed Quantification of Angiogenic Receptors via qFlow Cytometry and Qdot-nanosensors,* Biomedical Engineering Society (BMES) Annual Meeting: *talk given by graduate student: Si Chen* (Phoenix, AZ) 2017
4. *Predicting new targets for inducing sprouting angiogenesis via systems biology,* American Heart Association (AHA)--Davie Foundation Progress Meeting (Chicago, IL) 2017
5. *Quantitative + Computational Biology of Angiogenesis,* North American Vascular Biology Organization (NAVBO) VASCULATA, University of Illinois at Chicago (Chicago, IL) 2017
6. *…but PDGFs are Supposed to Bind to PDGFRs,* Gordon Research Conference (GRC): Biomaterials & Tissue Engineering (Holderness, NH) 2017
7. *Understanding growth factors and receptors in tumor angiogenesis through systems biology*, 3rd Annual Midwest Tumor Microenvironment Meeting, Washington University School of Medicine (St. Louis, MO) 2017
8. *Peering into the "black-box" of protein signaling: quantifying protein-protein interaction kinetics and* 2017

protein concentrations to computationally predict cell response, qB3 Seminar, University of California at Berkeley (Berkeley, CA)

9. *Predicting VEGFR-mediated cell response via protein-protein interaction kinetics and concentrations*, Clinical Pharmacology Grand Rounds Vanderbilt University (Nashville, TN) 2017
10. *Predicting Angiogenic Cell Response by Merging Quantitative Experimental Biology and Computational Biology*, Columbia University (New York, NY) 2016
11. *VEGFR1 Mediates Cell Migration through Activation of PI3K and PLCɣ.* American Institute of Chemical Engineers (AIChE) Annual Meeting; *talk given by graduate student: Jared Weddell* (San Francisco, CA) 2016
12. *Gentle Cell Capture and Release: PLL Stabilization of the Secondary Anchor Targeted Cell Release System.* American Institute of Chemical Engineers (AIChE) Annual Meeting; *talk given by graduate student: Ali Ansari* (San Francisco, CA) 2016
13. *Merging Quantitative Experimental Biology and Computational Biology to Control Angiogenesis*, NIH-NIDDK: Network of Minority Health Research Investigators Midwest Regional Meeting, Case Western Reserve University (Cleveland, OH) 2016
14. *Quantitative + Computational Biology: Towards Directed Control of Neovascularization*, Biomedical Engineering Society Annual Meeting (Minneapolis, MN) 2016
15. *Trypsin Upregulates Membrane PDGFR Localization.* Biomedical Engineering Society Annual Meeting; *talk given by graduate student: Si Chen (*Minneapolis, MN) 2016
16. *Research and Scholarship with Global Impact*, University of Illinois Board of Trustees Retreat (Urbana, IL) 2016
17. *Computational Analysis of Growth Factor Regulation of Angiogenesis*, Gordon Research Conference: Signal Transduction in Engineered Extracellular Matrices (Biddeford, ME) 2016
18. *Systems Biology: Towards Predictive Models of Cell Activation*, Research Initiative for Scientific Enhancement, Universidad Central del Caribe (Bayamón, PR) 2016
19. *qBio + cBio = sBio: Advancing Knowledge on Biomarkers, Drugs, & Disease,* Midwestern Quantitative Biology (MidQBio) Seminar (Urbana, IL) 2016
20. Computational Modeling of Generalized RTK Dimerization. Biomedical Engineering Society National Meeting; *talk given by graduate student: Spencer Mamer* (Tampa, FL) 2015
21. Identification and Quantification of Novel VEGF-PDGF Cross-Family Binding. Biomedical Engineering Society National Meeting; *talk given by graduate student: Spencer Mamer* (Tampa, FL) 2015
22. *Quantification of PDGFRs on Fibroblasts Reveals Serum, Intra-Family Ligand, and Cross-Family Ligand Regulation,* Biomedical Engineering Society Annual Meeting (Tampa, FL) 2015
23. *Teambuilding & Leadership Interventions Improve Undergraduate Bioengineering Students' Leadership Self-Construal,* Biomedical Engineering Society Annual Meeting (Tampa, FL) 2015
24. *Systems Biology & Bioengineering: Predicting Angiogenic Activation via Integrative Receptor Quantification & Computational Modeling,* Caltech HAL Symposium (Pasadena, CA) 2015
25. *Predicting Tumor Response by Integrating Quantitative VEGFR1 Profiling with Kinetic Modeling,* Society for Mathematical Biology Annual Meeting (Atlanta, GA) 2015
26. *Systems Biology and Angiogenesis: Developing Integrative Models of VEGFR1 Activation in Hypoxic Environments,* NIH-NIDDK: Network of Minority Health Research Investigators 13th Annual Workshop (Bethesda, MD) 2015
27. *Quantitative Fluorescent Profiling of Angiogenic Receptors,* University of Illinois iOptics Seminar 2015

(Urbana, IL)

28. *Understanding Angiogenic Signaling Through Systems Biology,* University of Illinois Chicago Chemical Engineering Seminar (Chicago, IL) 2014
29. *Introduction to VEGF Receptors in Breast Cancer and Peripheral Arterial Diseases,* University of Illinois Angiogenesis Symposium (Chicago, IL) 2014
30. *Systems Biology: Merging Experiment with Computation,* Frontiers in Bioengineering Symposium (Urbana, IL) 2014
31. *Progress of Women in Science, Technology, Engineering, and Mathematics (STEM);* Administrative Offices of the US Courts; (Washington, DC) 2013
32. *Bimodal Systems Biology: Integrating Biological Assays with Computational Modeling,* UIUC Institute for Genomic Biology (Urbana, IL) 2013
33. *Systems Biology and Bioengineering: Integrating biological assays with computation,* Purdue University Department of Biomedical Engineering (West Lafayette, IN) 2013
34. *Advancing computational modeling and quantitative receptor profiling of vascular pathologies,* Frontiers in Systems Biology, Georgia Tech (Atlanta, GA) 2013
35. *Systems Biology: VEGF-VEGFR in ischemia and breast cancer*, Mayo Clinic (Rochester, MN) 2012
36. *Systems Biology: Angiogenesis in Ischemia and Cancer*, UIUC College of Engineering/VetMed Mini-Symposium (Urbana, IL) 2012
37. *Nanotechnology-mediated sensing of angiogenesis: Quantitative characterization of the vascular microenvironment*, UIUC Center for Nanoscale Science and Technology Workshop (Urbana, IL) 2012
38. *Systems Biology of Angiogenesis*, UIUC Center for Physics of Living Cells Seminar (Urbana, IL) 2012
39. *Biophysics and Bioengineering,* UIUC Molecular Biophysics Training Grant Seminar (Urbana, IL) 2012
40. *Quantitative Fluorescent Biosensors in Neuroscience, Cardiovascular Disease, and Cancer*, BioSensing BioActuation BioNanotechnology Summer Institute (Urbana, IL) 2012
41. *Profiling the Vascular Microenvironment: Angiogenic Biosensors & Computational Modeling*, Agricultural and Biological Engineering Seminar (Urbana, IL) 2012
42. *Profiling the Vascular Microenvironment: Quantitative Fluorescent Biosensors & Computational Modeling,* 25th Molecular Biophysics Training Grant Symposium (Urbana, IL) 2012
43. *Profiling the Vascular Microenvironment: Quantitative Fluorescent Biosensors & Computational Modeling,* Caltech (Pasadena, CA) 2012
44. *Interpreting the vascular microenvironment through quantitative biosensors & computational modeling,* University of Michigan Biomedical Engineering Seminar (Ann Arbor, MI) 2012
45. *Interpreting angiogenesis through systems biology, Institute for Genomic Biology Regenerative Biology and Tissue Engineering Seminar (Urbana, IL)* 2011
46. *Quantification of VEGF Receptor Expression in Hindlimb Skeletal Muscle under Normal and Ischemic States, Biomedical Engineering Society Annual Meeting, (Hartford, CT)* 2010
47. *Quantitative analysis of angiogenic receptors,* University of California San Diego (La Jolla, CA) 2008
48. *Quantitative fluorescence reveals novel protein-protein interactions and transporter density on vesicles,* Merck Research Laboratories (Boston, MA) 2007
49. *Trafficking and lateral mobility of the γ-aminobutyric acid transporter, GAT1, visualized using FRAP and TIRF,* Biophysical Society National Meeting, (Baltimore, MD) 2007
50. *GAT1: Fluorescent constructs reveal motifs for correct transporter trafficking & dimerization & reveal its lateral mobility,* Yale University (New Haven, CT) 2007
51. *Dimerization, trafficking & lateral mobility of the γ-aminobutyric acid transporter, GAT1, visualized with FRET, FRAP & TIRF,* Johns Hopkins University (Baltimore, MD)

2006

52. Visualizing the Trafficking and Lateral Mobility of GAT1, California State University Los Angeles, (Los Angeles, CA)

GRANTS

CURRENT

1653925, National Science Foundation — 04/01/17-03/31/22
CAREER: qBio + cBio = sBio; Identifying the role of cross-family signaling in angiogenesis
Role: PI

1648454, National Science Foundation — 09/01/16-08/31/19
BPE: The Double Bind of Race and Gender: A Look into the Experiences of Women of Color in Engineering
Role: Co-PI

16SDG26940002, American Heart Association — 01/01/16-12/31/19
Predicting new targets for inducing sprouting angiogenesis via systems biology
Role: PI

1512598, National Science Foundation — 07/01/15-06/30/18
UNS: Advancing Cell-Preserving Separation via Detachable Cell Anchoring & Spiral Micro-Mixing
Role: PI

COMPLETED

1743333, National Science Foundation — Summer 2017
SUPPLEMENT – UNS: Advancing Cell-Preserving Separation via Detachable Cell Anchoring & Spiral Micro-Mixing
Role: PI

1743334, National Science Foundation — Summer 2017
SUPPLEMENT – CAREER: qBio+cBio=sBio; Identifying the role of cross-family signaling in angiogenesis
Role: PI

1640783, National Science Foundation — Summer 2016
SUPPLEMENT – UNS:Advancing Cell-Preserving Separation via Detachable Cell Anchoring & Spiral Micro-Mixing
Role: PI

University of Illinois, I-Start Entrepreneur Assistance Program — 02/01/16-05/31/16

NSF I-Corps, University of Illinois Site Cohort 11, Seed Funding — 01/01/16-03/31/16

282802, American Cancer Society, Illinois Division Basic Research Grant — 07/01/13-12/31/15
Sensing and predictive tuning of tumor angiogenesis through systems biology
Role: PI

14UFEL20050033, American Heart Association (MWA) — 06/01/14-08/31/14
Quantitative Flow Cytometry Analysis of Angiogenic Growth Factor Receptors
Role: PI

R01CA120003, NIH-NCI 08/01/12-05/31/13
Integrated biochip sensors for detection of cancer
Role: Faculty

T32HL07581, NIH-Training Grant 02/01/10-08/31/11
Cardiovascular Systems Regulation Program
Shoukas, Artin Andrew (PI)
Role: Postdoctoral Scholar

L30 HL097952-01, NIH-NHLBI 07/01/09–06/30/11
Quantitative analysis of angiogenesis in skeletal muscle
Role: PI

R01HL079653, NIH-NHLBI 02/01/08-01/31/10
Quantitative analysis of angiogenesis in skeletal muscle
Popel, Aleksander (PI)
Role: Postdoctoral Scholar

104425, UNCF/Merck Science Initiative 09/01/08-08/31/10
Postdoctoral Research Fellowship
Role: PI

AWARDS AND HONORS

- Young Innovator Award in Nanobiotechnology 2018
- CAREER Award, NSF 2017
- Rose Award for Teaching Excellence, College of Engineering 2017
- Travel Stipend Recipient, Teaching Computation in the Sciences Using MATLAB 2016
- Young Innovator, Cellular and Molecular Bioengineering 2015
- Basic Science Research Award, NIH-NIDDK NMRI 2015
- Travel Award, American Society of Nephrology 2015
- Excellent Instructor, University of Illinois Center for Teaching Excellence FALL 2014
- Travel Award, NIH Network of Minority Health Research Investigators Annual Workshop 2014
- Collins Fellow, University of Illinois 2013
- Poster Award, National Science Foundation Minority Faculty Development Workshop 2012
- Poster Award, Gordon Conference in Angiogenesis Poster Award 2011
- Postdoctoral Professional Development & Enrichment Award, FASEB 2010-2011
- Commitment to Diversity Award, Caltech 2008
- Outstanding Service Award, Caltech 2005
- Kavli Nanoscience Institute Award, Caltech 2005
- Academic All-America, CoSIDA-Verizon 2002
- Betsy Schumacker Award, MIT 2002
- Honorable Mention, Ford Foundation Graduate Fellowship 2002
- Postgraduate Scholarship, NCAA 2002
- All-American, NCAA Indoor Track and Field 2002, 2001
- MVP, MIT Varsity Track and Field 2002, 2001
- All-American, NCAA Outdoor Track and Field 2001
- Academic All-American, United States Track Coaches Association 2001
- Special Service Award, MIT Department of Chemical Engineering 2001
- Visionary Award, MIT National Society of Black Engineers 2001
- Scholarship, General Electric 2001
- Torchbearer Award, National Society of Black Engineers 2000-2001
- Academic Excellence Award, MIT Office of Minority Education 2000-2002
- Scholar Award, American Chemical Society 2001, 2000

- Undergraduate Research Award, MIT Undergraduate Research Opportunities Program 2000
- Multicultural Community Service Award, MIT 2000
- Bioengineering Undergraduate Research Award, MIT 1999
- Undergraduate Research Award, MIT Biotechnology Process Engineering Center 1999
- Class of 1972 Research Award, MIT 1999

TEACHING

UNIVERSITY OF ILLINOIS

- Guest Lecturer: BIOE 199 – Frontiers in Cancer Research 2016, 2014
- Project Advisor: ENG 100 – Engineering Orientation 2016, 2014
- Instructor: BIOE 498/598 – Systems Biology and Bioengineering 2014-present
- Guest Lecturer: BIOE 120 – Introduction to Bioengineering 2013
- Instructor: BIOE 201 - Conservation Principles in Bioengineering 2012-present
- Research Advisor: BIOE 297/397/498 – Individual Study 2012-present

PRIOR TEACHING

- Mathematics Adjunct Professor: Howard Community College 2009
- Mentor: Caltech Women Mentoring Women Program 2006-2008
- Teaching Assistant: Caltech Biology Course Drugs and the Brain 2006
- Research Mentor: Caltech Freshman Summer Institute 2006
- Physics and Engineering Curriculum Coordinator and Instructor: Caltech Young Engineering & Science Scholars Program 2005
- Neuroscience Instructor: Caltech Young Engineering & Science Scholars Program. 2004
- Physics Facilitator: MIT Seminar XL. 2001
- Teaching Assistant: MIT Mechanical Engineering Course. 2001
- HTML Instructor: NASA Research in Science and Engineering Program 2000
- Research Mentor: MIT Undergraduate Research Opportunities Program. 2000

CURRENT & FORMER ADVISEES

GRADUATE RESEARCH ASSISTANTS

M.S. Thesis Students

Student Name	Year Graduated	Thesis Title	Placement
Jared Weddell	2015	Quantitative methods to regulate angiogenesis: applications to cancer and cardiovascular disease	Abbvie
Ali Ansari	2016	Secondary anchor targeted cell release system	PhD student

M.S. Non-Thesis Students

Student Name	Year Graduated	Placement
Chengxi Wu	2016	Tulane University
Jad Maamari	Current	
Reema Patel	Current	

Ph.D. Thesis Students

Student Name	Year Graduated	Thesis Title	Placement

Jared Weddell	2016	Predicting angiogenic receptor trafficking and signaling via computational systems biology	Abbvie
Si Chen	Current		
Spencer Mamer	Current		
Ali Ansari	Current		
"Yingye" Cheri Fang	Current		
Colin Castleberry	Current		
Ashley Warfield Oyirifi	Current		
Jiaojiao Wang	Current		

Prelim and Qualifying Exam Committees

Doctoral Candidate	**Prelim/Qual Exam Date**
Caroline Cvetkovic Qualifying Exam Committee	12/20/12
Grace Kim Qualifying Exam Committee	01/15/13
Brittany Weida Qualifying Exam Committee	08/29/13
Kenneth Long Qualifying Exam Committee	08/19/13
Shweta Chitoor Qualifying Exam Committee	08/19/13
Daniel Sorensen Prelim Committee	08/21/14
Majeed Hassan Qualifying Exam Committee	08/18/14
Jamila Hedhli Qualifying Exam Committee	08/18/14
Yang Zhu Qualifying Exam Committee	08/20/15
Clare Ko Qualifying Exam Committee	08/20/15
Yiyang (Tony) Lu Qualifying Exam Committee	08/18/17
Zachary Quicksall Qualifying Exam Committee Chair	08/17/17
Kenan Jijakli Qualifying Exam Committee Chair	08/18/17

Post-doctoral Associates and Visiting Scientists

Name	**Title**	**Permanent Employer**	**Years**
Kenosa Okafor, MD	Research Associate	Mercy St. Vincent Hospital (Toledo, OH)	2012
Felipe Lee Montiel, PhD	Postdoctoral Fellow	University of California Berkeley (Berkeley, CA)	2012-2013
Wendy Woods, MS	Visiting Research Scientist	University of Illinois at Urbana Champaign	2013-2014
Jared Weddell, PhD	Academic Hourly	Senior Clinical Pharmacokineticist @ Abbvie	2017
Pierrick Gallerne	Visiting Research Scientist	Current	2017-present

UNDERGRADUATE RESEARCHERS

- Daphne Shen (2017-present), UIUC

- Lucas Lasher (2017-present), UIUC
- Priyanka Chopra (2017-present), UIUC
- Aaheli Poddar (2017-present), UIUC
- Shweta Bhushan (2017-present), UIUC
- Thien Le (2017-present), UIUC
- Thomas Ninan (2017-present), UIUC
- Ivan Villamar (2017-present), UIUC
- Allen Bell (2017-present), UIUC
- Jingyu Li (2017-present), UIUC
- Kathleen Ferreira (2017-present), UIUC
- David Romero (2017), UIUC
- Amanda Craine (2017), Penn State University
- Ranvit Reddy Bommineni (2017), UIUC
- Alena Downing (2017), UIUC
- Jacob Reed Beal (2016-present), UIUC
- Samantha R Schad (2016-present), UIUC
- Tomasz Stefan Kaszuba (2016-present), UIUC
- Nicole Grubb (2016), Florida State University
- Jacob Erstling (2016), Florida International University
- Kareem I Al-Qadi (2015-present), UIUC
- Silpa Gali (2015-present), UIUC
- Kinsey Schultheis (2015-present), UIUC
- Saba Imran (2015-2017), UIUC
- Ashley Wittenkeller (2015-2017), UIUC
- Reema Patel (2015-2017), UIUC
- Cassandra Renee Jensen (2015-2016), UIUC
- Caroline Blassick (2015-2016), UIUC
- Ericson Imarenezor (2015-2016), UIUC, B.S. MCB 2016
- Brent Wu (2015-2016), UIUC
- Sunil Kumar (2015-2016), UIUC
- Shreya Murali Santhanam (2015-2016)
- Mallory Genevieve Wall (2015-2016)
- Parnita Harsh (2015), UIUC
- Nmerichi Nwakanma (2015) UIUC
- Marcus Edwards (2015), UIUC
- Vesna Naumovski (2015), Illinois Institute of Technology
- Rachel White (2015), University of Delaware
- Alexandra Palasz (2014-2016), UIUC B.S. BIOE 2016:
- Aradhana Sridaran (2014-2015), University of Texas
- Dipen Kumar (2013-), UIUC
- Brendan Mathias (2013-2016), UIUC B.S. BIOE 2016: Ph.D. Student at Washington University
- Audra Storm (2013-2016), UIUC B.S. BIOE 2016: Research Assistant
- Osazomon Imarenzor (2013-2016), UIUC B.S. CHEM 2016
- Xinyi Guo (2013-2015), UIUC, B.S. MCB 2015: M.S. Student at Columbia University
- Michael Burris (2013-2014), UIUC
- Kelly Wang (2013-2014), UIUC
- Junia Findlay (2013), UIUC
- Shrinidhi Dawande (2013), UIUC
- Marion Hainguerlot (2013), École Centrale de Lille
- Cecilia Lesueur (2013), École Centrale de Lille
- Mathew Yang (2012-2015), B.S. BIOE, 2015: M.S. Student at University of Illinois at Chicago
- Joseph Adams (2012-2013), B.S. BIOE 2014
- Osayanmo Osarenkhoe (2012-2013), B.S. ECE, 2013: Ph.D. Student at Boston University
- Allison Guiang (2012-2013), B.S. BIOE, 2014: Sales Rep @ Wheaton (Chicago, IL)
- Grace Conrad (2012-2014), B.S. BIOE, 2014: M.D. Student at Indiana University
- Pavan Gupta (2012-2014), B.S. BIOE, 2014: O.D. Student at Midwestern University
- Manu Kumar (2012-2014), B.S. BIOE, 2014: Ph.D. Student at MIT
- Tyler Cowman (2012-2014), B.S. BIOE, 2014: Ph.D. Student at Case Western Reserve University
- James Parkin (2012-2014), B.S. BIOE, 2014: Ph.D. Student at Caltech
- Yoo-Jin Michelle Baik (2012), B.S. BIOE, 2014: M.D. Student at University of Texas
- Jacob Petit (2012), B.S. BIOE, 2015: Engineer @ Boston Scientific
- Amelia Johnson (2012), B.S. BIOE, 2015
- Marion Pedrero (2012), École Centrale de Lille

- Louise Morel (2012), École Centrale de Lille
- Sarah Spagnesi (2012), École Centrale de Lille

SERVICE

Review Panels

1. MIT Department of Athletics, Physical Education, and Recreation (DAPER); Visiting Committee Member — 2017-present
2. NIH Center for Scientific Review (CSR) Atherosclerosis and Inflammation of the Cardiovascular System (AICS) Study Section; Ad Hoc Reviewer — 09/2017
3. Biomedical Engineering Society (BMES) Abstract Reviewer: Bioinformatics Computational and Systems Biology Track, Biomedical Engineering Education Track, Cancer Technologies Track, Cardiovascular Engineering Track, & Cellular and Molecular Engineering Track — 2017
4. American Heart Association (AHA), BSc2 Study Section — 05/2017, 2015
5. National Science Foundation (NSF) Biomaterials and Biomechanics Panel — 03/2017
6. National Science Foundation (NSF) Field Based Bio-separations Panel — 02/2017
7. American Heart Association (AHA) Scientific Sessions, Abstract Reviewer — 2016
8. Biomedical Engineering Society (BMES) Midwest Regional Conference, Poster Judge — 2016
9. Biomedical Engineering Society (BMES) Abstract Reviewer: Bioinformatics, Computational and Systems Biology Track & Undergraduate Research Track, — 2014
10. NIH Center for Scientific Review (CSR) Instrumentation and Systems Development Study Section Bioengineering Sciences & Technologies Integrated Review Group; Early Career Reviewer — 06/2013
11. Biomedical Engineering Society (BMES), Drug Delivery Track, Abstract Reviewer — 2013
12. Biophysical Society, Minority Affairs Committee, 2008-2013, Travel Award Reviewer — 2008-2013

Service to Disciplinary and Professional Societies or Associations

1. BMES Annual Meeting, Session Chair: "Analysis of Cell Signaling;" Bioinformatics Computational and Systems Biology Track — 10/2017
2. Convener & Panelist: Developing Competency in Teaching Computation using MATLAB — 10/2017
3. Discussion Leader: Gordon Research Conference Physical Sciences of Cancer — 02/2017
4. Working Group Leader: Teaching Computation in the Sciences Using MATLAB workshop — 10/2016
5. Biomedical Engineering Society (BMES) Midwest Regional Conference, Panelist: Academic Careers II (Urbana, IL) — 11/2016
6. Planning Committee: Faculty Women of Color in the Academy National Conference — 2015
7. Biomedical Engineering Society (BMES) Annual Meeting, Session Chair: Cell Regulatory Circuits (San Antonio, TX) — 10/2014
8. Faculty Women of Color in the Academy, Session Presenter: Faculty Panel on Interdisciplinary Research (Urbana, IL) — 03/28/13
9. Biomedical Engineering Society (BMES) Annual Meeting, Session Chair: Targeted Delivery III (Seattle, WA) — 09/2013
10. Biomedical Engineering Society (BMES) Annual Meeting, Session Chair: Biomaterial Topics in Drug Delivery (Atlanta, GA) — 10/2012
11. Big Ten Academic Alliance (*formerly* CIC) NSF Alliance for Graduate Education and the Professoriate, Professorial Advancement Initiative Mentor — 2015-present
12. Biomedical Engineering Society (BMES), Co-chair: Celebration of Minorities Luncheon — 10/2014
13. Biomedical Engineering Society (BMES), Diversity Committee — 2013-2016
14. Biophysical Society, Minority Affairs Committee — 2008-2013

University/Campus Service

Department

1. Bioengineering Internal Advisory Committee — 2017-present

2. NSF Revolutionizing Engineering Education (RED) Committee/Senior Personnel — 2016-present
3. Search Committee: NSF Revolutionizing Engineering Education (RED) Visiting Research Scientist — Fall 2016
4. Bioengineering Eng-Math Liaison — 2015-2017
5. Faculty Search Committee — 2012-2014, 2015-2016
6. Bioengineering Representative to Academic Integrity Appeals — 2014-2017
7. Bioengineering Representative to Library Committee — 2014-2017
8. Bioengineering External Review + Cancer Community Poster Session: Poster Presenter — 11/2014
9. Bioengineering External Review: Assistant Professor Research Presentation — 11/2014
10. Biomedical Engineering Society (BMES) UIUC Chapter Journal Club Faculty Presenter — 10/28/14
11. Multicultural Engineering Recruitment for Graduate Education (MERGE) Student Weekend: Faculty Participant — 10/2014
12. Bioengineering Frosh Women's Luncheon — 2014, 2016
13. Medical Scientist Program (MSP) Interview Panelist — 03/01/13
14. Graduate Admissions Application Reviewer — Winter 2013
15. Graduate Admissions Committee Member — Winter 2012

College

1. Session Chair: Center for Nanoscale Science and Technology (CNST) 14th Annual Workshop — 05/2016
2. Poster Judge, Center for Nanoscale Science and Technology (CNST) 13th Annual Workshop — 05/2015
3. College of Engineering Leadership Retreat — 08/2014
4. College of Engineering MERGE Welcome Luncheon — 08/2014
5. Group Faculty Meeting w/Prof Subra Suresh "Borderless knowledge enterprise" Participant — 10/2013
6. College of Engineering Leadership Retreat — 09/2013
7. Grainger Engineering Breakthroughs Initiative (GEBI) Bioengineering Workshop Participant — 05/2013
8. Brain Mapping Initiative Discussion, Participant — 05/2013
9. Center for Nanoscale Science and Technology Workshop, Organizing Committee & Participant — 05/2013
10. Study of New Engineering Faculty by Russel Korte, Participant — 04/2013
11. Strategic Research Initiative (SRI) Proposal Reviewer — Spring 2013
12. VetMed/CoE Symposium Participant — 03/13/12
13. Society of Women Engineers, UIUC Chapter: Faculty Panelist for Graduate School Application "Insider Workshop" — 10/2012
14. UIUC COE Robotics and Automation in Medicine/ UIC Transplant Center Visit, Participant — 01/11/12

Campus

1. Research Advisory Board, Carle-Illinois College of Medicine — 2017-present
2. NSF Site Visit/Review Faculty Participant: Big 10 Academic Alliance Professional Advancement Initiative — Summer 2016
3. Advisory Committee: Pre-Tenure Faculty Advisory Committee — 2015-2016
4. Faculty Mentor, TRiO Ronald E. McNair Scholars Program — 2015-2016
5. Ronald E. McNair Scholars Induction Ceremony — 05/2015
6. Faculty Focus Group Participant: Campus Marketing/Branding Project — 2015
7. Panelist, STEM-FEM Alliance "The Perspectives of Underrepresented Women in STEM Disciplines" — 04/2015

8. Toward an Illinois Learning Sciences Design Laboratory—A Lightning Symposium 02/2015
9. Celebration of Women Faculty at Illinois, Participant 10/2014
10. Elizade University Visit, Participant 02/2014
11. NIH/NIGMS Site Visit Participant: Molecular Biophysics Training Grant 05/2014
12. Researchers Initiative: Mentor to undergraduate researchers Spring 2013
13. Celebration of Women Faculty at Illinois, Participant 10/2013
14. Moving Forward: Advancing the Future of Women Faculty at Illinois, Participant 02/2013
15. Black Geek Week, Black women in STEM: panelist 02/2013
16. Grad Mentoring @ Illinois: Faculty mentor to 3 underrepresented minority graduate students. 2012-2013
17. Black Graduate Student Association: Faculty Panelist for "Navigating the Academy as a Black Woman" event 04/2012
18. Morrill Engineering Program Banquet: Faculty representative at Bioengineering table 04/2012
19. Cancer Community @ Illinois: Faculty Judge for Poster Session 04/2012
20. Health and Social Justice Committee Member 2012-2014

System

1. Speaker: University of Illinois Board of Trustees Retreat 2016
2. Steering Committee: President's Strategic Planning 2015- 2016
3. Search Committee: University of Illinois Office of Governmental Relations Fall 2015
4. Participant: University of Illinois Board of Trustees Strategic Vision Retreat 2015
5. Organizing Committee: University of Illinois Angiogenesis Symposium (Organizing Committee) 2014

Prior Service

1. Graduate Rep: Caltech Administrative Committee on Diversity & Minority Affairs 2004-2007
2. Program Associate: Caltech SURF/MURF 2004, 2006
3. Board Member: Caltech Graduate Review Board, 2003-2004
4. Seminar Series Assistant: Caltech Bioengineering 2002-2003
5. Chapter President: MIT American Institute of Chemical Engineers 2001-2002
6. Public Relations Chairperson: MIT National Society of Black Engineers 2000-2001
7. Co-President: MIT Committee on Multiculturalism 1999-2000
8. Academic Excellence Chairperson: New England National Society of Black Engineers 1999