Melissa A Harrington
Delaware State University

Education:

1986 - 1993	PhD Neuroscience	Stanford University	Stanford, CA
1982 - 1986	BS Molecular Biology (Honors)	Purdue University	West Lafayette, IN

Post Doctoral Training

1996 - 1998 Biology Department, Stanford University, Area: Ion channel electrophysiology

1995 Hopkins Marine Station, Stanford University, Area: Calcium imaging in neurons

1992 – 1994 Pharmacology Dep't. UT Southwestern Med Center, Area: Ion channel electrophysiology

Other Professional Training

2016 Institute for Emerging Leaders in On-line Learning – Online Learning Consortium/Penn State World Campus

2010 - 2011 Fellow, American Council on Education (ACE): Placement at University of Delaware, Office of Research. Mentors: Mark Barteau, Karl Steiner

2010 ACE/OWHE National Leadership Forum, Washington, DC

Academic Positions

Delaware State University	Associate VP for Research	(2016 – present)
	Associate Dean for Research	(2016)
	Professor of Biology	(2010 - present)
	Associate Professor of Biology	(2005 - 2010)
	Assistant Professor of Biotechnology	(2001 – 2005)
Morehouse College	Assistant Professor of Biology	(1998 – 2001)
UC, Santa Cruz	Lecturer, Department of Biology	(1995 - 1998)

Administrative positions

2016 - Interim Associate Vice President for Research – Main research administrator for the university. Responsibilities include supervising Office of Sponsored Programs, creating a climate for success in obtaining external funding, ensuring compliance with regulations and ethical standards in research, authoring and maintaining research-related policies and procedures, representing the university research enterprise to inside and outside constituencies, managing procedures for limited submissions.

2016 Interim Associate Dean for Research – Main research administrator for the College of Mathematics, Natural Science and Technology. Responsibilities include: assisting faculty members in identifying grant opportunities and preparing proposals; organizing groups of faculty to submit large/complex/multi-disciplinary proposals; supporting faculty development.

2012 - Director, Delaware Center for Neuroscience Research – a statewide, virtual center based at DSU. Responsibilities include: management of a $2 million/year budget with a subcontract to the University of Delaware; professional development support and a structured mentoring program for 13 Center-supported faculty; led recruitment and negotiation for six new faculty hires; organizing seminar series, symposia and workshops for faculty.

2005 - 2015 Director of Biomedical Research, Delaware State University:
Served as the main research development officer for biomedically-related research at DSU. Assisted faculty members in identifying grant opportunities and preparing proposals; organized submission of large/complex/multi-disciplinary proposals.

2000 - 2001 Co-Director, Undergraduate Initiatives, Center for Behavioral Neuroscience, Atlanta, GA

Managed coordination of undergraduate neuroscience research and education programs across the six institutions participating in the Center for Behavioral Neuroscience.

1999 - 2001 Director, Morehouse College Neuroscience Program
Developed curriculum and courses, led searches for two new faculty, recruited students for the program, secured external funding for the program.

Summary of Grant Activity (Funded grants only)

Research Center Grants

2012 - 2017 "COBRE: The Delaware Center for Neuroscience Research" National Institutes of Health $10.5 million, Principal Investigator/Project Director

Research Grants

Principal Investigator or co-Principal Investigator for 8 external research grants awarded from 1999 - 2016 totaling $2.3 million. Examples include:

2017 – 2023 "A Graduate Training Program to Increase Diversity in Biomedical science", National Institute of General Medical Sciences RISE grant, $2.1 million, Principal Investigator

2016 – 2019 "Mechanisms and Modeling of the Adaptive Modulation of the Intrinsic Properties of Spinal Motoneurons", National Science Foundation, $700,000, Principal Investigator

2015 – 2016 "Adaptive Modulation of Spinal Motoneurons", Short-term Innovative Research (STIR) grant, Army Research Lab, Dept. of Defense, $50,000, Principal Investigator

2013 – 2017 "A Tale of Two synapses: the development of neurotransmitter phenotype in motor neurons" National Institutes of Health (NICHD), $571,000, Principal Investigator

2011 – 2013 "MRI: Acquisition of a Bench-top Olympus Confocal Microscope to Advance Biological Research at an HBCU", National Science Foundation $217,000, Co-Principal Investigator

2007 – 2011 "Recording Snail Brain Activity with a Multi-electrode Array" National Institutes of Health (NIGMS) $450,000 Principal Investigator

2003 – 2006 "Neurobiology of Slime Trail Tracking in a Predatory Snail", National Science Foundation, $265,000, Principal Investigator.

2003 – 2006 "MRI: Multielectrode physiology and fluorescence microscopy instrumentation to support research and training at an historically-black, undergraduate institution" National Science Foundation, $132,000 Principal Investigator

2000 - 2003 "Molecular Biophysical Studies of Cysteine Residues in the CFTR Cl- Channel" National Science Foundation, $178,000, Principal Investigator

Infrastructure/outreach grants

Principal Investigator/co-Principal Investigator for more than 12 grants supporting infrastructure and/or outreach programs awarded from 1999 – 2015, totaling just under $14 million in funding. Examples include:

2015 – 2020 "A Neuroscience-Focused Undergraduate Research Program at an HBCU"
National Institute of Neurological Disease and Stroke, $535,000 – Principal Investigator

2010 - 2015 "A Linear Leadership Development Model for STEM Success" National Institutes of Health, $2.1 million – co-Principal Investigator

2009 - 2015 "DSU-SMILE: A Science and Mathematics Initiative for Learning Enrichment"
National Science Foundation $2.5 million -- Co-Principal Investigator

2009 - 2015 "A Graduate Partnership to Expand Educational Opportunities at an HBCU" National Institute of General Medical Sciences $1.6 million - Principal Investigator

2009 - 2013 "An Inter-institutional Neuroscience PhD Program to Expand Graduate Education Opportunities for Minority Students" National Science Foundation, $1 million - co-PI

2009, 2010 "Delaware Residence Enrichment Academy of Mathematics and Science (DREAMS)"
Bernard Harris Exxon-Mobile Foundation, – $160,000, co-Principal Investigator

2005–2008 "A Dual-Degree Graduate Program to Build Infrastructure and Expand Opportunities for Graduate Education at an HBCU", National Science Foundation, $1 million – co-Principal Investigator

2003-2008 "Seeds of success: a comprehensive program for the retention, quality training and advancement of STEM students", National Science Foundation, $2.5 million – co-PI

1999 - 2001 "Promoting Excellence in Teaching and Research in the Neurosciences: A Collaborative Project of Atlanta University Center Colleges" National Science Foundation, $2 million, Principal Investigator

1999 - 2000 "Promoting Excellence in Teaching and Research in the Neurosciences", David & Lucile Packard Foundation, $100,000, Principal Investigator

Foundation grants

As a board member and Secretary for the Kent County Society for Prevention of Cruelty to Animals, I wrote more than 20 grant proposals to Federal, State and Foundation grant programs from 2003 – 2012, raising over $250,000 to support the organization's humane education mission.

Selected Peer-reviewed Publications (out of 32 total)

Lombardo, J. and M.A. Harrington (2016) Non-reciprocal mechanisms in up- and down-regulation of spinal motoneuron excitability by modulators of KCNQ/Kv7 channels. J. Neurophysiol. Epub August, 2016.

Harrington, M.A., Smolinski, T., Lloyd, A. and M.Shahin (2016) Closing the Gap: First Year Success in College Mathematics at an HBCU, Journal of Scholarship of Teaching & Learning, Vol 16: 5.

Harrington, M.A., Smolinski, T., Lloyd, A. and M.Shahin (2015) Undergraduate Research Programs can also be Faculty Development Programs. IN Infusing Research into Historically Black Colleges and Universities Curricula. Eds. McClinton, J., Melton, M.A., Engerman, K. Adams, J.H., Diversity in Higher Education V. 17.

Patel, K, Shaheen, N., Witherspoon, J., Robinson, N. and Harrington, MA (2013) Mucus Trail Tracking in a Predatory Snail: Olfactory Processing Retooled to Serve a Novel Sensory Modality. Brain & Behav.4: 83-94.

Zhang, H-M, Wu, C-Y, Wang, W. and Harrington, M.A (2011) Interneuronal synapses formed by motor neurons appear to be glutamatergic. NeuroReport, **22:** 809-13.

Zhang, H-M, Robinson, N., Wu, C-Y, Wang, W. and Harrington, M.A. (2010) Electrophysiological properties of motor neurons in a mouse model of severe spinal muscular atrophy: In vitro versus in vivo development. PLoSOne **5(7):** e11696.

Zhang, H-M. Robinson, N., Gomez, I., Wang, W. and Harrington, M.A. **(**2009) Neuronal and Network Activity in Cultured Spinal Motor Neurons. NeuroReport **20**: 859-854.

Dzakpasu, R, Patel, K, Robinson, N, Harrington MA, and Zochowski, M (2006) Measuring asymmetric temporal interdependencies in simulated and biological network. Chaos **16**(4), 043121.4.

Shaheen, N., Patel, K., Patel, P., Moore, M., and Harrington MA (2005) A Predatory Snail Distinguishes Between Conspecific and Heterospecific Snails and Trails Based on Chemical Cues in Slime. Animal Behavior. **70:**1067-1077.

Clifford, KT, Gross, L, Johnson, K, Martin, KJ, Shaheen, N, and Harrington MA (2003) Slime trail tracking in the predatory snail, *Euglandina rosea*. Behavioral Neuroscience **117**:1086 – 1095.

Harrington, MA, Kopito, RR (2002) Cysteine residues in the nucleotide binding domains regulate conductance state of the cystic fibrosis transmembrane conductance regulator. Biophys. J.: **82**:1278-92.

Professional Contributions

Faculty Mentorship

2015 – 2020 Primary mentor for NIH K01 award, PI: Hakeem Lawal "Acetylcholinergic neurotransmission during aging"

2015 Selected as a mentor for the Faculty Research & Education Development Program of the American Society for Cell Biology

2013 – 2018 Primary mentor for NIH K01 award, PI: Michael Gitcho "Selective over-expression of TDP43 in APP/PS1 mice alters APP processing".

Grant Writing Assistance to Colleagues

Developed and maintain the website www.grant-tutor.org which provides tips and a discussion board on how to be successful in writing grants. The site is targeted at faculty teaching at undergraduate institutions.

Provided leadership in application preparation and submission for groups of colleagues working on infrastructure and

education grants. Have worked on applications to NSF, NIH, the US Department of Education and ArtPlace America.
Successful awards

NSF HBCU-UP Implementation Planning grant, $350,000 funded 9/2015, PI Mazen Shahin

NSF Targeted Infusion Program, $375,000 grant funded 8/2015, PI Nicola Edwards-Omolewa

NSF Targeted Infusion Program - $375,000 grant funded 7/2014, PI Andrew Lloyd

Noyce Teacher Scholarship Program – 9/2012 $1.2 million, PI, Nicola Edwards-Omolewa,

NSF SSTEM program, $600,000 Funded 9/2009, PI Andy Lloyd,

NSF SSTEMS program, $600,000 Funded 9/2014, PI Malcolm D'Souza (Wesley College)

Selected Committee Service - Delaware State University

2014 - 2016 Member, University Promotion & Tenure Committee (by vote of faculty). Reviews and makes recommendations on all faculty sabbatical and promotion & tenure applications (2 year term).

2014 - Member Equity Resolution Panel. Developed DSU's policy for Title IX compliance, and investigates and adjudicates Title IX complaints for the institution

2008 - Member, Research Committee of Delaware INBRE (a statewide, NIH-funded partnership grant to develop the infrastructure for biomedical research)

2005 - Member, University Professional Development Committee – Reviews proposals and awards funds for research minigrants and travel awards submitted by faculty across the entire University,

2012 Chair, Faculty search committee, Department of Public and Allied Health (service requested by Department chair due to a lack of tenured faculty in the Department, 4 positions)

2011 – 2015 Chair, Dept. of Biology Personnel Committee – manages all departmental sabbatical & promotion & tenure reviews, faculty peer evaluations, and faculty searches when no search committee is designated.

2011 – 2012 Chair, Standards 4-6 (Leadership, Governance, Integrity) Committee for Middle States Accreditation

2009 - 2013 Chair, Neuroscience Faculty Search Committee (5 separate faculty searches, 8 positions)

2007 - 2012 Chair, Biology Department Graduate Committee - Developed curriculum and won approval for new MS and PhD program in Neuroscience and Professional Science MS in Biotech.

2005 - 2006 Chair, Neuroscience Faculty Search Committee (2 positions)

2005 – 2009 Chair, Biology Department Curriculum Committee
Developed and won approval for five new degree programs: a BS degree in forensic biology; an MS in Neuroscience; an MA in Biology, a PSM in Biotechnology, and a PhD in Neuroscience. The committee also completely revised the Biology MS degree.

Grant Review Panels/Study Sections

2012 - National Institute of General Medical Sciences, Training, Workforce Development & Diversity, Study Section D. (Panel Chair starting November 2016)

2016 Served on Special Emphasis panels for National Institute of General Medical Sciences, Centers of Biomedical Research Excellence grants (panels for both Phase I and Phase III)

2012 - 2016 Delaware Bioscience Center for Advanced Technology - a grant program to address the technology innovation gap and promote economic development in Delaware.

2000 - 2016 National Science Foundation - Service on >36 separate review panels for fifteen different grant programs for infrastructure, educational and research.

Other Leadership Roles

2007 - Organizer/Director Delaware Neuroscience Consortium
Worked with faculty from Delaware State University, University of Delaware, the A.I.duPont Children's Hospital and Christiana Medical Center in a consortium to support the development of neuroscience research and education in Delaware.

- Submitted/resubmitted $11.3 million grant proposal to the Centers of Biomedical Research Excellence program at NIH to support development of a statewide Center of Neuroscience. - funded 2012, renewal submitted September 2016.

- Submitted proposals and made presentations to the Delaware Health Fund, the Delaware Economic Development Office. Made presentations to the Lt. Governor of Delaware, the Delaware Health Fund, and the Delaware Congressional delegation in Washington DC in 2008 and 2012
- Established an inter-institutional neuroscience partnership between DSU and UD that includes a joint seminar series and tuition-free course exchange for graduate courses in neuroscience
- Organized annual Neuroscience Symposium & poster session (from 2008 - 2016)

2016 - Directed NINDS-funded Summer Undergraduate Neuroscience Research program

2003 – 2004, 2006-2009 Directed the HBCU-UP Summer Undergraduate Research Program at DSU

2003 - 2012 Secretary and grant specialist, Board of Directors, Kent County SPCA

1998 - 2001 Directed Neuroscience Summer Undergraduate Research Program at Morehouse College

Professional Honors

2015 Faculty Award for Excellence in Service, Delaware State University

2013 SMART Woman of the Year, Strengthening the Mid-Atlantic Region for Tomorrow Inc.

2012 Delaware Neuroscientist of the Year, from the Delaware Chapter of the Society for Neuroscience

2012 Summit award, Delaware IDeA Networks of Biomedical Research Excellence

2008 Faculty Award for Excellence in Mentoring, Delaware State University

2005 Faculty Award for Excellence in Research, Delaware State University

1997 - 1998 NRSA, Post-Doctoral grant from the National Institutes of Health

1996 - 1997 Cystic Fibrosis Foundation Post-Doctoral Grant

Graduate Teaching

2005 - Developed and taught graduate courses in neuroscience, molecular physiology, responsible conduct of research, effective teaching in biology, and a two-semester professional development course

Outreach Activities

2012 - 2015 Director, Delaware Brain Bee, sponsored by the Society for Neuroscience

2008 - 2010 Co-director, Bernard Harris Foundation/Exxon-Mobile Summer Science Camp

2002 - 2009 Instructor and research mentor for "Girls Explorations of Math and Science" a summer enrichment program for high school girls.

Post-doctoral fellows supervised

2009 – 2012 Hongmei Zhang, PhD. Currently: Research Assistant Professor, Department of Pain Medicine, University of Texas M.D. Anderson Cancer Center

2013 – 2017 Joseph Lombardo, PhD – Research Associate, Brigham & Women's Hospital, Boston (April 2017)

2015 – present Dwight Higgin, PhD

2017 – present Jianli Sun PhD

Graduate students supervised

MS 2005 - Nagma Shaheen, Department of Biology, DSU

MA 2011- Dwight Higgin, Department of Biology, DSU

MS 2008- Kinjal Patel, Department of Biology, DSU

MA 2013 – M. Kameron Brown, Department of Biology, DSU

MS 2014 - Charlotte Phillips, Department of Biology, DSU

2011 - present PhD program - Tharaneetharan Amurugarajah, Department of Biology, DSU

Service on dissertation/thesis committees

Served on dissertation committees for 5 students in DSU's Neuroscience PhD program. Three students graduated in 2015, two students are currently PhD candidates.

Served on thesis committees for 15 students in DSU's Neuroscience and Biology MS Programs. Twelve students graduated from 2010 - 2016, three students are currently in the MS program.