

Curriculum Vitae

Ishmail Abdus-Saboor

Jerome L. Greene Center, 3227 Broadway, Quad 6C
New York, NY 10027

Education

- 2012 **University of Pennsylvania**, Ph.D. in Cell and Molecular Biology
Thesis: EGF-Ras-Erk pathway and HMX homeodomain protein MLS-2 promote tube development in the C.elegans excretory system. Advisor: Meera Sundaram
- 2006 **North Carolina A&T State University**, B.S. in Animal Science, *summa cum laude*

Positions

Zuckerman Mind Brain Behavior Institute at Columbia University

2021– Assistant Professor of Biological Sciences

University of Pennsylvania

2018–2021 Mitchell J. and Margo Krody Blutt Presidential Assistant Professor of Biology

2014–2018 Postdoctoral Fellow, Department of Neuroscience. Advisor: Wenqin Luo

Weill Cornell Medicine

2012–2014 Postdoctoral Fellow, Neuroscience. Advisor: Benjamin Shykind

Honors, Prizes, and Fellowships

- 2021 Kavli Fellow, National Academy of Sciences
- 2021 Alfred P. Sloan Foundation Research Fellowship
- 2020 Rita Allen Foundation Scholar (Award in Pain)
- 2018 Named to Mitchell and Margo Blutt Presidential Endowed Chair (UPenn)
- 2018 NIH Mitchell Max Award for Excellence in Pain Research
- 2017 NIH K99/R00 Pathway to Independence Award
- 2015 Burroughs Wellcome Fund Postdoctoral Enrichment Program
- 2014 NIH IRACDA Postdoctoral Fellowship
- 2012 Tom Kadesch Prize in Genetic Research
- 2009 NIH Predoctoral Training Grant in Genetics
- 2006 Gloria Twine Chisum Graduate Fellowship

Grant Support

Active

- 4/2022 – 3/2026 NIH R25. “The short course on the application of machine learning for automated quantification of behavior.” \$82,784 total costs. Lead PI: Vivek Kumar (Jackson Labs), Role: MPI
- 9/2021 – 8/2023 Alfred P. Sloan Research Fellowship. \$75,000 direct costs. Role: PI
- 9/2020 – 8/2023 Rita Allen Foundation Scholar in Pain Award. “Discovering behavioral signatures of pain at millisecond timescales.” \$150,000 direct costs. Role: PI

Pending

- 6/2022 – 6/2023 Brain Research Foundation Seed Grant (Columbia nominee). “Investigating a skin-brain neuronal pathway for rewarding social touch.” \$80,000 direct costs. Role: PI
- 6/2022 – 6/2025 McKnight Scholar Award. “Skin-brain axis for rewarding touch.” \$225,000 direct costs. Role: PI
- 7/2022 – 6/2027 NIH/NINDS R01. “Connecting the skin and brain for rewarding social touch.” \$3,284,130 total costs. Role: PI

- 8/2022 – 7/2025 NIH/BRAIN Initiative R01. “Translational regulation of neuronal identity and connectivity.” \$4,787,175 total costs. PIs: Lomvardas, Zuker. Role: Co-I
- 9/2022 – 8/2027 NIH DP2 New Innovator Award. “Targeting social touch neurons in the skin to study sexual receptivity.” \$2,430,000 total costs. Role: PI
- 9/2022 – 8/2026 Pew Biomedical Scholar Award (nominee). “Elucidating pain sensation and emotion from circuits to cells to genes.” \$300,000 direct costs. Role: PI
- 9/2022 – 8/2026 Beckman Young Investigator (full proposal invited). “How do neurons in the skin trigger sexual receptivity.” \$600,000 direct costs. Role: PI

Completed

- 9/2017 – 8/2021 NIH K99/R00 Pathway to Independence Award (DE026807). “Determining the functions of molecularly defined populations of nociceptors in spinal and dental pain.” \$1,116,555 total costs. Role: PI
- 9/2015 – 8/2018 Burroughs Wellcome Fund Postdoctoral Enrichment Program. “Defining the neural mechanisms mediating crosstalk between touch and pain.” \$60,000 direct costs. Role: PI
- 6/2016 – 12/2017 Burroughs Wellcome Fund Collaborative Research Travel Grant. “Optogenetic and brain imaging investigation of pain neural circuitry.” \$8,000 direct costs. Role: PI; Co-I: Jin Lee, Stanford
- 9/2014 – 7/2017 NIH IRACDA Postdoc Fellowship (K12 GM081295). “Dissect neural mechanisms underlying the crosstalk between touch and pain.”
- 9/2009 – 8/2011 NIH Predoctoral Training Program in Genetics (T32 GM008216)

Peer-Reviewed Research Papers

Assistant Professor

- [1] Toussaint A, Foster W, Jones JM, Kaufmann S, Wachira M, Hughes R, Bongiovanni AR, Famularo ST, Dunham B, Schwark R, Karbalaei R, Dressler C, Bavley CC, Fried NT, Wimmer M, **Abdus-Saboor I**. Chronic paternal morphine exposure increases sensitivity to morphine-derived pain relief in male progeny. Science Advances, in press
- [2] Bohic M, Pattison L, Jhumka A, Rossi H, Thackray J, Ricci M, Foster W, Arnold J, Mossazghi N, Yttri E, Tischfield, MA, Smith ESJ, **Abdus-Saboor I***, Abaira V*. Mapping the signatures of inflammatory pain and its relief. Submitted (* joint corresponding authors)
- [3] Middleton L, Schaffler M, Succi I, Foster W, Gradwell M, Bohic M, Ejoh L, Abaira V, **Abdus-Saboor, I**. Identification of touch neurons underlying dopaminergic pleasurable touch and sexual receptivity. Cell, in revision
- [4] Jones JM, Foster W, Twomey CR, Burdge J, Ahmed OM, Pereira TD, Wojick JA, Corder G, Plotkin JB, **Abdus-Saboor I**. A machine-vision approach for automated pain measurement at millisecond timescales. eLife 9:e57258 (2020).
- [5] Rossi HL, See LP, Foster W, Pitake S, Gibbs J, Schmidt B, Mitchell CH, **Abdus-Saboor I**. Evoked and spontaneous pain assessment in a dental pulp injury model. Scientific Reports 17;10(1):2759 (2020).
- [6] Pitake S, Middleton LJ, **Abdus-Saboor I**, Mishra SK. Inflammation induced sensory nerve growth and pain hypersensitivity requires the N-type calcium channel Cav2.2. Front Neurosci 19;13:1009 (2019).

Postdoctoral Fellow

[7] **Abdus-Saboer I**, Fried NT, Lay M, Burdge J, Swanson K, Fischer R, Jones J, Dong P, Cai W, Guo X, Tao YX, Bethea J, Ma M, Dong X, Ding L, Luo W. Development of a mouse pain scale using sub-second behavioral mapping and statistical modeling. Cell Reports 6;28(6):1623-1634 (2019).

[8] Olson W, **Abdus-Saboer I**, Cui L, Burdge J, Raabe T, Ma M, Luo W. Sparse genetic tracing reveals regionally specific functional organization of mammalian nociceptors. eLife 12;6:e29507 (2017).

[9] Cui L, Miao X, Liang L, **Abdus-Saboer I**, Olson W, Fleming MS, Ma M, Tao YX, Luo W. Identification of early RET+ deep dorsal spinal cord interneurons in gating pain. Neuron 91, 1–17 (2016).

[10] **Abdus-Saboer I.**, Al Nufal MJ, Agha MV, Ruinart de Brimont M, Fleischmann A, Shykind B. An expression refinement process ensures singular odorant receptor gene choice. Current Biology 26, 1083–90 (2016).

[11] Fleischmann A, **Abdus-Saboer I**, Sayed A, Shykind B. Functional interrogation of an odorant receptor locus reveals multiple axes of transcriptional regulation. PLoS Biology 11(5):e1001568 (2013).

Graduate Student

[12] **Abdus-Saboer I**, Stone CE, Murray JI, Sundaram MV. The Nkx5/Hmx homeodomain protein MLS-2 is required for proper tube cell shape in the *C.elegans* excretory system. Developmental Biology 366, 298–307 (2012).

[13] **Abdus-Saboer I**, Mancuso VP, Murray JI, Palozola K, Norris C, Hall DH, Howell K, Huang K, Sundaram MV. Notch and Ras promote sequential steps of excretory tube development in *C.elegans*. Development 138, 3545–3555(2011).

Protocols

[1] Burdge J, Fried N, **Abdus-Saboer I**. Using high-speed videography for objective and reproducible pain measurement on a mouse pain scale. Star Protocols 2,100322 (2021)

Commentaries

[1] Burdge J, Anissa Jhumka, Bravo I, **Abdus-Saboer I**. Taking a deep breath: How a brainstem pathway integrates pain and breathing. Neuron (forthcoming)

Book Chapters

[1] **Abdus-Saboer I**, Luo W. Measuring mouse somatosensory reflexive behaviors with high-speed videography, statistical modeling, and machine learning. *Contemporary approaches to the study of pain: from molecules to neural networks*. Springer Nature, 2021 (in press). Edited by Rebecca Seal.

Reviews

[1] Z. Anissa Jhumka, **Abdus-Saboer I**. Next generation behavioral sequencing for advancing pain quantification. Current Opinion in Neurobiology (under review)

[2] Middleton LJ, **Abdus-Saboer I**. Bridging skin, brain, and behavior to understand pleasurable social touch. Current Opinion in Neurobiology (under review)

[3] Inclan-Rico JM, Kim BS*, **Abdus-Saboer I.*** Beyond somatosensation: Mrgprs in mucosal tissues. Neuroscience Letters Feb 11;135689 (2021)

[4] Fried NT, Chamesian A, Zylka MJ, **Abdus-Saboer I**. Improving pain assessment in mice and rats with advanced videography and computational approaches. Pain 161(7):1420-1424 (2020).

[5] Schaffler M.D., Middleton L.J., **Abdus-Saboer I**. Mechanisms of tactile sensory phenotypes in autism: current understanding, and future directions for research. Current Psychiatry Rep. 5;21(12):134 (2019).

[6] **Abdus-Saboer I.**, Fleischmann A., Shykind B. “Setting limits: maintaining order in a large gene

family.” **Transcription** 5:e28978 (2014).

Other articles

[1] Ishmail Abdus-Saboor feature interview, Neuron (2021). <https://doi.org/10.1016/j.neuron.2021.09.026>

Courses Taught

Columbia University

Neurobiology of the Senses. Teaching 100% of course. (Fall 2022)

G4340: Survey of Neuroscience, Spring 2022 (guest lecture)

BIOL GR9301: Pre-research seminar, Fall 2021 (guest lecture)

The Jackson Laboratory

Short Course on the Application of Machine Learning for Automated Quantification of Behavior; Course Co-Director (Fall 2022)

University of Pennsylvania

BIOL 221: Molecular Biology and Genetics. Taught 50% of course. 150 students. (Spring 2019, 2020, 2021)

NGG 588: Topics in Translational Neuroscience, Spring 2020 (guest lecture)

Research Advising: (*denotes underrepresented minority)

Postdoctoral Fellows (3)

1. ***Andre Toussaint** (PhD., Temple University) (incoming summer 2022)
Junior Fellow of the Simons Society of Fellows
2. **Z. Anissa Jhumka**. (PhD., Aix-Marseille University, France) (2021–present)
3. **Heather Rossi** (PhD., University of Florida) (2018–2021)
Current Position: Research Associate, University of Pennsylvania

Graduate Fellows (5)

1. ***Rachel Frazer** (2021–present)
Columbia Neurobiology and Behavior PhD Program
NSF Graduate Research Fellowship
2. **Ryan Schwark** (2020–present)
Columbia Biological Sciences PhD Program (transferred from University of Pennsylvania)
3. **Justin Burdge** (2020–present)
Columbia Biological Sciences PhD Program (transferred from University of Pennsylvania)
NIH T32 Training Program in Genetics (University of Pennsylvania)
4. **Leah Middleton** (2018–present)
University of Pennsylvania Neuroscience PhD Program
F31 NIH/NINDS Ruth L. Kirschstein Individual Predoctoral NRSA Fellowship
5. ***Melanie Schaffler** (2018–present)
University of Pennsylvania Neuroscience PhD Program
F31 NIH/NCCIH Ruth L. Kirschstein Individual Predoctoral NRSA Fellowship

Post-Bac Technicians (4)

1. ***Jared Boyce** (B.S., Dartmouth College) (2021–2022)

2. **Isabella Succi** (B.S., St. Joseph's University) (2020–2022)

3. **William Foster** (B.A., Haverford College) (2018–2021)

4. ***Jessica Jones** (B.S., UC Santa Cruz) (2018–2020)

Current Position: PhD student in John Tuthill's lab at University of Washington

Undergraduates (9)

*Justin Arnold, Justin Burdge, Phaelen Chang, Samuel Kaufmann, Emma Lu, *Alexis Marshall, *Wadzanayi Michelle Mayiseni, Lucie Pham, *Migyana Thomas

Summer Interns (7)

*Racquel Amadi, *Kayla Dennis, *Syphane Gibbs, *Camille Harrison, *Mariatu Fayia, Isabella Succi, *Meghan Wachira

Graduate Student Qualifying Exam and/or Thesis Advisory Committees

Columbia University

Aaron Limoges (Hugo Tejada lab), Biological Sciences Graduate Group, 2021– present

Eliza Jaeger (Maria Tosches lab), Biological Sciences Graduate Group, 2021

Yasmin Ramadan (Oliver Hobert lab), Biological Sciences Graduate Group, 2021– present

University of Pennsylvania

Brandon Bastien (Michael Hart lab), Neuroscience Graduate Group. 2020 – present

Jessica Wojick (Greg Corder lab), Biology Graduate Group, 2020

Michelle Klima (Nick Betley lab), Neuroscience Graduate Group. 2020 – present

Melina Gyparaki (Melike Lakadamyali lab), Biology Graduate Group. 2019 – 2021

Bishwas Sharma (Brian Gregory lab), Biology Graduate Group. 2019 – 2021

Luigim Cifuentes (Marc Fucillo lab), Neuroscience Graduate Group. 2019

Yongjun Li (Amita Sehgal lab), Biology Graduate Group, 2019

Linyang Ju (Shelley Berger lab), Biology Graduate Group, 2019

Invited Research Talks

103. **Society of General Physiologists Annual Symposium**, Mapping the pain landscape, MBL at Woods Hole 9/7/23
102. **Gordon Conference**, Amygdala Function in Emotion, Cognition and Disease, Spain 7/11/23
101. **Gordon Conference**, Neurotrophic Mechanisms in Health and Disease, Rhode Island 6/1/23
100. **University of Washington**, Department of Genome Sciences Seminar 1/11/23
99. **Gordon Conference**, Optogenetic Approaches to Understanding Neural Circuits and Behavior, Maine 7/19/22
98. **Northwestern University**, Department of Physiology and Pain Center Seminar Series 6/24/22
97. **Harvard Medical School**, Mass. Gen. Hospital, Dpt. of Molecular Biology Seminar Series 5/20/22
96. **National Institutes of Health**, Understanding Pain Seminar Series 5/12/22
95. **Columbia University**, Stavros Niarchos Foundation Lecture 4/27/22
94. **University of North Carolina at Chapel Hill**, Neuroscience Seminar Series 4/14/22
93. **Brandeis University**, Biology and Neuroscience Colloquium 3/29/22
92. **University of Washington**, Department of Biological Structure Seminar Series 1/27/22
91. **Penn State College of Medicine**, Neural and Behavioral Sciences Department Seminar Series 11/18/21
90. **Harvard University**, Brain Science Initiative, Neurobiology of Pain Event 11/16/21
89. **Johns Hopkins University**, Department of Molecular and Comparative Pathobiology Seminar Series 11/12/21
88. **Harvard Medical School**, Department of Neurobiology Seminar Series 10/4/21
87. **Johns Hopkins University**, Blaustein Pain Grand Rounds 9/24/21
86. **University of California San Francisco (UCSF)**, Neuroscience Seminar Series 9/2/21
85. **Brown University**, Samuel M. Nabrit Conference for Early Career Scholars 8/2/21
84. **Newcastle University**, UK, Centre for Behaviour and Evolution Seminar Series 7/6/21
83. **Brain Initiative Investigator's Meeting**, Diversity of the Social Brain Symposium 6/17/21

82. Columbia University , Department of Biological Sciences Seminar Series	5/17/21
81. Salk Institute for Biological Studies , Thursday Seminar Series	4/8/21
80. Williams College , Class of 1960 Scholar Speaker Series	3/31/21
79. University of Southern California (USC) , Neurobiology Seminar Series	3/22/21
78. Texas Pain Research Consortium , Seminar Series	3/15/21
77. George Washington University , IBS Neuroscience Seminar Series	3/11/21
76. University College London , Gatsby Computational Neuroscience Series	3/5/21
75. University of Chicago , Neuroscience Seminar Series	2/23/21
74. New York University School of Medicine , Marie Daly Speaker Series	2/19/21
73. Duke University , Department of Neurobiology Seminar Series	2/16/21
72. Allen Institute for Brain Science , Inaugural Black History Month Seminar Series	2/9/21
71. Middlebury College , Neuroscience Seminar Series	2/5/21
70. University of California San Diego (UCSD) , Neuroscience Seminar Series	1/12/21
69. Northeastern University , Biology Colloquium	12/7/20
68. Washington University in St. Louis , Anesthesiology Research Seminar Series	12/1/20
67. Weill Cornell Medicine , Frontiers in Neuropsychiatry Seminar Series	11/24/20
66. University of Pittsburgh & Carnegie Mellon University , CNBC ERC Series	11/18/20
65. UT Health San Antonio , Dpt of Pharmacology & Center for Biomedical Neuroscience	11/11/20
64. Johns Hopkins University , Department of Biology Seminar Series	11/5/20
63. University of Iowa , Neuroscience Institute Seminar Series	10/30/20
62. Neuromatch Meeting , <u>Keynote Lecture</u>	10/28/20
61. University of Michigan , Department of Molecular, Cell, Developmental Biology	10/16/20
60. Johns Hopkins University , Department of Biochemistry and Molecular Biology	10/12/20
59. Columbia University , Zuckerman Institute, Breakthroughs in Neuroscience Series	9/29/20
58. National Institutes of Health , Animal Genetics Consortium	9/24/20
57. Drexel University , Department of Neurobiology and Anatomy Seminar Series	9/23/20
56. Georgetown University , Department of Pharmacology and Physiology	9/10/20
55. National Institutes of Health , Early Career Investigators in Addiction Neuro Series	8/12/20
54. University of Pennsylvania , Diversity Action Plan in Genomics summer program	8/3/20
53. Johns Hopkins University , Department of Pharmacology & Molecular Sciences	7/22/20
52. Stanford University & Chinese Academy of Sciences ; Neuro Zoom	7/6/20
51. University of Virginia , Neuroscience Department, Inaugural Juneteenth Lecture	6/15/20
50. Pain Research Forum ; moderated by Cheryl Stucky, Wisconsin	3/24/20
49. Rowan University , Molecular and Cellular Biosciences Seminar Series	2/28/20
48. Temple University , Neuroscience Seminar Series	2/12/20
47. Keystone Symposium , "Pain: Aligning the Target", Colorado	2/3/20
46. University of Pennsylvania , Dermatology Research Seminar Series	1/14/20
45. University of Pennsylvania , Neuroscience Graduate Group Public Lecture on Pain	12/5/19
44. University of Pennsylvania , Psychology Department Colloquium Series	12/2/19
43. Annual Biomedical Conference for Minority Students (ABRCMS) , California	11/16/19
42. University of Texas at Dallas , School of Behavioral and Brain Sciences	11/7/19
41. Lasalle University , Department of Biology	10/1/19
40. University of Illinois at Chicago , Integrative Neuroscience Seminar Series	9/26/19
39. Fox Chase Cancer Center , Molecular Therapeutics Department	6/20/19
38. University of Pennsylvania , SUIP Faculty Research Seminar	6/12/19
37. University of Maryland Baltimore County , Dpts. of Biology; Chemistry/Biochemistry	5/8/19
36. University of Washington , Neuroscience Seminar Series	3/14/19
35. North Carolina A&T State University , Department of Biology	1/23/19
34. University of California Santa Cruz , Dpt. Molecular, Cell, Developmental Biology	1/14/19
33. St. Joseph's University , Department of Biology	11/14/18
32. University of Pennsylvania , Undergraduate Neuroscience Honors Society	12/4/18
31. University of Pennsylvania , Center for Neurobiology and Behavior Seminar	10/26/18
30. Mid-Atlantic Pharmacology Society Meeting , Philadelphia, PA	9/27/18
29. University of Pennsylvania , mindCORE Seminar Series	9/4/18
28. Gordon Conference , Molecular and Cellular Neurobiology, Hong Kong	7/3/18

27. National Institutes of Health , Pain Consortium Symposium	5/31/18
26. Rockefeller University , Sense to Synapse Conference	5/12/18
25. Vanderbilt University School of Medicine , <u>Emerging Scholars Lecture</u>	5/3/18
24. Meharry Medical College , Department of Biochemistry and Cancer Biology	5/2/18
23. Bryn Mawr College , Chemistry Colloquia Series	4/16/18
22. Duke University , Department of Pharmacology	2/20/18
21. New York University , Department of Oral Surgery	2/7/18
20. University of Pennsylvania , Department of Biology	1/11/18
19. University of Pennsylvania , Department of Oral Surgery & Pharmacology	12/14/17
18. Johns Hopkins University , Department of Pharmacology & Molecular Sciences	12/12/17
17. Temple University , Center for Substance Abuse Research	12/7/17
16. Society for Neuroscience Meeting , Washington D.C.	11/11/17
15. Haverford College , Department of Biology	4/3/17
14. Syracuse University , Department of Biology	3/10/17
13. University of Pennsylvania , SACNAS Chapter Science Café Seminar Series	2/16/17
12. Rutgers University Camden , Department of Biology	1/19/17
11. Swarthmore College , Department of Biology	11/30/16
10. Mount Holyoke College , Department of Biological Sciences	11/8/16
9. University of Pennsylvania Dental School , Levy Series	10/27/16
8. Bucknell University , Department of Biology	10/3/16
7. Rutgers University Camden , Department of Biology	3/10/16
6. Virginia Tech University , Department of Biochemistry	1/13/16
5. 2nd International Symposium on Olfaction , Paris	9/19/13
4. University of Pennsylvania , Genetics Symposium	11/28/12
3. University of Pennsylvania , Cell and Molecular Biology Annual Symposium	10/11/11
2. International <i>C.elegans</i> Meeting , Los Angeles, CA	6/26/11
1. Society for Dev. Bio. Meeting , Phila., PA, <u>award for best graduate student talk</u>	6/3/11

Media Coverage and Feature Stories

- Penn’s MindCORE, “*Beyond the CV: Stories from Faculty.*” 2021. Interview on YouTube
- Nature Biotechnology, 2021. Twitter highlight during Black History Month.
- Rita Allen Foundation, 2020. “*Announcing the 2020 Rita Allen Foundation Award in Pain Scholars*”
- Cell Press, 2020. “*100 inspiring black scientists in America.*”
- Katherine Baillie, 2019. “*The Science of Sensations*” Penn Today.
- Stephanie Stahl, 2018. “*From Central High School to His Own Lab, Penn Scientist Focused on Finding Better Treatments for Pain.*” <https://philadelphia.cbslocal.com/2018/09/11/central-high-school-graduate-penn-medicine/> **CBS Philadelphia TV Special**
- Marla Vacek Broadfoot, 2018. “*How early STEM program and mentors paved the way for a career in science.*” Burroughs Wellcome Fund Feature Article.
- Gregory Richter, 2018. “*PennPORT (al) into a Thriving Science Career.*” Penn Medicine News.

Podcast Interviews

- Pain Research Forum Pain Beat Podcast: “*Measuring Pain Behavior.*” Interviewed w/ Vivianne Tawfik, Mark Zylka, Carl Saab by Tayler Sheahan and Rebecca Seal 4/2/21
- Nautilus Magazine, *Ignorance*. Interviewed by Leslie Vossball and Stuart Firestein 2/24/21
- Carry the One Radio: “*Pain the Invisible Disease, Treatment, and Research.*” Interviewed alongside Allan Basbaum by UCSF graduate students 11/2/20
- *Penn Science Policy and Diplomacy Group Podcast* 2/18/20
- HBCU Digest Radio: “*HBCU Voices of STEM Excellence*” 7/26/18

University Service

Columbia University

2021–2022 Faculty Search Committee, Zuckerman Mind Brain Behavior Institute

University of Pennsylvania

2020–2021 Seminar Committee, Biology Department
 2020 Ad hoc Faculty Recruitment Committee, Biology Department
 2020 Recruitment Day Chair for Ph.D. admissions weekend, Biology Department
 2020–2021 Member, Dean’s Council on Diversity
 2020–2021 Seminar Committee, Department of Neuroscience
 2020–2021 Faculty Advisory Board, E.E. Just Biomedical Society for underrepresented minority PhD students in Biomedical Graduate Studies
 2019–2020 Member, Dean’s Committee for “Mapping the Mind”
 2018–2020 Co-Director, Mentoring Circle Program for underrepresented minority students

Professional Service

Editorial Boards: Cell Reports (2020–), eLife (2020–), Neurobiology of Pain (2021–)

Conference Organization: Session Chair: Keystone Symposium on Pain (2020), Session Chair: US Association for the Study of Pain Annual Meeting; 2 sessions (2020)

Study Section/Grant Reviewer: Chan Zuckerberg Biohub Investigators (2021), Burroughs Wellcome Fund Graduate Diversity Enrichment Program (2019), Department of Defense Neurophysiology of Cognition (2020), NIH/NINDS F99/K00 Blueprint D-SPAN Award (2020)

Journal Reviewer: Cell, Neuron, Nature Communications, Science Advances, Nature Reviews Neuroscience, eLife, Pain, PLoS Biology, Journal of Neuroscience, Cell Reports, Methods in Cell Biology, Molecular Pain, Neuroscience, Neuroscience Letters, Pain Reports, PLoS One, Star Protocols

Outreach

2021 Speaker, Columbia’s Zuckerman Institute, Diversity Funding Opportunities at NIH
 2021 Black-in-Stem conversation with Rutgers Camden University MARC students
 2020 Speaker, Harvard Medical School Black Postdoctoral Association
 2020 Speaker, Monell Chemical Senses Center, *Diversity Journal Club*
 2020 Feature Interview for middle school book project “*Healthy NewsWorks*”
 2020 Panelist, Postdoc Association (BPP) event, “*Pursuing an Academic Career*”
 2019 Speaker, NIH Conference on Advancing Diversity Programs
 2019 Panelist, NIH/ENDURE program for underrepresented minority trainees, SFN Neuroscience Annual Meeting
 2019 Panelist, mindCORE event, “*Navigating the academic job market*”
 2019 Abdus-Saboor lab Science Day for 25 elementary students in West Philly
 2019 Panelist, Center for Teaching and Learning “*Workshop on Inclusive Teaching*”
 2018 Panelist, Lasalle University STEM underrepresented minority day
 2018 Speaker, SMASH STEM program for high school minority students
 2018 Panelist, Society for Neuroscience Meeting, NIH Blueprint Diversity F99/K00 fellows
 2018 Panelist, Inaugural PennView Postdoc Diversity Initiative
 2017 Invited Speaker, “*March for Science*” Philadelphia, PA
 2017 Panelist, Alpha Kappa Alpha Sorority Ascend high school career fair
 2017 Facilitator, Penn | Post-bac & Summer URM Intern students, “*Writing Your 1st Manuscript*”
 2017 Panelist, Career Panel, Penn Cell and Molecular Biology PhD Program Symposium
 2017 Facilitator, Penn | HHMI BioInteractive Teaching Workshop for Faculty
 2017 Invited Lecturer, “*Neuroscience Symposium*” The Baldwin School, Bryn Mawr, PA
 2016 Panelist, *Diversity in STEM workshop*, Penn Center for Teaching and Learning
 2016 Program Organizer for URM interns at Penn, “*Graduate School Admissions Process*”
 2016 Program Organizer for workshop on obtaining NSF grants as new faculty
 2016 Career Development Panelist, “*Penn Honors Diversity Symposium*”
 2016 Science Fair poster judge, Lincoln University & Penn
 2016 Invited Lecture, “*Optogenetics and Pain*” Friends Central School, Wynnewood, PA

- 2016 Invited Lecture, Penn Undergraduate Neuroscience Society, "*Pain in the Brain*"
- 2012 Poster Judge at Diversity session, American Society for Cell Biology Annual Meeting
- 2011 Panelist, McNair Scholars forum for undergraduate seniors Penn
- 2008-2018 Volunteer, Science Education Academy (SEA) for middle-school URM students in West Philadelphia
- 2008 Panelist/Lab Tour Host, Upward Bound program for high school students
- 2007-2008 Outreach Chair, E.E. Just Biomedical Society for underrepresented minority graduate students