

Curriculum Vitae

Ishmail Abdus-Saboor

Columbia University, Zuckerman Mind Brain Behavior Institute and Department of Biological Sciences
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Website: <https://www.abdus-saboorlab.com/>

Education

2006 – 2012 **University of Pennsylvania**
Ph.D. Cell and Molecular Biology, Advisor: Meera Sundaram

2002 – 2006 **North Carolina A&T State University**
B.S. Animal Science, *summa cum laude*

Positions

2021 – **Columbia University**
Assistant Professor of Biological Sciences

2018 – 2021 **University of Pennsylvania**
Assistant Professor of Biology

2014 – 2018 Postdoctoral Fellow, Advisor: Wenqin Luo

2012 – 2014 **Weill Cornell Medicine**
Postdoctoral Fellow, Advisor: Benjamin Shykind

Select Honors and Awards

- NIH DP2 New Innovator Award (2022)
- Chan Zuckerberg Initiative Science Diversity Leadership Award (2022)
- Pew Scholar in the Biomedical Sciences (2022)
- Alfred P. Sloan Foundation Research Fellowship (2021)
- Kavli Fellow, National Academy of Sciences (2021)
- Rita Allen Foundation Scholar (2020)
- NIH Mitchell Max Award for Pain Research (2018)
- NIH K99/R00 Pathway to Independence Award (2017)
- Burroughs Wellcome Fund PDEP Postdoctoral Fellowship (2015)
- Tom Kadesch Prize in Genetics (2012)
- NIH T32 Predoctoral Training Grant in Genetics (2009)

Grant Support

9/2022–8/2027 NIH DP2 New Innovator Award (DP2NS130454). “Using mouse pain scales to discover unusual pain sensitivity and new pain targets.” \$2,467,500 total costs. Role: PI

9/2022–8/2027 Chan Zuckerberg Initiative Science Diversity Leadership Award. “Uncovering peripheral and central neural circuits for inflammatory pain.” \$1,150,000 total costs. Role: PI

9/2022–8/2026 Pew Scholar in the Biomedical Sciences. “Elucidating pain sensation and emotion from circuits to cells to genes.” \$300,000 direct costs. Role: PI

6/2022–6/2023 Brain Research Foundation Seed Grant. “Investigating a skin-brain neuronal pathway for rewarding social touch.” \$80,000 direct costs. Role: PI

- 6/2022–6/2023 Columbia University Provost Grant for Junior Faculty. “Does brain activity in the naked mole-rat govern cooperative social life?” \$30,000 direct costs. Role: PI
- 4/2022–3/2026 NIH R25. “The short course on the application of machine learning for automated quantification of behavior.” \$55,188 sub-award to I.A.S. Lead PI: Vivek Kumar (Jackson Labs), Role: MPI
- 9/2021–8/2023 Alfred P. Sloan Research Fellowship in Neuroscience. \$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
- 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 Institutional Research and Academic Career Development Award (K12 GM081295). “Dissect neural mechanisms underlying the crosstalk between touch and pain.” \$190,488.

Grant Support to Trainees

- 2022–2025 Burroughs Wellcome Fund PDEP Fellowship to Andre Toussaint (postdoctoral fellow). \$60,000
- 2022–2025 Junior Fellow of the Simons Society of Fellows to Andre Toussaint (postdoctoral fellow). \$435,847
- 2020–2023 NSF Graduate Research Fellowship (GRFP) to Rachel Frazer (graduate student). \$147,000
- 2021–2022 NIH F31 NRSA Fellowship to Melanie Schaffler (graduate student). \$140,250
- 2020–2022 NIH F31 NRSA Fellowship to Leah Middleton Elias (graduate student). \$140,250

Publications

Assistant Professor

Research Papers

- Lee PR, Kim J, Won J, Chung S, Han SY, Rossi HL, **Abdus-Saboer I**, Kim J, Oh SB. Transcriptional profiling of dental sensory and proprioceptive trigeminal neurons using single-cell RNA-sequencing. Submitted
- Schaffler M, Johnson M, Hing B, Kahler P, Hultman I, Srivastava S, Arnold J, Blendy J, Hultman R, **Abdus-Saboer, I**. A critical role for touch neurons in a skin-brain pathway for stress resilience. *bioRxiv*
- 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-Saboer I.**^{*}, Abaira V^{*}. Mapping the signatures of inflammatory pain and its relief. *bioRxiv*; **Neuron** (in revision) (^{*} joint senior authors)
- Elias L, Succi I, Schaffler M, Foster W, Gradwell M, Bohic M, Fushiki A, Upadhyay A, Ejoh L, Schwark R, Frazer R, Bistis B, Burke J, Saltz V, Boyce J, Jhumka A, Costa R, Abaira V, **Abdus-Saboer, I**. Touch neurons underlying dopaminergic pleasurable touch and sexual receptivity. **Cell** (in press)
- 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-Saboer I**. Chronic paternal morphine exposure increases sensitivity to morphine-derived pain relief in male progeny. **Science Advances** eabk2425 (2022).
- Jones JM, Foster W, Twomey CR, Burdge J, Ahmed O, Pereira TD, Wojick JA, Corder G, Plotkin JB, **Abdus-**

Saboer I. A machine-vision approach for automated pain measurement at millisecond timescales. **eLife** 9:e57258 (2020).

7. Rossi HL, See LP, Foster W, Pitake S, Gibbs J, Schmidt B, Mitchell CH, **Abdus-Saboer I.** Evoked and spontaneous pain assessment in a dental pulp injury model. **Scientific Reports** 17;10(1):2759 (2020).
8. Pitake S, Middleton LJ, **Abdus-Saboer 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

9. **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).
10. 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).
11. 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).
12. **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).
13. 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

14. **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).
15. **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).

Reviews and Commentaries

1. Z. Anissa Jhumka, **Abdus-Saboer I.** Next generation behavioral sequencing for advancing pain quantification. **Curr Opin in Neurobiol.** 76:102598 (2022).
2. **Abdus-Saboer I,** Luo W. Measuring mouse somatosensory reflexive behaviors with high-speed videography, statistical modeling, and machine learning. **Springer Nature,** 2022. Book chapter edited by Rebecca Seal.
3. Burdge J, Anissa Jhumka, Bravo I, **Abdus-Saboer I.** Taking a deep breath: How a brainstem pathway integrates pain and breathing. **Neuron** 2;110(5):739-741 (2022).
4. Elias LJ, **Abdus-Saboer I.** Bridging skin, brain, and behavior to understand pleasurable social touch. **Curr Opin in Neurobiol.** 73:102527 (2022).
5. 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).

6. Inclan-Rico JM, Kim BS*, **Abdus-Saboor I.*** Beyond somatosensation: Mrgprs in mucosal tissues. **Neuroscience Letters** Feb 11;135689 (2021)
7. Fried NT, Chamesian A, Zylka MJ, **Abdus-Saboor I.** Improving pain assessment in mice and rats with advanced videography and computational approaches. **Pain** 161(7):1420-1424 (2020).
8. Schaffler M.D., Middleton L.J., **Abdus-Saboor I.** Mechanisms of tactile sensory phenotypes in autism: current understanding, and future directions for research. **Current Psychiatry Rep.** 5;21(12):134 (2019).
9. **Abdus-Saboor I,** Fleischmann A., Shykind B. “Setting limits: maintaining order in a large gene family.” **Transcription** 5:e28978 (2014).

Other Article

1. Feature interview, **Neuron** (2021). <https://doi.org/10.1016/j.neuron.2021.09.026>

Invited Research Talks

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| 117. Keystone Meeting on Mammalian Pain and Somatosensation | 1/14/24 |
| 116. Society of General Physiologists Annual Symposium , Mapping the pain landscape, MBL at Woods Hole | 9/27/23 |
| 115. Oregon Health & Science University (OHSU) , Neuroscience Futures Seminar Series | 5/23/23 |
| 114. Harvard Medical School/Massachusetts General Hospital , Dpt. of Molecular Biology Seminar Series | 5/12/23 |
| 113. Stanford University , Wu Tsai Neuroscience Institute Seminar Series | 4/27/23 |
| 112. Princeton University , Neuroscience Institute Seminar Series | 3/2/23 |
| 111. National Institutes of Health (NIH) , Neuroscience Seminar Series | 2/27/23 |
| 110. Brown University , Neuroscience Seminar Series | 2/16/23 |
| 109. Caltech , Chen Institute Neuroscience Symposium | 1/28/23 |
| 108. Yale University , Neuroscience Seminar Series | 12/12/22 |
| 107. ACNP Annual Meeting , Panel on Neurocircuitry of Social-Emotional Behavior | 12/4/22 |
| 106. New York University (NYU) , Department of Biology Seminar Series | 11/21/22 |
| 105. UC Berkeley , Brain Imaging in the Bay Symposium | 11/5/22 |
| 104. Rockefeller University , Symposium on the Social Brain | 10/25/22 |
| 103. University of Pennsylvania , Cell & Molecular Biology Graduate Group Symposium, Keynote Lecture | 10/7/22 |
| 102. Albert Einstein College of Medicine , Neuroscience Seminar Series | 9/28/22 |
| 101. Gordon Conference , Optogenetic Approaches to Understanding Neural Circuits and Behavior, Maine | 7/19/22 |
| 100. Columbia University , Neurosurgery Grand Rounds | 7/7/22 |
| 99. Washington University in St. Louis , Anesthesiology Research Seminar Series | 6/30/22 |
| 98. Northwestern University , Department of Physiology and Pain Center Seminar Series | 6/24/22 |
| 97. Karger J.B. Johnston Club Symposium , Evolving Intersecting Neural Circuits | 5/12/22 |
| 96. Columbia University , Stavros Niarchos Foundation Lecture | 4/27/22 |
| 95. Brandeis University , M. R. Bauer Foundation Colloquium Seminar Series | 3/29/22 |
| 94. Columbia University , Frontiers in Engineering and Medicine, Symposium on Neuromodulation (panelist) | 3/4/22 |
| 93. UNC Chapel Hill , Society for Black Biomedical Scientists Black History Month Event, Keynote Lecture | 2/28/22 |
| 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 , Social Brain Symposium | 6/17/21 |
| 82. Columbia University , Department of Biological Sciences Seminar Series | 5/17/21 |
| 81. Salk Institute , 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 |

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| 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 , Department 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 |

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| 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, <i>award for best graduate student talk</i> | 6/3/11 |

Courses Taught

Columbia University

BIOL UN3004 Neurobiology I: Cellular and Molecular Neurobiology (Fall 2022)
G4340: Survey of Neuroscience, guest lecture on pain (Spring 2022, 2023)
G4100: Biology of Neurologic and Psychiatric Disorders, guest lecture on pain (Spring 2023)
BIOL GR9301: Pre-research seminar, guest lecture (Fall 2021)

The Jackson Laboratory

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

University of Pennsylvania

BIOL 221: Molecular Biology and Genetics; (Spring 2019, 2020, 2021)
NGG 588: Topics in Translational Neuroscience, Spring 2020 (guest lecture)

Research Advising: (*denotes underrepresented minority)

Postdoctoral Fellows (4)

Current

- **Anastasia-maria Zavitsanou** (2022 – present)
- ***Andre Toussaint** (2022 – present)
 - Simons Foundation Junior Fellow
 - Burroughs Wellcome Fund PDEP Fellow
- **Z. Anissa Jhumka** (2021–present)

Former

- **Heather Rossi** (2018–2021)
Current: Research Associate at UPenn

Graduate Fellows (6)

Current

- **Brittany Bistis**, Biological Sciences (2022–present)
- ***Rachel Frazer**, Neurobiology & Behavior (2021–present)
 - NSF Graduate Research Fellowship
 - Society for Neuroscience NSP Scholar
- **Ryan Schwark**, Biological Sciences (2020–present)

- **Justin Burdge**, Biological Sciences (2020–present)
Former
- ***Melanie Schaffler**, Neuroscience (2018–2022; PhD awarded 5/2022)
 - NIH F31 NRSA Fellowship
 - Current: Regulatory Affairs Associate, Teva Pharmaceuticals
- **Leah Middleton Elias**, Neuroscience (2018–2022; PhD awarded 4/2022)
 - NIH F31 NRSA Fellowship
 - Current: Postdoctoral Fellow at Johns Hopkins University

Technicians (5)*Current*

- **Victoria Saltz** (2022–present)

Former

- ***Jared Boyce** (2021–2022)
Current: MD/PhD student at University of Wisconsin-Madison
- **Isabella Succi** (2020–2022)
Current: PhD student at Columbia University
- **William Foster** (2018–2021)
Current: PhD student at Columbia University
- ***Jessica Jones** (2018–2020)
Current: HHMI Gilliam Fellow/PhD student at University of Washington

Undergraduates (14)*Current*

- Sarah Ogata, Religion (2022–present)
- *Alexis Knight, Neuroscience and Behavior (2022–present)
- *Jonathan Etricks, Neuroscience and Behavior (2022–present)
- *Abednego Delinois, Neuroscience and Behavior (2022–present)
- *Simon Ogundare, Neuroscience and Behavior (2021–present)
- *Alexis Marshall, Neuroscience and Behavior (2021–present)
- *Wadzanayi Michelle Mayiseni, Neuroscience and Behavior (2021–present)
- Phaelen Chang, Neuroscience and Behavior (2021–present)

Former

- *Justin Arnold (2019–2021), Biological Basis of Behavior; Next: MD student at Northwestern University
- Lucie Pham (2019–2021), Biology; Next: MD student at Rutgers University.
- Samuel Kaufmann (2019–2020), Biology
- Justin Burdge (2015–2019), Health and Societies; Next: PhD student in Abdus-Saboor lab
- Emma Lu (2019), Biology
- *Migyana Thomas (2018–2019)

Summer Interns (11)

- 2022 *Teresa Osorio, Rutgers Camden University; MARC Fellow
- 2022 *Adetokunboh Osineye, Morehouse College; EE Just Scholar
- 2022 *Ralph Anderson Jr., Morehouse College; EE Just Scholar
- 2022 Ziad Eltabakh, LaGuardia High School; BRAINYAC Scholar
- 2020 *Kayla Dennis, Penn Lens program high school student
- 2020 *Camille Harrison, North Carolina A&T State University; SUIP intern (Next: technician at UPenn)
- 2020 *Meghan Wachira, Rutgers Camden University (Next: post-bac at UPenn)
- 2019 Isabella Succi, St. Joseph's University (Next: technician in Abdus-Saboor lab)
- 2019 *Syphane Gibbs, North Carolina A&T State University; SUIP intern (Next: PhD student at U of Virginia)
- 2019 *Racquel Amadi, Xavier University in Louisiana; DAPPG intern
- 2019 *Mariatu Fayia, Penn Lens program high school student

Postdoctoral Fellow Mentorship Advisory Committees

*Whitney Gibbs – K99/R00 MOSAIC Scholar (Thomas Schwarz lab), Harvard University, 2022 – present

*Christian Cazares – F99/K00 DSPAN Scholar (Kay Tye lab), Salk Institute, 2022 – present

Thesis Defense Exam Committee

Zihe Zhang (Clifford Woolf lab), Harvard University, 2023

Graduate Student Qualifying Exam and/or Thesis Advisory Committees

Nova Qi (Wes Grueber lab), Cellular, Molecular, and Biomedical Studies Graduate Group, 2022– present

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

*Erin (Evonne) Jean (Debroski Herbert lab), Immunology Graduate Group. 2022– present

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

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

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

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

University Service

Columbia University

2022 – Diversity, Equity, Inclusion (DEI) Committee, Department of Biological Sciences

2022 Reviewer (for internal competition), Brain Research Foundation Seed Grant Program

2022 Reviewer (for internal competition), J&J WiSTEM2D program

2022 Reviewer, Research Initiatives in Science & Engineering (RISE) competition

2022 Reviewer, Presidential Scholars in Society and Neuroscience Postdoctoral Fellowship

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

Meeting Organization

- Co-Chair, Keystone Meeting on Mammalian Somatosensation (2024)
- Co-Chair, Northeast Pain Meeting (2023)

Editorial and Advisory Boards

2022–present Advisory Board, Burroughs Wellcome Fund PDEP Postdoctoral Fellowship

2021–present Editorial Board, Neurobiology of Pain

2020–present Editorial Board, Cell Reports

2020–2022 Board of Reviewing Editors, eLife

Study Section/Grant Reviewer

Burroughs Wellcome Fund PDEP Postdoctoral Fellowship review panel (2023)

NIH BRAIN Initiative R01 review panel (2022)
Chan Zuckerberg Initiative Biohub Investigators (Stanford, Berkeley, UCSF) review panel (2021)
Department of Defense (DoD) Neurophysiology of Cognition review panel (2020)
NIH/NINDS F99/K00 Blueprint D-SPAN Award review panel (2020)
Burroughs Wellcome Fund Graduate Diversity Enrichment Program review panel (2019)

Journal Reviewer: Cell, Neuron, Nature Communications, Science Advances, Nature Reviews Neuroscience, eLife, Pain, PLoS Biology, Neuropsychopharmacology, Journal of Neuroscience, Cell Reports, Methods in Cell Biology, Molecular Pain, Neuroscience, Neuroscience Letters, Pain Reports, PLoS One, Star Protocols, Annals of the New York Academy of Sciences

Outreach

- Director and Founder “*Hildrus Poindexter Scholars*” summer program hosted at Columbia University for HBCU undergraduates funded through the Chan Zuckerberg Initiative Science Diversity Leadership Award (2023–2028)
- Panelist, Interviewed by Richard Axel at Brain Series Lecture at Columbia’s Zuckerman Institute (2022)
- Panel Leader, DEI in the machine learning and behavior community at the Jackson Labs short course (2022)
- Keynote Speaker, BRAINYAC Columbia University high school summer intern graduation ceremony (2022)
- Speaker, ASSURE Summer Scholars Program for URM students at Washington University in St. Louis (2022)
- Speaker, “*Stories in Science*”, Columbia University Neuroscience Society & Black in Neuro Manhattan (2022)
- Speaker, Columbia’s Zuckerman Institute, Diversity Funding Opportunities at NIH (2021)
- Black-in-Stem conversation with Rutgers Camden University MARC students (2021)
- 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*” (2020)
- Speaker, NIH Conference on Advancing Diversity Programs (2019)
- Panelist, NIH/ENDURE program for underrepresented minority trainees (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 (2018)
- Invited Speaker, “**March for Science**” Philadelphia, PA (2017)
- Panelist, Alpha Kappa Alpha Sorority Ascend high school career fair for URM students (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 (2017)
- Panelist, *Diversity in STEM workshop*, Penn Center for Teaching and Learning (2016)
- Program Organizer for URM interns at Penn, “*Graduate School Admissions Process*” (2016)
- Career Development Panelist, “*Penn Honors Diversity Symposium*” (2016)
- Science Fair poster judge, Lincoln University & Penn (2016)
- Invited Lecture, “*Optogenetics and Pain*” Friends Central High School, Wynnewood, PA (2016)
- Invited Lecture, Penn Undergraduate Neuroscience Society, “*Pain in the Brain*” (2016)
- Poster Judge at Diversity session, American Society for Cell Biology Annual Meeting (2012)
- Panelist, McNair Scholars forum for undergraduate URM seniors at Penn (2011)
- Co-Founder & Volunteer, Science Education Academy for middle-school students in West Phila. (2008 – 2018)
- Panelist/Lab Tour Host, Upward Bound program for high school students (2008)
- Outreach Chair, E.E. Just Biomedical Society for underrepresented minority graduate students (2007)