

Ishmail Abdus-Saboar, PhD

Associate Professor, Department of Biological Sciences
 Principal Investigator, Zuckerman Mind Brain Behavior Institute
 Freeman Hrabowski Scholar, Howard Hughes Medical Institute
 Columbia University, 3227 Broadway, Quad 6C, New York, NY 10027

Personal

Born: Philadelphia, Pennsylvania USA. May 19, 1984; married, two children

Positions

2023–present	Freeman Hrabowski Scholar, Howard Hughes Medical Institute
2025–present	Associate Professor (tenured), Department of Biological Sciences, Columbia University
2023–2025	Associate Professor, Department of Biological Sciences, Columbia University
2021–2023	Assistant Professor, Department of Biological Sciences, Columbia University
2018–2021	Mitchell and Margo Blutt Presidential Assistant Professor of Biology, University of Pennsylvania

Education

2014–2018	Postdoctoral Fellow, Wenqin Luo Lab, University of Pennsylvania
2012–2014	Postdoctoral Fellow, Ben Shykind Lab, Weill Cornell Medicine
2006–2012	Ph.D. in Cell and Molecular Biology, Meera Sundaram Lab, University of Pennsylvania
2002–2006	B.S. in Animal Science (summa cum laude), North Carolina A&T State University

Honors and Awards

2025	NIH Director's Pioneer Award
2025	Kavli-Grossman Scholar
2024	One Mind Rising Star Award
2024	50 Scientists that Inspire, 50 th year anniversary of Cell
2023	Young Investigator Award, Society for Neuroscience
2023	HHMI Freeman Hrabowski Scholar
2023	McKnight Scholar Award
2022	NIH New Innovator Award
2022	Pew Biomedical Scholar
2022	Chan Zuckerberg Initiative SDL Award
2022	Brain Research Foundation Award
2021	Alfred P. Sloan Fellow
2021	Kavli Fellow, National Academy of Sciences
2020	Rita Allen Foundation Scholar
2017	NIH Pathway to Independence Award
2015	Burroughs Wellcome Fund PDEP Fellow
2012	Tom Kadesch Prize in Genetics

Distinguished Lectureships

2025	Keynote Lecture, UAB School of Medicine, Neuroscience Center Retreat
2025	Wayne E. Crill Lecture, University of Washington
2025	Keynote Lecture, Young Memorial Symposium, Emory University
2024	Presidential Lecture, Simons Foundation
2023	Plenary Lecture, American Society for Cell Biology Annual Meeting
2023	SFNova Lecture, Society for Neuroscience Annual Meeting
2022	Keynote Lecture, University of Pennsylvania, Cell & Molecular Biology Grad Group Symposium
2018	Emerging Scholars Lecture, Vanderbilt University School of Medicine

Publications

1. Burdge J, Jhumka A, Khan A, Ogundare S, Baer N, Fulton S, Kaplan A, Bistis B, Foster W, Thackray J, Toussaint A, Li M, Morizawa YM, Nazarian J, Yadessa L, George AJ, Delinois A, Mayiseni W, Loran N, Yang G, Margolis DJ, Abaira VE, Abdus-Saboar I. Remote automated delivery of mechanical stimuli coupled to brain recordings in behaving mice. eLife 13:RP99614 (2025)
2. Sur D, Zeng Y, Kobayashi H, Zhi X, Goetz MR, Müller CM, Zavitsanou AM, Picoli CC, Martel Matos AA, Pareja J,

- Savita BK, Lee T, Cunha-Junior JP, Amorim JH, Nikpoor AR, Dory A, Thanabalasuriar A, Galante PAF, Ma VT, James AW, Shepherd AJ, Oudin MJ, Bunimovich YL, Scheff NN, D'Silva NJ, Dixon KO, Abdus-Saboor I, Wang TC, Talbot S, Birbrair A. Entangled cellular and molecular relationships at the sensory neuron–cancer interface. *Neuron* 113(17):2760-2790 (2025)
3. Fulton S, Bendl J, DiSalvo G, Fullard J, Al-Kachak A, Lepack A, Stewart A, Singh S, Poller W, Bastle R, Hauberg M, Fakira A, Patel V, Chen M, Durand-de Cuttoli R, Gameiro-Ros I, Cathomas F, Ramakrishnan A, Gleason K, Shen L, Tamminga C, Milosevic A, Russo S, Swirski F, Slesinger P, Abdus-Saboor I, Blitzer R, Roussos P, Maze I. Major-depressive-disorder-associated dysregulation of ZBTB7A in orbitofrontal cortex promotes astrocyte-mediated stress susceptibility. *Neuron* 6273(25)00394-0 (2025)
4. Upadhyay A, Gradwell M, Vajtay T, Conner J, Sayal AA, Azadegan C, Patel KR, Thackray JK, Bohic M, Imai F, Ogundare S, Yoshida Y, Abdus-Saboor I, Azim E, Abaira V. The dorsal column nuclei scale mechanical sensitivity in naive and neuropathic pain states. *Cell Reports* 22;44(4):115556 (2025)
5. Liu D, Rahman M, Johnson A, Amo R, Tsutsui-Kimura I, Sullivan Z, Pena N, Talay M, Logeman BL, Finkbeiner S, Qian L, Choi S, Capo-Battaglia A, Abdus-Saboor I, Ginty DD, Uchida N, Watabe-Uchida M, Dulac C. A hypothalamic circuit underlying the dynamic control of social homeostasis. *Nature* 640(8060):1000-1010 (2025)
6. Inclan-Rico JM, Napuri C, Lin C, Hung LY, Ferguson A, Wu Q, Pastore CF, Stephenson A, Femoe U, Rossi HL, Reed D, Abdus-Saboor I, Luo W, Herbert DR. MrgprA3 neurons drive cutaneous immunity against helminths through selective control of myeloid-derived IL-33. *Nature Immunology* 25(11):2068-2084. (2024)
7. Sgourdou P, Schaffler M, Choi K, McCall N, Burdge J, Williams J, Corder G, Fuccillo M, Abdus-Saboor I, Epstein D. Impaired pain in mice lacking first order posterior medial thalamic neurons. *Pain* 166(1):130-143 (2025).
8. Schwark R, Ogundare O, Sheng P, Foster W, Chang P, Tsai Y-YW, Arnold A, Abdus-Saboor I. Social touch shapes communication and animal recognition in naked mole-rats. *bioRxiv* (2024)
9. Zavitsanou A, Abdus-Saboor I. Sex organs sense vibrations through specialized touch neurons. *Nature* 630(8018):822 823 (2024).
10. Bashkirova E, Klimpert N, Monahan K, Campbell CE, Osinski J, Tan L, Schieren I, Pourmorady A, Stecky B, Barnea G, Xie XS, Abdus-Saboor I, Shykind B, Marlin BJ, Gronostajski R, Fleischmann A, Lomvardas S. Opposing, spatially-determined epigenetic forces impose restrictions on stochastic olfactory receptor choice. *eLife* 12:RP87445 (2023)
11. Bohic M, Pattison L, Jhumka A, Rossi H, Thackray J, Ricci M, Foster W, Ogundare S, Twomey C, Hilton H, Arnold J, Mossazghi N, Yttri E, Tischfield, MA, Smith ESJ, Abdus-Saboor I*, Abaira V*. Mapping the neuroethological signatures of pain, analgesia, and recovery in mice. *Neuron* 111(18):2811-2830 (2023)
12. 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-Saboor, I. Touch neurons underlying dopaminergic pleasurable touch and sexual receptivity. *Cell* 186, 577–590 (2023).
13. Z. Anissa Jhumka, Abdus-Saboor I. Next generation behavioral sequencing for advancing pain quantification. *Current Opinion in Neurobiology* 76:102598 (2022).
14. Elias LJ, Abdus-Saboor I. Bridging skin, brain, and behavior to understand pleasurable social touch. *Current Opinion in Neurobiology* 73:102527 (2022).
15. Burdge J, Jhumka ZA, Bravo I, Abdus-Saboor I. Taking a deep breath: How a brainstem pathway integrates pain and breathing. *Neuron* 2;110(5):739-741 (2022).
16. 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* eabk2425 (2022).

17. Inclan-Rico JM, Kim BS, Abdus-Saboor I. Beyond somatosensation: Mrgprs in mucosal tissues. *Neuroscience Letters* 11;135689 (2021).
18. Schaffler M, Johnson M, Hing B, Kahler P, Hultman I, Srivastava S, Arnold J, Blendy J, Hultman R, Abdus-Saboor, I. A critical role for touch neurons in a skin-brain pathway for stress resilience. *bioRxiv* (2022)
19. Jones JM, Foster W, Twomey CR, Burdge J, Ahmed O, Pereira T, Wojick J, Corder G, Plotkin JB, Abdus-Saboor I. A machine-vision approach for automated pain measurement at millisecond timescales. *eLife* 9:e57258 (2020).
20. 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).
21. 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).
22. Schaffler M, Elias L, Abdus-Saboor I. Mechanisms of tactile sensory phenotypes in autism: current understanding, and future directions for research. *Current Psychiatry Reports* 5;21(12):134 (2019).
23. 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).
24. Abdus-Saboor 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).
25. Olson W, Abdus-Saboor 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).
26. Cui L, Miao X, Liang L, Abdus-Saboor 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).
27. Abdus-Saboor 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).
28. Abdus-Saboor I, Fleischmann A., Shykind B. Setting limits: maintaining order in a large gene family. *Transcription* 5:e28978 (2014).
29. Fleischmann A, Abdus-Saboor I, Sayed A, Shykind B. Functional interrogation of an odorant receptor locus reveals multiple axes of transcriptional regulation. *PloS Biology* 11 (5):e1001568 (2013).
30. Abdus-Saboor 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).
31. Abdus-Saboor 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).

Patents:

- Automated reproducible mechanical stimulation for animal experiments. Patent filed on 6-16-2023

Teaching

Columbia University:

Instructor (75-150 students): BIOL UN3004 Neurobiology I: Cellular and Molecular Neurobiology (2022 – present)

University of Pennsylvania:

Instructor (150 students): BIOL 221: Molecular Biology and Genetics (2019 – 2021)

Columbia University Service

2025	Member, ARC Committee, Department of Biological Sciences
2025	Lecturer Review Committee, Department of Biological Sciences
2024–present	Member, PhD Graduate Committee, Department of Biological Sciences
2024	Member, Department of Neuroscience Chair Search Committee
2023–present	Member, Executive Committee, Department of Biological Sciences
2023–present	Faculty Advisor, BUMP Biology
2023	Organizer (with Laura Duvall), Department of Biological Sciences Annual Retreat
2021–2022	Faculty Search Committee, Zuckerman Mind Brain Behavior Institute

Graduate Student Qualifying Exam and/or Thesis Advisory Committees

Aniekan Umoren, 2025– present; Ruihuan Yu, 2025– present; Sherry Li, 2024– present; Valentine Andreu, 2023– 2024; Abby Wood, 2023– present; Nova Qi, 2022– present; Eliza Jaeger, 2021– present; Yasmin Ramadan, 2021– present; Aaron Limoges, 2021– 2024; Erin Jean, 2022– 2024; Brandon Bastien, 2020 – 2024; Michelle Klima, 2020 – 2022; Jessica Wojick, 2020; Melina Gyparakis, 2019 – 2021; Bishwas Sharma, 2019 – 2021; Luigim Cifuentes, 2019; Yongjun Li, 2019; Linyang Ju, 2019

Professional Service

Scientific Advisory Boards

2024–present	Co-Founder and Scientific Consultant, Tactorum Inc.
2022–2025	Scientific Advisory Board, Doloromics Inc.
2022–present	Advisory Board, Burroughs Wellcome Fund PDEP Postdoctoral Fellowship
2021–present	Editorial Board, Neurobiology of Pain
2020–present	Editorial Board, Cell Reports
2020–2023	Board of Reviewing Editors, eLife

Faculty Mentorship

2026–2027	Faculty mentor to junior faculty through NIH R25 Faculty Access Program
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Grant Review Panels

- Standing member, NIH Neurobiology of Pain and Itch study section (2025 – 2029)
- Standing member, HHMI Hannah Gray Fellowship (2024 – present)
- Ad hoc reviewer, NIH R01 review panel for Neurobiology of Pain and Itch study section (2024)
- Ad hoc reviewer, NIH HEAL Initiative R01 review panel on “Discovery of Novel Pain Targets” (2023)
- Ad hoc reviewer, NIH/NIDDK R01 review panel on “Mechanisms and Management of Pain” (2023)
- Ad hoc reviewer, Simons Foundation Autism Research Initiative (SFARI) “Cross-Species Studies of ASD” (2023)
- Standing member, Burroughs Wellcome Fund PDEP Postdoctoral Fellowship (2023 – present)
- Ad hoc reviewer, NIH BRAIN Initiative R01 review panel (2022)
- Ad hoc reviewer, Chan Zuckerberg Biohub Investigators San Francisco review panel (2021)
- Ad hoc reviewer, NIH/NINDS F99/K00 Blueprint D-SPAN Award review panel (2020)
- Ad hoc reviewer, Burroughs Wellcome Fund GDEP review panel (2019)

Meeting Organization

Keystone Meeting: Mammalian Somatosensation (with Diana Bautista & Becky Seal) (2024)
Northeast Pain Meeting (with Vanna Zachariou and Victoria Abaira) (2023 – present)

Journal Reviewer

2018–present	Nature, Cell, Science, Neuron, Nature Neuroscience, Science Advances, Nature Communications, eLife, Cell Reports, Journal of Neuroscience, Pain, Nature Methods, etc.
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Grant Support

Pending grants

2025-2030	NIH/NIMH Research Project award (R01MH139796)	\$2,059,135/\$3,419,275 (direct/total)
Role: PI	“Determining the role of peripheral touch sensing neurons in stress response phenotypes”	

Active grants

2025–2030	NIH Director’s Pioneer Award	\$3,500,000 /\$5,757,500 (direct/total)
Role: PI	“Role of social touch and social memory in organizing naked mole-rat colonies”	

2025–2026 Role: PI	Incite Institute at Columbia University Hard Questions Grant “How does the brain control social recognition and social memory?”	\$75,000 (direct)
2025–2028 Role: PI	Kavli-Grossman Scholar Award	\$225,000 (direct)
2024–2027 Role: PI	One Mind Rising Star Award “Activating neurons in the skin to relieve symptoms of chronic stress”	\$300,000 (direct)
2023–2033 Role: PI	Freeman Hrabowski Scholar, Howard Hughes Medical Institute “Neural circuits for somatosensation from mice to naked mole-rats”	\$8,600,000 (direct)
2023–2026 Role: PI	McKnight Scholar Award “Skin-brain axis for rewarding touch behaviors”	\$225,000 (direct)
2023–2026 Role: PI	Ernest E. Just Faculty Mentor Award.. Awarded to IAS to fund a postdoc	\$437,283/\$465,783 (direct/total)
2022–2027 Role: PI	Chan Zuckerberg Initiative Science Diversity Leadership Award “Uncovering Peripheral and Central Neural Circuits for Inflammatory Pain”	\$1,000,000/\$1,150,000 (direct/total)
2022–2026 Role: PI	Pew Scholar in the Biomedical Sciences “Elucidating Pain Sensation and Emotion from Circuits to Cells to Genes”	\$300,000 (direct)
<u>Completed grants</u>		
2022–2025 Role: PI	NIH/NINDS DP2 New Innovator Award (DP2NS130454) “Using mouse pain scales to discover unusual pain sensitivity and new pain targets.”	\$1,500,000/\$2,467,500 (direct/total)
2024–2025 Role: PI	Columbia University Cancer Center & Arts and Science (Co-PI: Yvon Woappi) “Do sensory neurons in the skin drive wound memory to promote squamous cell carcinoma?”	\$100,000 (direct)
2022–2024 Role: PI	Brain Research Foundation Seed Grant “Investigating a skin-brain neuronal pathway for rewarding social touch.”	\$80,000 (direct)
2022–2023 Role: PI	Columbia University Provost Grant for Junior Faculty “Does brain activity in the naked mole-rat govern cooperative social life?”	\$30,000 (direct)
2021–2023 Role: PI	Alfred P. Sloan Research Fellowship in Neuroscience.	\$75,000 (direct)
2020–2023 Role: PI	Rita Allen Foundation Scholar in Pain Award “Discovering behavioral signatures of pain at millisecond timescales.”	\$150,000 (direct)
2017–2021 Role: PI	NIH/NIDCR 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)
2015–2018 Role: PI	Burroughs Wellcome Fund Postdoctoral Enrichment Program “Defining the neural mechanisms mediating crosstalk between touch and pain.”	\$60,000 (direct)
2016–2017 Role: PI	Burroughs Wellcome Fund Collaborative Travel Grant “Optogenetic and brain imaging investigation of pain neural circuitry.” Co-I: Jin Lee, Stanford	\$8,000 (direct)
2014–2017 Role: PI	NIH IRACDA Postdoc Fellowship (K12 GM081295) “Dissect neural mechanisms underlying the crosstalk between touch and pain.”	\$190,488 (total)

Department Seminars and Conference Talks

2026

New York University, Pain Research Center Seminar Series
University of Pennsylvania, Distinguished Seminar Series, Cell & Developmental Biology Department
Janelia Conference: Functional Mapping of the Peripheral Nervous System
Weill Cornell Medicine, Burke Neurological Institute Seminar Series

2025

Neuroscience Day, King Abdullah University of Science and Technology, Saudi Arabia
Summer Conference on the Changing Brain. Beckman Center of the National Academies at UC Irvine
Samsung Global Research Symposium: Brain-Body Interactions, Sweden
Columbia University Medical Center, Neuroscience Seminar Series
University of Lausanne, Switzerland. Department of Neuroscience Seminar Series
Lake Conference on Circuits Neuroscience: Sensation and Action. Lake Thun, Switzerland
UC Berkeley, Neuroscience Seminar Series

2024

International Associate for the Study of Pain World Congress on Pain, Netherlands
88th Cold Spring Harbor Laboratory Symposium on Quantitative Biology: Brain Body Physiology
Cold Spring Harbor Laboratory, Neuroscience Seminar Series
Columbia University, Psychiatry Grand Rounds
UC Davis, Neuroscience Seminar Series
New York University, Interdisciplinary Pain Research Program Seminar Series
Keystone Meeting: Mammalian Pain and Somatosensation
Johns Hopkins University, Department of Neuroscience Seminar Series

2023

Columbia University, Integrative Animal Behavior Seminar Series
Barnard College, Department of Biological Sciences Seminar Series
Brown University, Neuroscience Seminar Series
Columbia University, Dermatology Grand Rounds
Columbia University, HICCC Cancer-relevant Chemistry and Biology Symposium
Mount Sinai School of Medicine: Brain and Body Lecture Series
Oregon Health & Science University, Neuroscience Futures Seminar Series
Stanford University, Wu Tsai Neuroscience Institute Seminar Series
Princeton University, Neuroscience Institute Seminar Series
Caltech, Chen Institute Neuroscience Symposium

2022

Yale University, Neuroscience Seminar Series
American College of Neuropsychopharmacology Annual Meeting
New York University, Department of Biology Seminar Series
UC Berkeley, Brain Imaging in the Bay Symposium
Rockefeller University, Symposium on the Social Brain
Albert Einstein College of Medicine, Neuroscience Seminar Series
Gordon Conference, Optogenetic Approaches to Neural Circuits and Behavior, Maine
Columbia University, Neurosurgery Grand Rounds
Washington University in St. Louis, Anesthesiology Research Seminar Series
Northwestern University, Department of Physiology and Pain Center Seminar Series
Karger J.B. Johnston Club Symposium, Evolving Intersecting Neural Circuits
Columbia University, Stavros Niarchos Foundation Lecture
Brandeis University, M. R. Bauer Foundation Colloquium Seminar Series
Columbia University, Frontiers in Engineering and Medicine, Symposium on Neuromodulation
University of Washington, Department of Biological Structure Seminar Series

2021

Penn State College of Medicine, Neural and Behavioral Sciences Department Seminar Series
Harvard University, Brain Science Initiative, Neurobiology of Pain Event

Johns Hopkins University, Department of Molecular and Comparative Pathobiology Seminar Series

Harvard Medical School, Department of Neurobiology Seminar Series

Johns Hopkins University, Blaustein Pain Grand Rounds

University of California San Francisco, Neuroscience Seminar Series

Brown University, Samuel M. Nabrit Conference for Early Career Scholars

Newcastle University (UK), Centre for Behaviour and Evolution Seminar Series

Brain Initiative Investigator's Meeting, Social Brain Symposium

Columbia University, Department of Biological Sciences Seminar Series

Salk Institute, Thursday Seminar Series

Williams College, Class of 1960 Scholar Speaker Series

University of Southern California, Neurobiology Seminar Series

Texas Pain Research Consortium, Seminar Series

George Washington University, IBS Neuroscience Seminar Series

University College London, Gatsby Computational Neuroscience Series

University of Chicago, Neuroscience Seminar Series

New York University School of Medicine, Marie Daly Speaker Series

Duke University, Department of Neurobiology Seminar Series

Allen Institute for Brain Science, Inaugural Black History Month Seminar Series

Middlebury College, Neuroscience Seminar Series

University of California San Diego, Neuroscience Seminar Series

2020

Northeastern University, Biology Colloquium

Washington University in St. Louis, Anesthesiology Research Seminar Series

Weill Cornell Medicine, Frontiers in Neuropsychiatry Seminar Series

University of Pittsburgh & Carnegie Mellon University, CNBC ERC Series

UT Health San Antonio, Department of Pharmacology & Center for Biomedical Neuroscience

Johns Hopkins University, Department of Biology Seminar Series

University of Iowa, Neuroscience Institute Seminar Series

University of Michigan, Department of Molecular, Cell, Developmental Biology

Johns Hopkins University, Department of Biochemistry and Molecular Biology

Columbia University, Zuckerman Institute, Breakthroughs in Neuroscience Series

National Institutes of Health, Animal Genetics Consortium

Drexel University, Department of Neurobiology and Anatomy Seminar Series

Georgetown University, Department of Pharmacology and Physiology

National Institutes of Health, Early Career Investigators in Addiction Neuro Series

Johns Hopkins University, Department of Pharmacology & Molecular Sciences

Stanford University & Chinese Academy of Sciences; Neuro Zoom

University of Virginia, Neuroscience Department, Inaugural Juneteenth Lecture

Rowan University, Molecular and Cellular Biosciences Seminar Series

Temple University, Neuroscience Seminar Series

Keystone Symposium: Pain: Aligning the Target, Colorado

University of Pennsylvania, Dermatology Research Seminar Series

2019

University of Pennsylvania, Neuroscience Graduate Group Public Lecture on Pain

University of Pennsylvania, Psychology Department Colloquium Series

Annual Biomedical Conference for Minority Students (ABRCMS), California

University of Texas at Dallas, School of Behavioral and Brain Sciences

Lasalle University, Department of Biology

University of Illinois at Chicago, Integrative Neuroscience Seminar Series

Fox Chase Cancer Center, Molecular Therapeutics Department

University of Pennsylvania, SUIP Faculty Research Seminar

University of Maryland Baltimore County, Departments of Biology; Chemistry/Biochemistry

University of Washington, Neuroscience Seminar Series

North Carolina A&T State University, Department of Biology

University of California Santa Cruz, Department of Molecular, Cell, Developmental Biology

2018

Rockefeller University, Sense to Synapse Conference
 Gordon Conference, Molecular and Cellular Neurobiology, Hong Kong
 St. Joseph's University, Department of Biology
 University of Pennsylvania, Center for Neurobiology and Behavior Seminar
 Mid-Atlantic Pharmacology Society Meeting, Philadelphia, PA
 University of Pennsylvania, mindCORE Seminar Series
 National Institutes of Health, Pain Consortium Symposium
 Meharry Medical College, Department of Biochemistry and Cancer Biology
 Bryn Mawr College, Chemistry Colloquia Series
 Duke University, Department of Pharmacology
 New York University, Department of Oral Surgery
 University of Pennsylvania, Department of Biology

Media

- 50 Scientists that Inspire, 50th Year Anniversary Issue. **Cell** (2024)
- Podcast interview. From Lab to Life: The Science of Touch." **Pew Charitable Trusts** (2024)
- Q & A Feature interview. "Pleasure or pain? He maps the neural circuits that decide." **Quanta Magazine** (2024).
- "Trailblazing neurobiologist studies the science of pleasure and pain" **Columbia University** (2022). [YouTube](#)
- Q & A Feature interview. **Neuron** (2021)
- "Beyond the CV: Stories from Faculty." **University of Pennsylvania MindCORE**, 2021. [YouTube](#)
- Feature interview. "The Science of Sensations" **Penn Today** (2019)
- TV Feature and lab visit, **CBS News** (2018). "Central High School Graduate Hoping to Make Impact with New Lab at Penn Medicine" {<https://www.youtube.com/watch?v=DkApUni3MA>}

Mentorship:

Current

Postdoctoral Fellows

- 1) 2024 – present Anna Zhukovskaya
- 2) 2024 – present Yuki Haba (Leon Levy Fellow)
- 3) 2023 – present Aleksander Kaplan
- 4) 2023 – present Briana Nixon (HHMI-LSRF Fellow)
- 5) 2023 – present Sasha Fulton (HHMI Hannah Gray Fellow)
- 6) 2022 – present Anastasia-maria Zavitsanou (Simons Junior Fellow)

Doctoral Students

- 1) 2025 – present Tate Yawitz (Neurobiology & Behavior)
- 2) 2024 – present Viviana Vinci (Biological Sciences)
- 3) 2024 – present Yu-Young Wesley Tsai (Biological Sciences)
- 4) 2023 – present William Foster (Neurobiology & Behavior)
- 5) 2023 – present Preston Sheng (Biological Sciences)
- 6) 2023 – present Isabella Succi (Biological Sciences)
- 7) 2022 – present Brittany Bistis (Biological Sciences)

Undergraduates

- 1) 2025 – present Jerry Lyu, Neuroscience and Behavior
- 2) 2025 – present Wiam Alhumood, Neuroscience and Behavior
- 3) 2025 – present Berra Köse, Neuroscience and Behavior
- 4) 2025 – present Emmanuel Okeke, Neuroscience and Behavior
- 5) 2025 – present Carolina Abascal, Neuroscience and Behavior
- 6) 2025 – present Erin Yoo
- 7) 2023 – present Ashar Khan, Neuroscience and Behavior

Alumni (last known position)

Postdoctoral Fellows

- 1) 2022 – 2024 Andre Toussaint (Postdoctoral Fellow at Mount Sinai Medicine)
- 2) 2021 – 2024 Anissa Jhumka
- 3) 2018 – 2021 Heather Rossi (Senior Research Investigator at UPenn)

Doctoral Students

- 1) 2020 – 2024 Ryan Schwark (Curation Scientist, Fulgent Technologies)
- 2) 2020 – 2024 Justin Burdge (Postdoctoral Fellow at Rutgers University)
- 3) 2018 – 2022 Melanie Schaffler (Regular Writer at Novo Nordisk)
- 4) 2018 – 2022 Leah Elias (JCC Postdoctoral Fellow at Johns Hopkins University)

Technicians

- 1) 2023 – 2024 Alexis Knight (Clinical research associate at Columbia University)
- 2) 2022 – 2023 Victoria Saltz (PhD student at Columbia University)
- 3) 2021 – 2022 Jared Boyce (MD-PhD student at Wisconsin-Madison)
- 4) 2020 – 2022 Isabella Succi (PhD student in the Abdus-Saboor lab at Columbia University)
- 5) 2018 – 2021 William Foster (PhD student in the Abdus-Saboor lab at Columbia University)
- 6) 2018 – 2020 Jessica Jones (HHMI Gilliam Fellow and PhD student at University of Washington)

Undergraduates

- 1) 2024–2025 Simon Toney (technician in the Abdus-Saboor lab at Columbia University)
- 2) 2023–2025 Amanda Arnold (technician at Rockefeller University)
- 3) 2023–2025 Leah Yadessa (Intern at Pfizer)
- 4) 2023–2025 Sofia Marin-Quiros (tech startup)
- 5) 2023–2024 Olaedo Udensi
- 6) 2023–2024 Maximillian Comfere
- 7) 2022–2024 Jake Kothandaraman
- 8) 2022–2024 Melody Gomez
- 9) 2022–2024 Sarah Sorensen Ogata (Medical Assistant - Street Medic on Skid Row)
- 10) 2022–2024 Abednego Delinois (technician at Yale University)
- 11) 2023 –2024 Sevilla Duran (Master's student at Stanford University)
- 12) 2023–2024 Aishat Bakare
- 13) 2021–2024 Simon Ogundare (MD-PhD student at Columbia University)
- 14) 2022–2023 Alexis Knight (PhD student at University of Arizona)
- 15) 2022–2023 Jonathan Ettricks (R & D intern at Iveric Bio)
- 16) 2021–2023 Alexis Marshall (technician at Columbia University)
- 17) 2021–2023 Wadzanayi Michelle Mayiseni (post-bac at Yale University)
- 18) 2021–2023 Phaelen Chang (post-bac at Memorial Sloan Kettering)
- 19) 2019–2021 Justin Arnold (MD student at Northwestern University)
- 20) 2019–2021 Lucie Pham (MD student at Rutgers University)
- 21) 2019–2020 Samuel Kaufmann (Research Fellow at Silver Lining)
- 22) 2015–2019 Justin Burdge (PhD student in the Abdus-Saboor lab at Columbia University)
- 23) 2019 Emma Lu
- 24) 2018–2019 Migyana Thomas

Summer Interns

- 1) 2025 Sheldon Garrick II, Fordham University, HHMI SURP Intern
- 2) 2025 Lesley Iyamu, Columbia University; BUMP Intern
- 3) 2024 Tyla Mcaffitty, Howard University, EE Just Scholar
- 4) 2024 Jonathan Bryson-Harvey, Columbia University, SURF Intern
- 5) 2024 Joshua Samuels, St. Paul's School
- 6) 2024 Meley Haile, Columbia University; SPURS Intern
- 7) 2024 Marianna Liistro, University of Edinburgh
- 8) 2023 Zennetta Hinojosa, UT San Antonio, Leadership Alliance Intern
- 9) 2023 Noah Loran, University of Southern California, Leadership Alliance Intern
- 10) 2023 Misha Nair, Harvard University; SPURS Intern
- 11) 2023 Francesca Whitecross, Middlebury College
- 12) 2023 Alexa Cuvilly, high school student; BRAINYAC Scholar

- 13) 2023 James Reed, high school student; BRAINYAC Scholar
- 14) 2022 Teresa Osorio, Rutgers Camden University MARC Scholar. (PhD student at Johns Hopkins)
- 15) 2022 Adetokunboh Osineye, Morehouse College; EE Just Scholar
- 16) 2022 Ralph Anderson Jr., Morehouse College; EE Just Scholar
- 17) 2022 Ziad Eltabakh, LaGuardia High School; BRAINYAC Scholar
- 18) 2020 Kayla Dennis, Penn Lens program high school student
- 19) 2020 Camille Harrison, North Carolina A&T State University; SUIP intern (PhD student at UPenn)
- 20) 2020 Meghan Wachira, Rutgers Camden University; (post-bac at UPenn)
- 21) 2019 Isabella Succi, St. Joseph's University, (PhD student in the Abdus-Saboor lab at Columbia University)
- 22) 2019 Syphane Gibbs, North Carolina A&T U, SUIP intern; (PhD student at University of Virginia)
- 23) 2019 Racquel Amadi, Xavier University in Louisiana; DAPPG intern (Law student at Texas Southern U.)
- 24) 2019 Mariatu Fayia, Penn Lens program high school student (Masters student at Thomas Jefferson)

Fellowships Awarded to Trainees

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| 2025–2028 | Leon Levy Scholar in Neuroscience to Yuki Haba (postdoctoral fellow) |
| 2025–2033 | HHMI Hannah Gray Fellowship to Sasha Fulton (postdoc to faculty fellowship) |
| 2024–2027 | HHMI-LSRF Fellowship to Briana Nixon (postdoctoral fellow) |
| 2024–2027 | Simons Junior Fellowship to Anastasia Zavitsanou (postdoctoral fellow) |
| 2024–2027 | Burroughs Wellcome Fund PDEP to Sasha Fulton (postdoctoral fellow) |
| 2023–2024 | NIH NRSA Predoctoral Fellowship to Justin Burdge (graduate student) |
| 2023–2025 | NIH D-SPAN Fellowship to Sasha Fulton (postdoctoral fellow) |
| 2022–2024 | Simons Junior Fellowship to Andre Toussaint (postdoctoral fellow) |
| 2022–2024 | Burroughs Wellcome Fund PDEP to Andre Toussaint (postdoctoral fellow) |
| 2021–2022 | NIH NRSA Predoctoral Fellowship to Melanie Schaffler (graduate student) |
| 2020–2022 | NIH NRSA Predoctoral Fellowship to Leah Elias (graduate student) |