

**Ishmail Abdus-Saboor, 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.

**Education**

2006–2012 Ph.D. Cell and Molecular Biology, University of Pennsylvania (Advisor: Meera Sundaram)  
 2002–2006 B.S. Animal Science, North Carolina A&T State University (*summa cum laude*)

**Positions**

2023–present Freeman Hrabowski Scholar, Howard Hughes Medical Institute  
 2023–present Associate Professor, untenured, Columbia University  
 2021–2023 Assistant Professor, Columbia University  
 2018–2021 Mitchell and Margo Blutt Presidential Assistant Professor, University of Pennsylvania  
 2014–2018 Postdoctoral Fellow, University of Pennsylvania (Advisor: Wenqin Luo)  
 2012–2014 Postdoctoral Fellow, Weill Cornell Medicine (Advisor: Benjamin Shykind)

**Honors and Awards**

2025 Grossman-Kavli Scholar  
 2024 One Mind Rising Star Award  
 2023 Young Investigator Award, Society for Neuroscience  
 2023 HHMI Freeman Hrabowski Scholar  
 2023 McKnight Scholar Award  
 2022 Brain Research Foundation Award  
 2023 UNCF EE Just Faculty Mentor Award  
 2022 NIH New Innovator Award  
 2022 Chan Zuckerberg SDL Award  
 2022 Pew Biomedical Scholar  
 2021 Alfred P. Sloan Fellow  
 2021 Kavli Fellow, National Academy of Sciences  
 2020 Rita Allen Scholar  
 2018 Mitchell Max Award  
 2017 NIH Pathway to Independence Award  
 2015 Burroughs Wellcome Fund PDEP Fellow  
 2014 NIH IRACDA PennPORT Fellow  
 2012 Tom Kadesch Prize in Genetics

**Distinguished Lectureships**

2025 Wayne E. Crill Lecture, University of Washington, Seattle  
 2025 Keynote Lecture, Emory University Memorial Symposium for Dr. Larry Young  
 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

**Fellowships Awarded to Trainees**

2025 HHMI Hannah Gray Fellowship to Sasha Fulton (postdoc to faculty fellowship)  
 2024 LSRF Fellowship to Briana Nixon (postdoctoral fellow)  
 2024 Simons Junior Fellowship to Anastasia Zavitsanou (postdoctoral fellow)  
 2024 Burroughs Wellcome Fund PDEP to Sasha Fulton (postdoctoral fellow)  
 2023 NIH NRSA Predoctoral Fellowship to Justin Burdge (graduate student)  
 2023 NIH D-SPAN Fellowship to Sasha Fulton (postdoctoral fellow)  
 2023 EE Just Postgraduate Fellowship to Sasha Fulton (postdoctoral fellow)  
 2022 Simons Junior Fellowship; Burroughs Wellcome Fund PDEP to Andre Toussaint (postdoctoral fellow)

- 2021 NIH NRSA Predoctoral Fellowship to Melanie Schaffler (graduate student)  
2020 NIH NRSA Predoctoral Fellowship to Leah Elias (graduate student)

## **Teaching**

### **Columbia University:**

- Instructor (75-100 students): BIOL UN3004 Neurobiology I: Cellular and Molecular Neurobiology (2022 – present)  
Guest lecturer (graduate course): G4340: Survey of Neuroscience (2022 – present)  
Guest lecturer (undergraduate course): BIO UN1908: First-Year Seminar in Biology (Fall 2023)  
Guest lecturer (undergraduate course): BIO UN3041: Cell Biology (Fall 2023)  
Guest lecturer (graduate course): G4100: Biology of Neurologic and Psychiatric Disorders (Spring 2023)  
Guest lecturer (graduate course): BIOL GR9301: Pre-research seminar (Fall 2021)

### **University of Pennsylvania:**

- Instructor (150 students): BIOL 221: Molecular Biology and Genetics (2019 – 2021)  
Guest lecturer (graduate course): NGG 588: Topics in Translational Neuroscience (Spring 2020)

## **Mentorship:**

### **Current**

#### **Postdoctoral Fellows**

- 1) 2024 – present Anna Zhukovskaya (Ph.D. Princeton University)
- 2) 2024 – present Yuki Haba (Ph.D. Princeton University)
- 3) 2023 – present Aleksander Kaplan (Ph.D. Hebrew University)
- 4) 2023 – present Briana Nixon (Ph.D. Cornell University)
- 5) 2023 – present Sasha Fulton (Ph.D. Mount Sinai Medicine)
- 6) 2022 – present Anastasia-maria Zavitsanou (Ph.D. New York University)

#### **Doctoral Students**

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

#### **Undergraduates**

- 1) 2024 –present Simon Toney, Neuroscience and Behavior
- 2) 2023 –present Amanda Arnold, Neuroscience
- 3) 2023 –present Leah Yadessa, Neuroscience and Behavior
- 4) 2023 –present Sofia Marin-Quiros, Computer Science
- 5) 2023 –present Ashar Khan, Neuroscience and Behavior

### **Alumni** (last known position)

#### **Postdoctoral Fellows**

- 1) 2022 – 2024 Andre Toussaint (Postdoctoral Fellow at Mout Sinai Medicine)
- 2) 2021 – 2024 Anissa Jhumka (TBD)
- 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 Affairs Associate at Teva Pharmaceuticals)
- 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) 2023–2024 Olaedo Udensi
- 2) 2023–2024 Maximillian Comfere
- 3) 2022–2024 Jake Kothandaraman
- 4) 2022–2024 Melody Gomez
- 5) 2022–2024 Sarah Sorensen Ogata
- 6) 2022–2024 Abednego Delinois
- 7) 2023 –2024 Sevilla Duran (Master’s student at Stanford University)
- 8) 2023–2024 Aishat Bakare
- 9) 2021–2024 Simon Ogundare (MD-PhD student at Columbia University)
- 10) 2022–2023 Alexis Knight (technician in the Abdus-Saboor lab at Columbia University)
- 11) 2022–2023 Jonathan Ettricks (R & D intern at Iveric Bio)
- 12) 2021–2023 Alexis Marshall (technician at Columbia University)
- 13) 2021–2023 Wadzanayi Michelle Mayiseni (post-bac at Yale University)
- 14) 2021–2023 Phaelen Chang (post-bac at Memorial Sloan Kettering)
- 15) 2019–2021 Justin Arnold (MD student at Northwestern University)
- 16) 2019–2021 Lucie Pham (MD student at Rutgers University)
- 17) 2019–2020 Samuel Kaufmann (Research Fellow at Silver Lining)
- 18) 2015–2019 Justin Burdge (PhD student in the Abdus-Saboor lab at Columbia University)
- 19) 2019 Emma Lu
- 20) 2018–2019 Migyana Thomas

**Service****Meeting Organization**

- Organizer (w/ Diana Bautista & Becky Seal), Keystone Meeting: Mammalian Somatosensation (2024)
- Organizer (w/ Vanna Zachariou and Victoria Abaira), Northeast Pain Meeting (2023)

**Grant Review Panels**

- Ad hoc reviewer, HHMI Hannah Gray Fellowship (2024)
- Ad hoc reviewer, NIH Neurobiology of Pain and Itch study section R01 review panel (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 (2023-2026)
- Ad hoc reviewer, NIH BRAIN Initiative R01 review panel (2022)
- Ad hoc reviewer Chan Zuckerberg Biohub Investigators (Stanford/Berkeley/UCSF) 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)

**Scientific or Other Advisory Boards**

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|--------------|--|
| 2024–present | Co-Founder and Scientific Consultant, Tactorum Inc.                  |
| 2024–present | Editorial Board, Pain Research Forum                                 |
| 2022–present | 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                                    |

**Journal Reviewer**

- Nature	- Science	- Cell	- eLife	- Neuron	- Pain
- Cell Reports	- Nat. Comm.	- Nat. Neurosci.	- Neuropsych.	- Aging Cell	- Mol. Pain
- J.Neurosci.	- Star Protocols	- Pain Reports	- Neurosci.	- Neurosci. Let.	- Meth. Cell Bio.
- PloS Biology	- Annals of NYAS	- Sci. Advances	- PloS One	- Nature Protocols	

**Columbia University**

2024–2025	Member, PhD Graduate Admissions Committee, Department of Biological Sciences
2024	Member, Department of Neuroscience Chair Search Committee
2023–2024	Member, Executive Committee, Department of Biological Sciences
2023–present	Faculty Advisor, BUMP Biology
2023	Co-Organizer, 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**

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

**Grant Support**

2025–2028	Grossman-Kavli Scholar	\$225,000 (direct)
2024–2027	One Mind Rising Star Award	\$300,000 (direct)
2024–2025	Columbia University Cancer Center & Arts and Science (Co-PI: Yvon Woappi)	\$100,000 (direct)
2023–2033	Freeman Hrabowski Scholar, Howard Hughes Medical Institute	\$8,600,000 (direct)
2023–2026	McKnight Scholar Award	\$225,000 (direct)
2023–2026	Ernest E. Just Faculty Mentor Award. Awarded to IAS to fund a postdoc.	\$465,783 (total)
2022–2027	NIH/NINDS DP2 New Innovator Award (DP2NS130454)	\$2,467,500 (total)
2022–2027	Chan Zuckerberg Initiative Science Diversity Leadership Award	\$1,150,000 (total)
2022–2026	Pew Scholar in the Biomedical Sciences	\$300,000 (direct)
2022–2024	Brain Research Foundation Seed Grant	\$80,000 (direct)
2022–2023	Columbia University Provost Grant for Junior Faculty	\$30,000 (direct)
2021–2023	Alfred P. Sloan Research Fellowship in Neuroscience.	\$75,000 (direct)
2020–2023	Rita Allen Foundation Scholar in Pain Award	\$150,000 (direct)
2017–2021	NIH/NIDCR K99/R00 Pathway to Independence Award (DE026807)	\$1,116,555 (total)
2015–2018	Burroughs Wellcome Fund Postdoctoral Enrichment Program	\$60,000 (direct)
2016–2017	Burroughs Wellcome Fund Collaborative Travel Grant	\$8,000 (direct)
2014–2017	NIH IRACDA Postdoc Fellowship (K12 GM081295)	\$190,488 (total)

**Department Seminars and Conference Talks**

1.	Emory University, Neuroscience Frontier's Seminar Series	10/17/25
2.	New York University (NYU), Department of Molecular Pathobiology Seminar Series	9/25/25
3.	Summer Conference on the Changing Brain. Beckman Center of the National Academies	8/18/25
4.	Samsung Global Research Symposium: Brain-Body Interactions, Sweden	8/3/25
5.	Columbia University Medical Center, Neuroscience Seminar Series	6/18/25
6.	University of Lausanne, Switzerland. Department of Neuroscience Seminar Series	5/9/25
7.	Lake Conference on Circuits Neuroscience: Sensation and Action. Lake Thun, Switzerland	5/4/25
8.	Western University, Canada, Perspectives in Neuroscience Seminar Series	4/16/25
9.	UC Berkeley, Neuroscience Seminar Series	1/16/25
10.	Columbia's Zuckerman Institute, Neuroscience of Social Connections Meeting	10/29/24
11.	International Association for the Study of Pain (IASP) World Congress on Pain, Netherlands	8/5/24
12.	North American Pain School, Quebec, Canada	6/26/24
13.	Gatsby Tri-Center Meeting for Theoretical Neuroscience, Zuckerman Institute at Columbia University	6/3/24
14.	88 <sup>th</sup> Cold Spring Harbor Laboratory Symposium on Quantitative Biology: Brain Body Physiology	5/30/24
15.	Cold Spring Harbor Laboratory, Neuroscience Seminar Series	3/4/24
16.	Columbia University, Psychiatry Grand Rounds	2/28/24

17. UC Davis, Neuroscience Seminar Series	2/22/24
18. New York University (NYU), Interdisciplinary Pain Research Program Seminar Series	2/8/24
19. Keystone Meeting, "Mammalian Pain and Somatosensation"	1/14/24
20. Johns Hopkins University, Department of Neuroscience Seminar Series	1/4/24
21. Columbia University, Integrative Animal Behavior Seminar Series	11/6/23
22. Barnard College, Department of Biological Sciences Seminar Series	11/3/23
23. Brown University, Neuroscience Seminar Series	10/26/23
24. Columbia University, Dermatology Grand Rounds	9/15/23
25. Columbia University, HICCC Cancer-relevant Chemistry and Biology Symposium	9/7/23
26. Kallyope Inc., Seminar Series	8/23/23
27. Mount Sinai School of Medicine, "Brain and Body Lecture Series"	5/30/23
28. Oregon Health & Science University (OHSU), Neuroscience Futures Seminar Series	5/23/23
29. Stanford University, Wu Tsai Neuroscience Institute Seminar Series	4/27/23
30. Princeton University, Neuroscience Institute Seminar Series	3/2/23
31. Caltech, Chen Institute Neuroscience Symposium	1/28/23
32. Yale University, Neuroscience Seminar Series	12/12/22
33. American College of Neuropsychopharmacology Annual Meeting	12/4/22
34. New York University (NYU), Department of Biology Seminar Series	11/21/22
35. UC Berkeley, Brain Imaging in the Bay Symposium	11/5/22
36. Rockefeller University, Symposium on the Social Brain	10/25/22
37. Albert Einstein College of Medicine, Neuroscience Seminar Series	9/28/22
38. Gordon Conference, Optogenetic Approaches to Neural Circuits and Behavior, Maine	7/19/22
39. Columbia University, Neurosurgery Grand Rounds	7/7/22
40. Washington University in St. Louis, Anesthesiology Research Seminar Series	6/30/22
41. Northwestern University, Department of Physiology and Pain Center Seminar Series	6/24/22
42. Karger J.B. Johnston Club Symposium, Evolving Intersecting Neural Circuits	5/12/22
43. Columbia University, Stavros Niarchos Foundation Lecture	4/27/22
44. Brandeis University, M. R. Bauer Foundation Colloquium Seminar Series	3/29/22
45. Columbia U, Frontiers in Engineering and Medicine, Symposium on Neuromodulation	3/4/22
46. UNC Chapel Hill, Society for Black Biomedical Scientists Black History Month	2/28/22
47. University of Washington, Department of Biological Structure Seminar Series	1/27/22
48. Penn State College of Medicine, Neural and Behavioral Sciences Department Seminar Series	11/18/21
49. Harvard University, Brain Science Initiative, Neurobiology of Pain Event	11/16/21
50. Johns Hopkins University, Dpt of Molecular and Comparative Pathobiology Seminar Series	11/12/21
51. Harvard Medical School, Department of Neurobiology Seminar Series	10/4/21
52. Johns Hopkins University, Blaustein Pain Grand Rounds	9/24/21
53. University of California San Francisco (UCSF), Neuroscience Seminar Series	9/2/21
54. Brown University, Samuel M. Nabrit Conference for Early Career Scholars	8/2/21
55. Newcastle University (UK), Centre for Behaviour and Evolution Seminar Series	7/6/21
56. Brain Initiative Investigator's Meeting, Social Brain Symposium	6/17/21
57. Columbia University, Department of Biological Sciences Seminar Series	5/17/21
58. Salk Institute, Thursday Seminar Series	4/8/21
59. Williams College, Class of 1960 Scholar Speaker Series	3/31/21
60. University of Southern California (USC), Neurobiology Seminar Series	3/22/21
61. Texas Pain Research Consortium, Seminar Series	3/15/21
62. George Washington University, IBS Neuroscience Seminar Series	3/11/21
63. University College London, Gatsby Computational Neuroscience Series	3/5/21
64. University of Chicago, Neuroscience Seminar Series	2/23/21
65. New York University School of Medicine, Marie Daly Speaker Series	2/19/21
66. Duke University, Department of Neurobiology Seminar Series	2/16/21
67. Allen Institute for Brain Science, Inaugural Black History Month Seminar Series	2/9/21
68. Middlebury College, Neuroscience Seminar Series	2/5/21
69. University of California San Diego (UCSD), Neuroscience Seminar Series	1/12/21
70. Northeastern University, Biology Colloquium	12/7/20
71. Washington University in St. Louis, Anesthesiology Research Seminar Series	12/1/20
72. Weill Cornell Medicine, Frontiers in Neuropsychiatry Seminar Series	11/24/20
73. University of Pittsburgh & Carnegie Mellon University, CNBC ERC Series	11/18/20
74. UT Health San Antonio, Department of Pharmacology & Center for Biomedical Neuroscience	11/11/20
75. Johns Hopkins University, Department of Biology Seminar Series	11/5/20

76. University of Iowa, Neuroscience Institute Seminar Series	10/30/20
77. Keynote Speaker, Neuromatch Meeting	10/28/20
78. University of Michigan, Department of Molecular, Cell, Developmental Biology	10/16/20
79. Johns Hopkins University, Department of Biochemistry and Molecular Biology	10/12/20
80. Columbia University, Zuckerman Institute, Breakthroughs in Neuroscience Series	9/29/20
81. National Institutes of Health, Animal Genetics Consortium	9/24/20
82. Drexel University, Department of Neurobiology and Anatomy Seminar Series	9/23/20
83. Georgetown University, Department of Pharmacology and Physiology	9/10/20
84. National Institutes of Health, Early Career Investigators in Addiction Neuro Series	8/12/20
85. University of Pennsylvania, Diversity Action Plan in Genomics summer program	8/3/20
86. Johns Hopkins University, Department of Pharmacology & Molecular Sciences	7/22/20
87. Stanford University & Chinese Academy of Sciences; Neuro Zoom	7/6/20
88. University of Virginia, Neuroscience Department, Inaugural Juneteenth Lecture	6/15/20
89. Pain Research Forum; moderated by Cheryl Stucky, Wisconsin	3/24/20
90. Rowan University, Molecular and Cellular Biosciences Seminar Series	2/28/20
91. Temple University, Neuroscience Seminar Series	2/12/20
92. Keystone Symposium, "Pain: Aligning the Target", Colorado	2/3/20
93. University of Pennsylvania, Dermatology Research Seminar Series	1/14/20
94. University of Pennsylvania, Neuroscience Graduate Group Public Lecture on Pain	12/5/19
95. University of Pennsylvania, Psychology Department Colloquium Series	12/2/19
96. Annual Biomedical Conference for Minority Students (ABRCMS), California	11/16/19
97. University of Texas at Dallas, School of Behavioral and Brain Sciences	11/7/19
98. Lasalle University, Department of Biology	10/1/19
99. University of Illinois at Chicago, Integrative Neuroscience Seminar Series	9/26/19
100. Fox Chase Cancer Center, Molecular Therapeutics Department	6/20/19
101. University of Pennsylvania, SUIP Faculty Research Seminar	6/12/19
102. University of Maryland Baltimore County, Dpts. of Biology; Chemistry/Biochemistry	5/8/19
103. University of Washington, Neuroscience Seminar Series	3/14/19
104. North Carolina A&T State University, Department of Biology	1/23/19
105. University of California Santa Cruz, Dpt. Molecular, Cell, Developmental Biology	1/14/19
106. St. Joseph's University, Department of Biology	11/14/18
107. University of Pennsylvania, Undergraduate Neuroscience Honors Society	12/4/18
108. University of Pennsylvania, Center for Neurobiology and Behavior Seminar	10/26/18
109. Mid-Atlantic Pharmacology Society Meeting, Philadelphia, PA	9/27/18
110. University of Pennsylvania, mindCORE Seminar Series	9/4/18
111. Gordon Conference, Molecular and Cellular Neurobiology, Hong Kong	7/3/18
112. National Institutes of Health, Pain Consortium Symposium	5/31/18
113. Rockefeller University, Sense to Synapse Conference	5/12/18
114. Meharry Medical College, Department of Biochemistry and Cancer Biology	5/2/18
115. Bryn Mawr College, Chemistry Colloquia Series	4/16/18
116. Duke University, Department of Pharmacology	2/20/18
117. New York University, Department of Oral Surgery	2/7/18
118. University of Pennsylvania, Department of Biology	1/11/18
119. University of Pennsylvania, Department of Oral Surgery & Pharmacology	12/14/17
120. Johns Hopkins University, Department of Pharmacology & Molecular Sciences	12/12/17
121. Temple University, Center for Substance Abuse Research	12/7/17
122. Society for Neuroscience Meeting, Washington D.C.	11/11/17
123. Haverford College, Department of Biology	4/3/17
124. Syracuse University, Department of Biology	3/10/17
125. University of Pennsylvania, SACNAS Chapter Science Café Seminar Series	2/16/17
126. Rutgers University Camden, Department of Biology	1/19/17
127. Swarthmore College, Department of Biology	11/30/16
128. Mount Holyoke College, Department of Biological Sciences	11/8/16
129. University of Pennsylvania Dental School, Levy Series	10/27/16
130. Bucknell University, Department of Biology	10/3/16
131. Rutgers University Camden, Department of Biology	3/10/16
132. Virginia Tech University, Department of Biochemistry	1/13/16
133. 2 <sup>nd</sup> International Symposium on Olfaction, Paris	9/19/13
134. University of Pennsylvania, Genetics Symposium	11/28/12



135. University of Pennsylvania, Cell and Molecular Biology Annual Symposium 10/11/11  
 136. International *C.elegans* Meeting, Los Angeles, CA 6/26/11  
 137. Society for Developmental Biology Meeting, Phila., PA, *award for best graduate student talk* 6/3/11

### **Media**

- 50 Scientists that Inspire, 50<sup>th</sup> 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) <https://doi.org/10.1016/j.neuron.2021.09.026>
- “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). <https://www.cbsnews.com/philadelphia/news/central-high-school-graduate-penn-medicine/>

### **Publications**

1. 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](#) (in press)
2. 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 scales mechanical allodynia during neuropathic pain. [Cell Reports](#) (in press)
3. 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)
4. Burdge J, Ogundare S, Jhumka A, Baer N, Fulton S, Bistis B, Foster W, Toussaint A, Li M, Morizawa Y, Yadessa L, Khan A, Khan A, Delinois A, Mayiseni W, Loran N, Yang G **Abdus-Saboor, I**. Remote automated delivery of mechanical stimuli coupled to brain recordings in behaving mice. [eLife](#) (2024). doi.org/10.7554/eLife.99614.1.
5. 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)
6. 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 (2024).
7. 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) \* joint senior authorship
8. Bashkirova EV, Klimpert N, Monahan K, Campbell CE, Osinski J, Tan L, Schieren I, Pourmorady A, Stecky B, Barnea G, Xie XS, **Abdus-Saboor I**, Shykind BM, Marlin BJ, Gronostajski RM, Fleischmann A, Lomvardas S. Opposing, spatially-determined epigenetic forces impose restrictions on stochastic olfactory receptor choice. [eLife](#) 12:RP87445 (2023)
9. 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).
10. 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).
11. 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)

12. Jones JM, Foster W, Twomey CR, Burdge J, Ahmed O, Pereira T, Wojcik J, Corder G, Plotkin JB, **Abdus-Saboor I.** A machine-vision approach for automated pain measurement at millisecond timescales. *eLife* 9:e57258 (2020).
13. 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. *Sci Reports* 17;10(1):2759 (2020).
14. 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).
15. **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).
16. 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).
17. 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).
18. **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).
19. 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).
20. **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).
21. **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).

#### Reviews and Commentaries:

1. Zavitsanou A, **Abdus-Saboor I.** Sex organs sense vibrations through specialized touch neurons. *Nature* 630(8018):822-823 (2024).
2. Z. Anissa Jhumka, **Abdus-Saboor I.** Next generation behavioral sequencing for advancing pain quantification. *Curr Opin in Neurobiol.* 76:102598 (2022).
3. 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).
4. Elias LJ, **Abdus-Saboor I.** Bridging skin, brain, and behavior to understand pleasurable social touch. *Curr Opin in Neurobiol.* 73:102527 (2022).
5. Inclan-Rico JM, Kim BS\*, **Abdus-Saboor I.\*** Beyond somatosensation: Mrgprs in mucosal tissues. *Neuroscience Letters* 11;135689 (2021). \* joint senior authorship
6. 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).
7. Schaffler M, Elias L, **Abdus-Saboor I.** Mechanisms of tactile sensory phenotypes in autism: current understanding, and future directions for research. *Curr Psychiatry Rep.* 5;21(12):134 (2019).



8. **Abdus-Saboor I**, Fleischmann A., Shykind B. Setting limits: maintaining order in a large gene family. Transcription 5:e28978(2014).

**Book Chapters:**

1. **Abdus-Saboor I**. Synchronized neuronal activity in peripheral sensory ganglia may drive chronic pain. Principles of Neural Science Online Updates, McGraw Hill, Access Neurology (2023).
2. **Abdus-Saboor I**, Luo W. Measuring mouse somatosensory reflexive behaviors with high-speed videography, statistical modeling, and machine learning. Neuromethods (2022).

**Patents:**

Automated reproducible mechanical stimulation for animal experiments. Patent no. 63/521,444 filed on 6-16-2023