

PROMOTION RECOMMENDATION
THE UNIVERSITY OF MICHIGAN
MEDICAL SCHOOL
DEPARTMENT OF OTOLARYNGOLOGY-HEAD AND NECK SURGERY
DEPARTMENT OF MOLECULAR AND INTEGRATIVE PHYSIOLOGY

Michael Roberts, Ph.D., assistant professor of otolaryngology-head and neck surgery, Department of Head and Neck Surgery, and assistant professor of molecular and integrative physiology, Department of Molecular and Integrative Physiology, Medical School, is recommended for promotion to associate professor of otolaryngology-head and neck surgery, with tenure, Department of Head and Neck Surgery, and associate professor of molecular and integrative physiology, without tenure, Department of Molecular and Integrative Physiology, Medical School.

Academic Degrees:

Ph.D.	2005	The University of Texas at Austin, Austin, TX
B.A.	2000	The University of Chicago, Chicago, IL

Professional Record:

2021 – Present	Assistant Professor, Molecular and Integrative Physiology, University of Michigan, Ann Arbor, MI
2015 – Present	Assistant Professor, Otolaryngology-Head and Neck Surgery, University of Michigan, Ann Arbor, MI
2011 – 2012	Lecturer, The University of Texas at Austin, Austin, TX

Summary of Evaluation:

Teaching: Dr. Roberts has been actively engaged in teaching and mentoring research trainees. He is a lecturer in team-taught graduate level courses, Principles of Neuroscience (NEUROSCI614), Neuroscience Bootcamp (NEUROSCI623), and Integrative Neuroscience (PHYSIOL592). He has given lectures at institutional, national, and international workshops, including the Biology of the Inner Ear at the Marine Biological Laboratory in Woods Hole, MA, and the Neurobiology of Hearing Workshop in Spain. Teaching evaluations are very good to excellent. He has provided research mentorship to post-doctoral fellows, graduate students, and undergraduate students. Many of his research mentees are first and co-authors on publications, have given presentations at conferences, and are recipients of extramural awards. Three mentees have attained an NIH F31, and one has attained a K99 award. Dr. Roberts has also served on numerous dissertation and preliminary exam committees. He has a formal role as the associate co-director of admissions and recruitment for the Neuroscience Graduate Program.

Research: Dr. Roberts' research focuses on determining how the neural circuitry of the auditory midbrain supports speech processing with the long-term goal of improving neuroscience-based approaches to improve hearing. He has a strong funding record from sources such as the National Institutes of Health (NIH), the National Science Foundation, the Hearing Foundation, and the National Institute on Alcohol Abuse and Alcoholism. His current funding as a principal investigator includes an NIH R01 grant, an NIH T32 grant, and a consultant on a foundation grant, as well as a mentor for several of his graduate students who have received F31 awards, and a

postdoc who has received a K99. He has authored 21 peer reviewed manuscripts in impactful journals such as the *Journal of Neuroscience*, *Frontiers in Neural Circuits*, and *Developmental Neurobiology*. He has been an invited speaker on five occasions, given multiple extramural seminars at major academic institutions, served as a moderator at an Auditory System Gordon Research Conference, and has 59 abstracts.

Recent and Significant Publications:

Silveira MA, Drotos AC, Pirrone TM, Versalle TS, Bock A, Roberts MT, “Neuropeptide Y signaling regulates recurrent excitation in the auditory midbrain,” *J Neurosci*. 2023 September 13, JN-RM-0900-23; doi: 10.1523/JNEUROSCI.0900-23.2023.

Anair JD, Silveira MA, Mirjalili P, Beebe NL, Schofield BR, Roberts MT, “Inhibitory NPY Neurons Provide a Large and Heterotopic Commissural Projection in the Inferior Colliculus,” *Front Neural Circuits*. 2022 May 26;16:871924. doi: 10.3389/fncir.2022.871924. PMID: 35693026; PMCID: PMC9178209.

Rivera-Perez LM, Kwapiszewski JT, Roberts MT, “ $\alpha 3\beta 4^*$ Nicotinic Acetylcholine Receptors Strongly Modulate the Excitability of VIP Neurons in the Mouse Inferior Colliculus,” *Front Neural Circuits*. 2021 Aug 9;15:709387. doi: 10.3389/fncir.2021.709387. PMID: 34434092; PMCID: PMC8381226.

Silveira MA, Anair JD, Beebe NL, Mirjalili P, Schofield BR, Roberts MT, “Neuropeptide Y Expression Defines a Novel Class of GABAergic Projection Neuron in the Inferior Colliculus,” *J Neurosci*. 2020 Jun 10;40(24):4685-4699. doi: 10.1523/JNEUROSCI.0420-20.2020. Epub 2020 May 6. PMID: 32376782; PMCID: PMC7294802.

Goyer D, Silveira MA, George AP, Beebe NL, Edelbrock RM, Malinski PT, Schofield BR, Roberts MT, “A novel class of inferior colliculus principal neurons labeled in vasoactive intestinal peptide-Cre mice,” *eLife*. 2019 Apr 18;8:e43770. doi: 10.7554/eLife.43770. PMID: 30998185; PMCID: PMC6516826.

Service: Dr. Roberts has been actively engaged in service endeavors at all levels. Internationally, he has served as an ad hoc study section reviewer for the Israel Science Foundation. Nationally, he has served as a member of several Association for Research in Otolaryngology committees including his role as the chair of the Finance and Investment Committee and he was elected as the vice chair, and subsequently, the chair of the Auditory System Gordon Research Conference. He is a review editor for *Frontiers in Cellular Neuroscience* and serves as an ad hoc reviewer for many journals including *Neuroscience*, *Journal of Comparative Neurology*, and *eLife*. He has served as an ad hoc study section reviewer for the National Science Foundation, and the NIH. Institutionally, he served as the co-chair for the Neuroscience Graduate Admissions Committee and DEI Task Force for the Neuroscience Graduate Program. He is currently a member of the Sensory Science Initiative executive board. Departmentally, he has served on several committees, including as the chair of the faculty search committee, chair of the HBCS Seminar Organizing and Training Grant Admissions committees, and a member of the Values and Culture committee. He is also the Director of the Hearing, Balance, and Chemical Senses T32 training grant.

External Reviewers:

Reviewer A: “Michael has established a reputation as an extremely careful neurophysiologist with a deep understanding of neuroanatomy of the auditory system. There are few who are operating across such wide scales – from synapse to system – and able to combine multiple levels of analysis

with such a high level of skill. His expertise and insight have been sought out by the community...”

Reviewer B: “Although his performance is exemplary at all levels, I am most struck by Dr. Robert’s [sic] mentorship, which is exceptional. In his own laboratory, his graduate students have received 3 F31 awards from the NIH, and a postdoc has received a K99. Many, if not all, of his undergraduates have been authors on papers from his group. He has also recently taken over leadership of the T32 award in Otolaryngology. I do this work myself, and it’s a serious time commitment, but very important for the trainees.”

Reviewer C: “Michael has a high profile for his career stage, based on his record of publication and reviewing in high-quality journals, successful grant applications from fellowships to major R01s, and numerous seminar invitations.”

Reviewer D: “Dr. Roberts [sic] service contributions to the auditory field are extraordinary and highly unusual for his career level, both in respect to quantity and quality.”

Reviewer E: “Outside of these publications, Dr. Roberts has been an excellent scientific citizen and is nationally recognized as an expert in the IC. He has served on national and international grant review boards, including those from the NIH and NSF, he is a review editor for *Frontiers in Cellular Neuroscience*, has organized mini-symposia at the Association for Research in Otolaryngology meeting and was a leader in organizing the important Midwest Auditory Research Conference.”

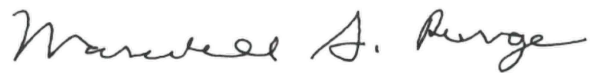
Reviewer F: “He has a strong funding record (including his current R01, a prior R56, and a well-scored new R01 application that, given the score, stands an excellent chance to reach the bar on resubmission, and whose topic indicates that it follows up on a couple of recent papers), excellent productivity with several of the papers in ‘upper-tier’ journals, and his service to the discipline and academic community is outstanding.”

Reviewer G: “Dr. Roberts has been an exceptional mentor, as illustrated by his trainees who have been consistently awarded with F31 and K99 grants, where he serves as a mentor. I am particularly impressed by his ability to mentor postdocs for K99 awards, which are very difficult to get and are usually associated with more senior mentors (usually Professors and Associate Professors, very rarely if ever with Assistant Professors).”

Reviewer H: “Michael is well-respected in the hearing field. He has made significant contributions to our understanding of the cellular and molecular mechanisms of auditory information processing. He is well known as someone who does extremely rigorous and technically challenging experiments to answer big questions in the field. When you pick up a Michael Robert’s [sic] paper, you know it is going to be thorough, technically excellent, and with answers to fundamental questions.”

Summary of Recommendation:

Dr. Roberts is an exceptional researcher who has made substantial contributions to the auditory neuroscience field and has established a national reputation for his body of work. He is an outstanding mentor, is highly regarded by his peers, and has demonstrated excellent knowledge and aptitude as an educator and researcher. I am pleased to recommend Michael Roberts, Ph.D. for promotion to associate professor of otolaryngology-head and neck surgery, with tenure, Department of Head and Neck Surgery, and associate professor of molecular and integrative physiology, without tenure, Department of Molecular and Integrative Physiology, Medical School.



Marschall S. Runge, M.D., Ph.D.
Executive Vice President for Medical Affairs
Dean, Medical School

May 2024