

PROMOTION RECOMMENDATION
The University of Michigan
College of Literature, Science, and the Arts

Haoxing Xu, associate professor of molecular, cellular, and developmental biology, with tenure, College of Literature, Science, and the Arts, is recommended for promotion to professor of molecular, cellular, and developmental biology, with tenure, College of Literature, Science, and the Arts.

Academic Degrees:

Ph.D.	2001	Georgia State University
B.A.	1992	Peking University, Beijing

Professional Record:

2012 – present	Associate Professor, Department of Molecular, Cellular, and Developmental Biology, University of Michigan
2007 – 2012	Assistant Professor, Department of Molecular, Cellular, and Developmental Biology, University of Michigan
2004 – 2006	Instructor, Harvard Medical School
2001 – 2004	Post-doctoral Fellow, Harvard Medical School

Summary of Evaluation:

Teaching – Professor Xu is a dedicated educator who has contributed in substantial ways to the department's undergraduate and graduate curricula. He teaches "Introduction to Neurobiology and Animal Physiology," a large enrollment course that is among the most highly subscribed courses in the Program in Biology and is required for the large neuroscience major. He also teaches an advanced undergraduate course, "Molecular Biology of Taste and Sensation," which is a popular course for neuroscience majors. Professor Xu is a devoted teacher who spends a great deal of time working with students in and outside of the classroom. He mentors a large number of trainees in his laboratory, which includes many undergraduate students, Ph.D. students, and several post-doctoral fellows. He runs a high intensity laboratory, but all members receive personal attention from him. He is a highly respected mentor who has had a strong, positive impact on the careers of dozens of trainees.

Research – Professor Xu is an internationally recognized leader in his due to his pioneering and ground breaking research, which has led to important breakthroughs in understanding processes that may lead to lysosomal storage diseases in humans. He serves on the board of two biotech companies that are developing small molecule drugs to treat these diseases. Professor Xu has secured substantial funding for his research with three active National Institutes of Health grants and two industry grants. Professor Xu has been recognized for his accomplishments with multiple awards, including a 2015 UM Faculty Recognition Award. We are confident that his work will continue to bring distinction to the University of Michigan.

Recent and Significant Publications:

"Upregulation of lysosomal TRPML1 channels is essential for lysosomal adaptation to nutrient starvation," with W. Wang, et al., *Proceedings of the National Academy of Sciences (USA)*, ePub, 2015, Mar 17.

"Lysosomal calcium signaling regulates autophagy via calcineurin and TFEB," with L. M. Medina, et al., *Nature Cell Biology*, 17(3), 2015, pp. 288-299.

“An intracellular Ca²⁺ channel is required for sarcolemma repair to prevent muscular dystrophy,” with X. Cheng, et al., *Nature Medicine*, 20(10), 2014, pp. 1187-92.

“A genetically-encoded fluorescent probe to visualize intracellular PI(3,5)P₂ localization and dynamics,” with X. Li, et al., *Proceedings of the National Academy of Sciences (USA)*, ePub, 2013 Dec 11.

Service – Professor Xu is a valued colleague who gives freely of his time and has been an engaged member of the committees on which he has served. Within the department, he has been elected to the departmental Executive Committee twice, once as an assistant professor, and currently as an associate professor. While in rank, he served on two faculty search committees, once as co-chair of the committee. He currently serves on the Rackham Pre-Doctoral Fellowship Selection Committee and was invited to serve on the President’s Advisory Panel on Biosciences. His inclusion on this high-profile committee reflects his stature within the life science community at the university. It is also noteworthy that he has devoted considerable time to academic professional organizations in his field, on journal editorial boards, and, most notably, he co-founded and co-organized a new Gordon Research Conference on “*Organellar Channels and Transporters*,” which was held for the first time this year. His service and leadership positions are international in scope, which reflect his reputation as a scientific leader in his field.

External Reviewers:

Reviewer (A)

“Haoxing was promoted to a tenured associate professorship in 2012. Since then he has been impressively productive and has established himself as a leader in the studies of ion channels in intracellular organelles. This is a relatively small but growing field that will contribute much to cell biology. ...[his] work is substantial and important and I expect it to continue in quality...and quantity.”

Reviewer (B)

“...I would rate Dr. Xu among the very top ion channel experts in the sensory biology field... His already-impressive productivity will undoubtedly continue to grow and he will continue to be a leader in the field. I have served on our Institution’s Professorial Promotions Committee for several years. On the basis of Dr. Xu’s qualifications, I have no doubt that he would be successfully promoted here, and wholeheartedly endorse his promotion.”

Reviewer (C)

“...Haoxing Xu is a very effective experimentalist and lab head, with a thorough grasp of physiology, TRP channels, and voltage-gated Na and Ca-selective channels. He is incredibly hard working, honest, and gets along well with collaborators and colleagues. He continues to work on exciting new problems and has a wealth of experimental data. He is now an acknowledged expert in lysosomal biology, with a recent review on this topic in the *Ann. Rev. of Physiology* (2015), and many recent papers in outstanding journals as listed in his C.V.”

Reviewer (D)

“He combines biophysics with cell biology in a context of calling attention to medical consequences. Almost everything is new because the biophysical approach has not been used before for intracellular organelles. His work is elegantly done with rigorous attention to proof. ...Xu continues to carve out a new field of biomedical cell biology and is advancing it with highest scientific standards. He is the top investigator in this field and with his meticulous style of work will remain so. There is no

question that someone with such a fine record would be promoted to Professor with tenure in my institution.”

Reviewer (E)

“In the TRP channel field, Xu is widely recognized internationally as a leader at the nexus of cellular physiology and membrane protein mechanism. Because of the unusual character of his work, as well as its medical relevance, Xu is a frequent speaker at TRP meetings.”

Reviewer (F)

“Dr. Xu is an extraordinary scientist who has already established himself as a major force in the TRP field and in the field focusing on lysosomal storage disorders (LSDs). ... I have no doubt that Dr. Xu will continue to hit many more home runs, and will continue his record of creativity and accomplishment... Thus, I strongly support his promotion to the rank of Professor with tenure with very high enthusiasm.”

Reviewer (G)

“His pioneering work on TRPML1 channels in the lysosome is really cutting-edge and fascinating. Dr. Xu’s work is well appreciated in the fields of TRP channels and lysosome ion channels, and it is safe to say that Dr. Xu, as a very productive yet solid...scientist, is a driving force in the field. ... I think he is on the very top for the list of ion channel researchers [in his cohort].”

Reviewer (H)

“There is no doubt in my mind that Haoxing Xu is a rising star in the calcium signaling/TRP channel field. His newly acquired fame in functional characterization of endolysosomal channels has placed him in the leading position of organellar channel research. ... I can easily rank him to the top 1% of investigators at the similar career stage.”

Summary of Recommendation:

Professor Xu is a recognized leader at both the national and international level in his field. He is a gifted teacher who is well liked by his students, a devoted mentor to his research trainees, and a valued colleague. The Executive Committee of the College of Literature, Science, and the Arts and I recommend that Associate Professor Haoxing Xu be promoted to the rank of professor of molecular, cellular, and developmental biology, with tenure, College of Literature, Science, and the Arts.



Andrew D. Martin, Dean
Professor of Political Science and Statistics
College of Literature, Science, and the Arts

May 2016