

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

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

Professional Record:

2007 – present 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 an excellent teacher, who continually strives to improve his instructional efforts. He plays an important role in the success of the undergraduate and graduate curricula – especially in the undergraduate concentration in neuroscience. He teaches a large enrollment course in animal physiology and a small enrollment capstone course in neuroscience that he developed. Student evaluations and testimonials, plus peer evaluations all attest to his enthusiasm for teaching.

Research – Professor Xu is a neurobiologist whose work straddles the fields of neuroscience and cell biology. He has made seminal discoveries about the roles of ion channels in basic cellular functions. His work demonstrates exceptional technical skill. Professor Xu has an impressive publication record and his papers have appeared in the most prestigious and competitive science journals. He has also been very successful in obtaining funding from the government and private foundations, including the National Institutes of Health and the National Multiple Sclerosis Society, among others. He received an Alfred P. Sloan Research Fellowship (2009-2011); the Presidential Early Career Award for Scientists and Engineers (2010), which is the highest honor bestowed by the US government to scientists and engineers in early stages of their career; and Michigan's Henry Russell Award (2012).

Recent and Significant Publications:

- “PI(3,5)P₂ controls intracellular membrane traffic by direct activation of mucolipin Ca²⁺ release channels in the endolysosome,” with X. Dong, et al., *Nature Communications*, 2010, 1:38 doi: 10.1038/ncomms1037 2010.
- “TRP channel regulates EGFR signaling in hair morphogenesis and skin barrier formation,” with X. Cheng, et al., *Cell*, 141(2), 2010, pp. 331-343.
- “Activating mutations of the TRPML1 channel revealed by proline scanning mutagenesis,” with X. Dong, et al., *Journal of Biological Chemistry*, 284(46), 2009, pp. 32040-32052.

“The type IV mucopolipidosis-associated protein TRPML1 is an endo-lysosomal iron release channel,” with X. Dong, *Nature*, 455(7215), 2008, pp. 992-996.

Service – Professor Xu has provided the normal level of service within his department, the university, and at the national level. He has also organized regular, multi-laboratory meetings and journal clubs that bring together neuroscience research groups from his department and the Medical School with a common interest in neurophysiology. These meetings provide unique opportunities for developing collaborations across campus.

External Reviews:

Reviewer (A)

“He is a leader in his field, has published outstanding work, seems to be a dedicated and effective teacher, and has a record of funding. I am confident he will continue to be an important contributor to his field.”

Reviewer (B)

“Although it is still early in Xu’s career, he is staking out a course toward understanding the physiological and cell biological roles of channels, rather than their classical biophysical properties. This is a bold move... I strongly support his promotion.”

Reviewer (C)

“I can safely say that he is one of the most productive and creative scientists in...[his] field and has established a powerhouse lab at a very early stage of his career. ... In a few short years, his lab made multiple major discoveries in the ion channel field. ...the sky is limit for this talented scientist.”

Reviewer (D)

“As an independent scientist at Univ. Michigan, Haoxing has taken off like a rocket. ...he has a significant teaching load... His drive, experience, inquisitiveness, and insight will enable him to continue to succeed as an independent investigator, and to make important contributions to science.”

Reviewer (E)

“His standing in relation to others in the same research area is again in the top 10% without question, and his work would figure into any list of recent articles of central importance to the field. ...Hoaxing has received numerous awards and honors...and he is extremely active in the neuroscience and biophysics communities. What has distinguished him above others, however, is his outstanding and numerous publications in leading journals.”

Reviewer (F)

“He has an enviable record of discovery in new areas of cell biology and biophysics. ... Dr. Xu has carved 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.”

Reviewer (G)

“Xu is one of the gems. His work on TRPs - especially the groundbreaking niche he has made for himself on the TRPML subclass - stands out well above the product of numerous TRP researchers senior to him.”

Reviewer (H)

“Dr. Xu is an extraordinary scientist who has already established himself as a major force in the TRP field...”

Summary of Recommendation:

Professor Xu is considered to be a pioneer as well as a leader in his research area. He is an excellent teacher and has provided valuable service. The Executive Committee of the College of Literature, Science, and the Arts and I recommend that Assistant Professor Haoxing Xu be promoted to the rank of associate professor of molecular, cellular, and developmental biology, with tenure, in the College of Literature, Science, and the Arts.



Terrence J. McDonald
Arthur F. Thurnau Professor,
Professor of History, and Dean,
College of Literature, Science, and the Arts

May 2012