

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

Stephen A. Maren, associate professor of psychology, with tenure, College of Literature, Science, and the Arts, is recommended for promotion to professor of psychology, with tenure, College of Literature, Science, and the Arts.

Academic Degrees:

1993	Ph.D.	University of Southern California
1991	M.S.	University of Southern California
1989	B.S.	University of Illinois, Urbana-Champaign

Professional Record:

2002 – present	Associate Professor, Department of Psychology, University of Michigan
1996 – 2002	Assistant Professor, Department of Psychology, University of Michigan
1993 – 1996	Postdoctoral Fellow, Department of Psychology, University of California, Los Angeles

Summary of Evaluations:

Teaching – In the classroom Professor Maren receives outstanding ratings in large undergraduate classes as well as in smaller graduate courses. He has made significant contributions in creating a new interdisciplinary Life Sciences undergraduate course and in framing the Department of Psychology's portion of the Howard Hughes proposal for undergraduate research training in the biomedical sciences. Undergraduates comment on his clarity in presentation, effective use of technology, and unusual accessibility and caring for students.

Research – Professor Maren's research focuses on one special form of learning and memory, memories for emotional events, and especially the memory for fearful events. His papers routinely appear in the top journals in the field, including the *Journal of Neuroscience*, the *Proceedings of the National Academy of Sciences (PNAS)* and *Neuron*. These are amongst the most selective and highly ranked journals in all the biological sciences, and the most selective in the neurosciences. His research is especially impressive because it spans so many disciplines, ranging from beautifully designed and executed behavioral studies to electrophysiological studies of synaptic physiology.

Recent and Significant Publications:

"Neuronal signaling of fear memory," with G. J. Quirk, *Nature Reviews Neuroscience*, 5, 2004, pp. 844-852

"Factors regulating the effects of hippocampal inactivation on renewal of fear after extinction," with K. A. Corcoran, *Learning and Memory*, 11, 2004, pp. 598-603.

"Auditory-evoked spike firing in the lateral amygdala and Pavlovian fear conditioning: Mnemonic code or fear bias?" with K. A. Goosens and J. A. Hobin, *Neuron*, 40, 2003, pp. 1013-1022.

"Context-dependent neuronal activity in the lateral amygdala represents fear memories after extinction," with J. A. Hobin and K. A. Goosens, *Journal of Neuroscience*, 23, 2003, pp. 8410-8416.

Service – Professor Maren is currently serving a two-year term as Associate Director of the Neuroscience Program. He has served on the Department’s Augmented Executive Committee and Steering Committee for the Concentration in Neuroscience, as a concentration advisor for undergraduates in biopsychology and neuroscience, and he conducted an interdisciplinary workshop. He participated in the University’s Health Sciences Scholars Program and served as a member of the Horace H. Rackham School of Graduate Studies Divisional Board. At the national level, he is Associate Editor of *Cognitive, Affective, and Behavioral Neuroscience*; editorial board member of three other neuroscience journals; and has contributed ad hoc reviews for numerous other journals.

External Reviews:

Reviewer (A)

“Dr. Maren is one of the leading investigators on the neural basis of fear. ...[he] has done extremely important, influential work that has had huge impact on the field.”

Reviewer (B)

“Dr. Maren uses a combination of behavioral, lesion and single neuron recording approaches in his studies. ... In this sense, Dr. Maren is rather unique among his peers. Most do not use psychological theory to drive their experimental programs to the extent that Dr. Maren does.”

Reviewer (C)

“Maren is terrific. You are lucky to have him on your faculty. He is highly productive, working on one of the major problems in psychology. He is well regarded, being one of the key players in the area of fear conditioning. Finally, his work is well funded and frequently cited.”

Reviewer (D)

“Dr. Maren is exceptionally intelligent and uses that intelligence in an exceptionally productive manner. ... He has successfully exploited a large number of neuroscience related skills such as behavioral testing, electrophysiology and autoradiography to provide a multileveled understanding of learning, memory and emotion.”

Reviewer (E)

“Steve is an extremely productive scientist and he is probably the most visible researcher in his age cohort working on the neural basis of fear. I have no doubt that he will continue to produce important scientific contributions and be a credit to your institution.”

Reviewer (F)

“I would consider Dr. Maren to be one of the very best and most productive behavioral neuroscientists of his generation. If one restricts this question to his subfield, I would rate him as the single best.”

Reviewer (G)

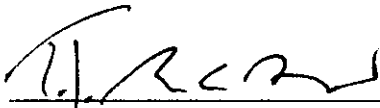
“One of his notable findings is that hippocampal lesions disrupt contextual fear conditioning when the lesions are made after training but do not disrupt the acquisition of contextual fear when the lesions are made before training. ... This finding provides an important lesson about how animals can adapt more than one strategy to acquire a task...”

Reviewer (H)

“...these studies have broad impact because they demonstrate convincingly that the amygdala is a locus for memory encoding and storage during fear conditioning. ... His future work is aimed at exploring the neural circuits underlying the context-dependence of extinction, and the molecular cascades in the amygdala that stamp in fear memories in the first place.”

Summary of Recommendation:

Professor Maren is a leading scientist in the study of the amygdala's role in encoding memories surrounding fear conditioning. He is a talented teacher and a dedicated citizen. The Executive Committee of the College of Literature, Science, and the Arts and I recommend that Associate Professor Stephen A. Maren be promoted to the rank of professor of psychology, with tenure.



---

Terrence J. McDonald, Dean  
College of Literature, Science, and the Arts

May 2006