

Approved by the  
Regents  
May 21, 2015

PROMOTION RECOMMENDATION  
THE UNIVERSITY OF MICHIGAN  
COLLEGE OF LITERATURE, SCIENCE AND THE ARTS

Joshua D. Berke, associate professor of psychology, with tenure, College of Literature, Science, and the Arts, and associate professor of biomedical engineering, without tenure, College of Engineering and Medical School, is recommended for promotion to professor of psychology, with tenure, College of Literature, Science, and the Arts, and professor of biomedical engineering, without tenure, College of Engineering and Medical School.

Academic Degrees:

Ph.D.	1998	Harvard University
B.A./M.A.	1991	University of Cambridge

Professional Record:

2013 – present	Associate Professor, Department of Biomedical Engineering, University of Michigan
2010 – present	Associate Professor, Department of Psychology, University of Michigan
2004 – 2010	Assistant Professor and Neuroscience Scholar, Department of Psychology, University of Michigan
2000 – 2004	Research Assistant Professor and Principal Investigator, Laboratory of Cognitive Neurobiology, Department of Psychology, Boston University
1999 – 2000	Research Associate, Department of Psychology, Boston University
1998 – 1999	IRTA Post-doctoral Fellow, National Institute for Neurological Disorders and Stroke, National Institutes of Health

Summary of Evaluation:

Teaching – Professor Berke’s teaching record shows that he is an effective teacher within and outside the classroom. He has taught undergraduate and graduate seminars. Student evaluations are at or exceed the top quartile and their comments agree that his lecturers are well structured and that he is a very engaging instructor. Professor Berke has been an excellent mentor to undergraduate students who did electives in his lab. Since 2010, he supervised four honors students and mentored several undergraduate students, graduate students, and post-doctoral fellows. He also co-authored four publications with undergraduate students. Post-doctoral trainees from his laboratory have been highly successful; four have gone on to establish and run their own laboratories. Many of his former students are pursuing successful academic careers at top research institutions.

Research – Professor Berke is a leader in our understanding of the brain (particularly the basal ganglia), and has pioneered methods that have significantly changed the way psychologists conduct research in this area. He publishes in the top journals in the field and his impact on the field is evident by how frequently his work is cited. According to Google Scholar, his articles have been cited over 3,490 times and two of his publications have each generated over 1,000 citations, which is seldom achieved. It is also notable that Professor Berke has received invitations to give talks at many institutions and international symposia.

Recent and Significant Publications:

“Canceling actions involves a race between basal ganglia pathways,” with R. Schmidt, et al., *Nature Neuroscience*, 16, 2013, pp. 1118-1124.

“Selective inhibition of striatal fast-spiking interneurons causes dyskinesias,” with A. H Gittis, et al., *Journal of Neuroscience*, 31, 2011, pp. 15727-15731.

“Functional properties of striatal fast-spiking interneurons,” *Frontiers in Systems Neuroscience*, 5, 2011, p. 45.

“Selective activation of striatal fast spiking interneurons during choice execution,” with G. J. Gage, et al., *Neuron*, 67, 2010, pp. 466-479.

Service – Professor Berke has taken on important service obligations in the Department of Psychology and has played a central leadership role in the college’s Neuroscience Program. In the larger community, Professor Berke has served on grant agencies and as a reviewer for important journals in his field.

External Reviewers:

Reviewer (A)

“Over the past five years he has shown remarkable productivity having published many papers in the highest profile neuroscience journals, in gaining grant funding, he is invited to speak at Basal Ganglia conferences and he [is] establishing himself as one of the leaders of the field. He is a star in basal ganglia research...”

Reviewer (B)

“I have no reservation in recommending Dr[.] Berke in the strongest terms for the proposed promotion. Had Dr[.] Berke been a researcher here he would have satisfied our criteria for such a position a year or two ago, and, indeed, I know of at least one institution outside of the states that has attempted to recruit Dr[.] Berke to this level.”

Reviewer (C)

“Overall, he has compiled a visible research program... Dr. Berke is already an internationally well-recognized scientist with an excellent reputation. He has published a significant number of papers in good journals over the years and he is a sought after speaker. ... He is also very well[-]funded...”

Reviewer (D)

“His contributions are those of behavioural rigour, advanced methods, persistence to important and hard problems, a deep understanding of a system that he has been working on for very many years, and an engagingly collaborative attitude and spirit. ... He is a significant figure in the field...”

Reviewer (E)

“Dr. Berke has demonstrated outstanding progress in defining an exciting, state-of-the art research program. I would place Josh’s work on par with the two other hot-shot researchers [of his cohort] in his field... However, I find Josh’s work more engaging because he takes a mechanistic, circuit-based view of basal ganglia function.”

Reviewer (F)

"I believe that his work is outstanding, innovative, rigorous and widely accepted. He has brought clarity to understanding the role of basal ganglia circuits in several very complex processes involved in decision (action selection or suppression) under conditions of conflict. ... His stature and the quality of his work is documented by his success in competing for extramural funding, his publication in high quality journals and the large number of invited talks at national and international venues."

Reviewer (G)

"...Prof Berke has identified a unique area of contribution in an important and growing field. He has shown methodological innovation both technically (in his study of dopamine levels) and behaviorally (in his rat behavior papers). I have every reason to assume that he will continue to be a productive and successful scholar within the basal ganglia community."

Reviewer (H)

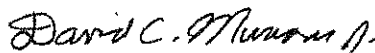
"Prof. Berke's research addresses several fundamental questions facing neuroscience and psychology: how do we make decisions; what circuits affect motivation and the selection of behavioral actions and motor programs; how do these circuits function... These are some of the 'big' questions in the field and Prof. Berke has taken a strong interdisciplinary approach to tackling them."

Summary of Recommendation:

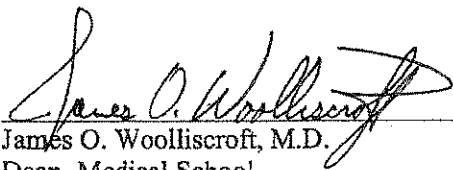
Professor Berke's research represents the highest quality science and has had a significant impact. He is an effective teacher both inside and outside the classroom, and has taken on important leadership positions. The Executive Committees of the College of Literature, Science, and the Arts, the College of Engineering, and the Medical School, recommend that Associate Professor Joshua D. Berke be promoted to the rank of professor of psychology, with tenure, College of Literature, Science, and the Arts, and professor of biomedical engineering, without tenure, College of Engineering and Medical School.



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



David C. Munson, Jr.  
Robert J. Vlastic Dean of Engineering  
College of Engineering



James O. Woolliscroft, M.D.  
Dean, Medical School  
Lyle C. Roll Professor of Medicine