

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

J. Wayne Aldridge, 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:

Ph.D. 1979 University of Toronto
M.S. 1975 University of Toronto
B.S. 1973 University of Toronto

Professional Record:

2009 – present Associate Professor and Research Scientist, Department of Psychology, University of Michigan
2008 – 2009 Assistant Research Scientist, Department of Psychology, University of Michigan
1997 – 2008 Research Associate Professor, Department of Neurology, University of Michigan
1997 – 2003 Senior Associate Research Scientist, Department of Neurology, University of Michigan
1996 – 1997 Associate Research Scientist, Department of Neurology, University of Michigan
1996 – 1997 Associate Research Scientist, Department of Neurology, University of Michigan
1982 – 1996 Assistant Research Scientist, Department of Neurology, University of Michigan

Summary of Evaluations:

Teaching – Professor Aldridge has been an active research mentor for Psychology undergraduate and graduate students for at least twenty years. Students who have worked with him have produced excellent senior theses and dissertations. Their evaluations note that he is a very supportive mentor who provides substantial direct assistance in teaching them how to carry out very complex and difficult electrophysiological methods and analyses. He has also taught two three-hundred-level courses in Psychology and has received excellent ratings and comments from students. Professor Aldridge was awarded the “Outstanding Faculty Service Recognition Award” by the Neuroscience Program in 2003, in part because of student appreciation for his teaching and mentoring.

Research – Professor Aldridge seeks to understand how the brain represents and controls behavior. He has achieved a national reputation for his expertise in combining questions about complex behaviors like motor movements and responses to rewarding stimuli with electrophysiological recording of neural activity and sophisticated computational analysis. To accomplish valid recordings of behaviors in rodents, Professor Aldridge developed new hardware for collecting neural recordings, which has been patented. The external reviewers note that his approach is highly innovative and is raising the bar by which other researchers must measure the quality of their data and analyses. Each paper produces impressive findings that are ready to be published in the top journals of his field.

Recent and Significant Publications:

- “Neural coding of pleasure: ‘Rose-tinted glasses’ of the ventral pallidum,” with K. C. Berridge in *Pleasures of the Brain*, M. Kringelbach and K. C. Berridge (eds.), Oxford University Press, 2020, pp. 62-73.
- “Dopamine receptor modulation of repetitive grooming actions in the rat: Potential relevance for Tourette syndrome,” with J. L. Taylor, et al., *Brain Research*, 1322, 2010, pp. 92-101.
- “Ventral pallidum firing codes hedonic reward: When a bad taste turns good,” with A. J. Tindell, et al., *Journal of Neurophysiology*, 96, 2006, pp. 2399-2409.
- “Ventral pallidal neurons code incentive motivation: Amplification by mesolimbic sensitization and amphetamine,” with A. J. Tindell, et al., *European Journal of Neuroscience*, 22, 2005, pp. 2617-2634.

Service – Professor Aldridge’s service includes his work on admissions committees for Biopsychology and the Neuroscience Program, preliminary examination committees, and the Neuroscience Program’s Executive Committee. Since his tenured appointment in the Department of Psychology in 2009, he has served as the College’s representative to a university-wide task force and provided a solution to the issue at hand. Professor Aldridge has also been called upon to review manuscripts for top journals and to serve on National Institutes of Health and National Science Foundation review panels.

External Reviews:

Reviewer (A)

“Dr. Aldridge is working in one of the more dynamic areas of neuroscience, and has contributed much of the fundamental work which has pushed this area to the forefront of systems neuroscience. Much of the interest in the work comes from the recent shift towards more clinically relevant studies, and the limbic-basal ganglia circuits which Dr. Aldridge studies have been implicated in disorders from drug addiction to schizophrenia. ...both the field of work and the technical approaches being used by Dr. Aldridge...are highly relevant to psychology...”

Reviewer (B)

“The candidate is not only an expert in behavioural analysis in animals but is also expert in the recording of electrophysiological activity *in vivo* in behaving animals and, an expert in computational analysis. This is a rare combination and makes him extremely ‘desirable’... He is recognized as one of the leaders in the field of basal ganglia in relation to the neuronal basis of behaviour.”

Reviewer (C)

“...Dr. Aldridge developed and applied sophisticated analysis procedures of electrophysiological recording data...to gain additional insight into relationships between neural signaling within and between brain regions. This approach is highly innovative...”

Reviewer (D)

“All of his work is extremely meticulous, of the highest quality and integrity, and of very high originality. ...Wayne has the right questions, the right approach and exciting results both with respect to basal ganglia coding of natural movement sequences and hedonic variables.”

Reviewer (E)

“Professor Aldridge continues to publish important papers in the field, most recently his work...on incentive salience. ... He not only pioneered in the field of the physiology of the basal ganglia, but has continued as a steady contributor to the now extensive subfield within neuroscience...”

Reviewer (F)

“His early work in primate reaching...comes up often in discussions of motor control, and I consider his 1998 *Journal of Neuroscience* paper...a classic. The study of execution and timing of complex (or even simple) movements is fundamental to both psychology and neuroscience. That said, research...on neuronal coding of positive and negative tastes, their associated taste reactivity responses, and their involvement in reward, is probably already more widely known and is surely going to become even more influential in the future.”

Reviewer (G)

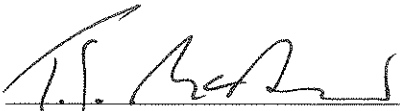
“...the combination of electrophysiological measurement in behaving animals...is undoubtedly one of the most, if not the most, exciting developments in all psychology, and is leading to profound insight into neural coding of behaviour.”

Reviewer (H)

“Wayne’s scholarly accomplishments are impressive. He is one of the world's leading experts on the coding of sequential motor patterns by basal ganglia neurons. His work has appeared in some of the top peer-review journals of the field... All his papers are characterized by careful attention to detail, sound methodology, and clear presentation of results and discussion of major issues.”

Summary of Recommendation:

Professor Aldridge’s research is highly regarded and internationally recognized. He is an excellent teacher and mentor. He has engaged in valuable service for his department, the university community, and his profession. The Executive Committee of the College of Literature, Science, and the Arts and I recommend that Associate Professor J. Wayne Aldridge be promoted to the rank of professor of psychology, with tenure, 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

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