

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

Trisha Wittkopp, assistant professor of ecology and evolutionary biology, and assistant professor of molecular, cellular, and developmental biology, College of Literature, Science, and the Arts, is recommended for promotion to associate professor of ecology and evolutionary biology, with tenure, and associate professor of molecular, cellular, and developmental biology, without tenure, College of Literature, Science, and the Arts.

Academic Degrees:

Ph.D.	2002	University of Wisconsin
B.S.	1997	University of Michigan

Professional Record:

2005 – present	Assistant Professor, Department of Ecology and Evolutionary Biology and Department of Molecular, Cellular, and Developmental Biology, University of Michigan
2002 – 2005	Damon Runyon Cancer Research Foundation Postdoctoral Fellow, Cornell University

Summary of Evaluation:

Teaching – Professor Wittkopp has an extraordinary ability to reach students at all levels and she has quickly established herself as one of the most innovative and successful teachers in the department. She teaches a required core course in genetics for most biology concentrations that has grown to over 400 students during the term she teaches. She continually works to improve this course by incorporating active learning, in-class problems, student response systems, relevance to contemporary issues, and regular polling for feedback on content comprehension from students. She has been just as innovative in her upper-level course in genetics where she introduced a number of techniques to help students learn to read difficult primary literature in science. Students give her nearly perfect ratings in this course. As a mentor, Professor Wittkopp is very strong with both undergraduate and graduate researchers.

Research – Professor Wittkopp’s research on the evolutionary basis of developmental differences within and among species is highly creative, technically cutting edge, and addresses some of the most important questions in evolutionary biology. She is widely regarded as one of a very elite group of leaders in this rapidly advancing area of modern biology and as someone who has a formidable combination of skills in computation and at the laboratory bench. She has made significant contributions to the understanding of different types of gene function regulation and how divergence in regulatory processes occurs over evolution. Professor Wittkopp publishes her findings in high-profile scientific journals and has been successful in attracting outstanding graduate students and significant levels of external funding from a variety of sources, including the National Institutes of Health (NIH) and the National Science Foundation (NSF).

#### Recent and Significant Publications:

“Local adaptation for body color in *Drosophila Americana*,” with G. Smith-Winberry, et al., *Heredity*, Jul 7, 2010 (ePublication ahead of print).

“Regulatory divergence in *Drosophila* revealed by mRNA-Seq,” with C. J. McManus, et al., *Genome Research*, 20, 2010, pp. 816-825.

“Connecting intraspecific polymorphism to interspecific divergence: Genetics of pigmentation in *Drosophila*,” with E. E. Stewart, et al., *Science*, 326, 2009, pp. 540-544.

“Regulatory changes underlying expression differences within and between *Drosophila* species,” with B. K. Haerum and A. Clark, *Nature Genetics*, 40, 2008, pp. 346-350.

Service – Professor Wittkopp has served on numerous committees in the Department of Ecology and Evolutionary Biology, including the Executive, Diversity, Nominating, Seminar, and on two faculty search committees. She also serves as associate editor of *Evolution*, one of the premier journals in her field, and associate editor of *Proceedings of the Royal Society B: Biological Sciences*, a top journal covering all areas of biology. She is an active reviewer of manuscripts for a wide range of journals, and she has served as a panelist on an NSF review panel and is an *ad hoc* reviewer for the NSF, Human Frontier Science Program, Austrian Science Fund, and other organizations.

#### External Reviews:

##### Reviewer (A)

“Over the past six years Trisha has published a series of papers that have played an important role in reshaping the way we think about the molecular forces that underlie phenotypic evolution. In particular, she has integrated population genetics, embryology and molecular biology to illuminate the roles that changes in gene regulation play in the generation of organismal diversity.”

##### Reviewer (B)

“I would rank her among the very best, and quite possibly the best, of her peers at the same career stage in this area. Indeed, her contributions rival those of more senior, tenured faculty in the field. ...I would strongly support Trisha for tenure at [my institution]... Her accomplishments to date are impressive, and the future trajectory looks extremely promising. She is a rapidly rising star.”

##### Reviewer (C)

“Patricia is clearly one of the top evolutionary developmental geneticists in the world at this stage of her career. ... She has also received many prestigious honors and awards throughout her career... ...I was enormously impressed with her teaching statement and the efforts she has made to effectively communicate science to her undergraduate and graduate students.”

##### Reviewer (D)

“I believe Dr. Wittkopp is one of the leading scientists [of her generation] working in the field of evo-devo [evolutionary-developmental biology] and evolutionary genetics. She has demonstrated an outstanding publication and funding record, and has clearly made the transition to an independent researcher doing internationally competitive research.”

Reviewer (E)

“As can be easily seen from her CV, Dr[.] Wittkopp is not a rising star in evolutionary genetics, she is a star, period. She has developed a highly successful and technically sophisticated research program and is also a charismatic communicator. Dr[.] Wittkopp is thus way over the threshold for tenure in practically any institution.”

Reviewer (F)

“There is no question that Trisha is one of the brightest, most innovative, and most successful scientists [of her generation] working in the field of evolutionary genetics today. ...in my opinion there is no one at her career stage who surpasses Trisha’s combination of insight, creativity, and rigor. She has a sharp eye for a good question and the capability to pursue it effectively...”

Reviewer (G)

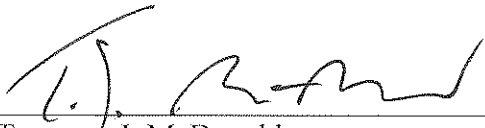
“Trisha is an exceptionally creative scientist [of her generation] with a very sharp intellect, great benchtop acumen, and a strong track record. She is emerging as an outstanding independent investigator of the mechanisms underlying the evolution of traits and species. ...[she] has all the attributes of a star scientist.”

Reviewer (H)

“Trisha’s record of accomplishments as a... faculty member in your department is hard to beat. In terms of publication rate, the high profile of the papers she produces, funding success, speaking engagements, and other professional recognition, Trisha has shown that she has what it takes to assure long-term success as an engaged and research-active professor. She has established a set of research questions with a characteristic research style that has attracted wide attention.”

Summary of Recommendation:

Professor Wittkopp is a leading scholar in her field who has made important contributions to our understanding of the evolution of gene regulation. She is an excellent teacher and mentor of students, and she has provided outstanding service. The Executive Committee and the College of Literature, Science, and the Arts and I recommend that Assistant Professor Trisha Wittkopp be promoted to the rank of associate professor of ecology and evolutionary biology, with tenure, and associate professor of molecular and developmental biology, without 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

May 2011