

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

Steven E. Clark, associate professor of molecular, cellular, and developmental biology, with tenure, College of Literature, Science, and the Arts, is recommended for promotion to professor of molecular, cellular, and developmental biology, with tenure, College of Literature, Science, and the Arts.

Academic Degrees:

1991	Ph.D.	University of Chicago
1986	B.S.	Ohio State University

Professional Record:

2001 – present	Associate Professor, Department of Molecular, Cellular, and Developmental Biology, University of Michigan
2000 – 2001	Associate Professor, Department of Biology, University of Michigan
1994 – 2000	Assistant Professor, Department of Biology, University of Michigan
1991 – 1994	Postdoctoral Fellow, Division of Biology, California Institute of Technology

Summary of Evaluation:

Teaching – Professor Clark has been an effective and intellectually stimulating instructor in two of the most important courses in his department—the introductory genetics course and the introductory biology course. Introductory biology has an enrollment of between 200 and 300 students per semester. Because of his broad expertise, he teaches the entire introductory biology course himself, although it typically requires two faculty members to cover the breadth of topics. Professor Clark willingly participates in teaching large enrollment courses for science concentrators, demonstrating his commitment to the core educational mission of his department. He has participated in graduate courses and has been an active trainer of numerous undergraduate and graduate students as well as postdoctoral fellows in his research laboratory.

Research – Professor Clark has a vigorous and well-funded research program that focuses on the regulation of stem cells during plant development. He studies fundamental questions concerning the production and maintenance of these stem cells as plants grow and develop. Using genetic approaches, he has discovered several genes (known as the *CLAVATA* genes) that appear to encode components of a signaling pathway. These studies, which are included in many developmental biology textbooks, are widely considered to represent one of the major breakthroughs in our understanding of plant development. Since his promotion to associate professor, he has continued this groundbreaking research by identifying additional genes involved in stem cell regulation. His success has led to important, frequently cited publications, many domestic and international speaking invitations, and consistent research funding from federal agencies.

Recent and Significant Publications:

- “Evidence for functional conservation, sufficiency and proteolytic processing of the CLAVATA3 CLE domain,” with J. Ni, *Plant Physiology*, 140, 2006, pp. 1-8.
- “POL and related phosphatases are dosage-sensitive regulators of meristem and organ development in Arabidopsis,” with S.-K. Song, *Developmental Biology*, 285, 2005, pp. 272-284.
- “Class III homeodomain-leucine zipper gene family members have overlapping, antagonistic, and distinct roles in Arabidopsis development,” with M. J. Prigge, et al., *Plant Cell*, 17, 2005, pp. 61-76.
- “*POLTERGEIST* encodes a protein phosphatase 2C that regulates CLAVATA pathways controlling stem cell identity at Arabidopsis shoot and flower meristems,” with L. P. Yu and A. K. Miller, *Current Biology*, 13, 2003, pp. 179-188.

Service – Professor Clark is an active contributor to departmental service. He has been on the Executive Committee, the Graduate Affairs Committee, and on several search committees. He was recently appointed Associate Chair for Research and Facilities for a three-year term. This is a major time commitment and he will be responsible for overseeing research equipment and addressing building issues, including arrangements for laboratory set-up for new faculty members. Professor Clark has served on the Rackham Divisional Board (Chair, 2004-2005) and the Organogenesis Training Grant Fellowship Committee. Additionally, he has served on several federal grant review panels for the U.S. Department of Agriculture, National Science Foundation, National Institute of Health, and Department of Energy; he is a frequent reviewer for many important scientific journals; and he has served on the advisory board of the *Plant Journal*, one of the top journals in his field.

External Reviews:

Reviewer (A)

“I have great respect for Dr. Clark’s research work and scientific achievements. His superlative research has earned him enviable international reputations in the fields of developmental biology and cellular signaling as well as in the general area of plant biology. Dr. Clark is clearly an international leader in the area of meristem regulation.”

Reviewer (B)

“Based on the scientific accomplishments that Dr. Clark has made, I consider him to be one of the leaders in the field of Plant Development, and an outstanding scientist in the area of molecular control of meristems.”

Reviewer (C)

“Steve has a strong international reputation in the area of meristem function... I would recommend Steve for this promotion based on a record of productivity over a number of years that shows every sign of continuing, his strong international reputation and his ability to raise funds from respected sources to support his work.”

Reviewer (D)

“Steve is at the top of his field together with perhaps half a dozen others. In my view, his program has produced some of the most elegant genetic studies of meristem function.”

Reviewer (E)

“Compared to other scientists that have worked in the same area of research for a similar length of time, Steve has performed very well, being among the top three leading scientists.”

Reviewer (F)

“...Steve has developed his own niche and continues to address very relevant questions. ...it can be foreseen that he will continue to make breakthrough discoveries in the stem cell field.”

Reviewer (G)

“Clark has an excellent publication record...these publications are in highly respected journals... He has good research support...and his work is respected amongst his peers as indicated by his past seminar schedule and frequent presentations...”

Reviewer (H)

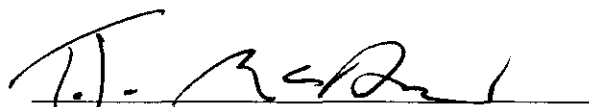
“Over the past few years, his work has had an increasingly impressive impact on understanding the molecular mechanisms behind cell differentiation and cell fate. ... He has consistently made seminal contributions in this area...”

Reviewer (I)

“All of the papers sent in the package of materials are truly outstanding.”

Summary of Recommendation:

Professor Clark leads an internationally recognized research program on plant stem cells. He has been an effective instructor and has participated in numerous service activities. The Executive Committee of the College of Literature, Science, and the Arts and I recommend that Associate Professor Steven E. Clark be promoted to the rank of 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 2007