

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

Approved by the
Regents
May 21, 2015

Andrzej Wierzbicki, assistant professor of molecular, cellular, and developmental biology, College of Literature, Science, and the Arts, is recommended for promotion to associate professor of molecular, cellular, and developmental biology, with tenure, College of Literature, Science, and the Arts.

Academic Degrees:

Ph.D.	2003	University of Warsaw
M.S.	2000	University of Warsaw

Professional Record:

2009 – present	Assistant Professor, Department of Molecular, Cellular, and Developmental Biology, University of Michigan
2005 – 2009	Post-doctoral Research Associate, Washington University, St. Louis
2004 – 2005	Adjunct Lecturer, Warsaw University of Technology
2003 – 2005	Research Assistant, University of Warsaw

Summary of Evaluation:

Teaching – Professor Wierzbicki is a committed and successful educator, and a dedicated mentor to undergraduate students. His primary teaching assignments have been a large-enrollment course in genetics, which is a core requirement for life science majors, and a 400-level specialty course on epigenetics that he developed. Professor Wierzbicki has effectively adopted active learning techniques in both courses and has incorporated primary literature reading to introduce students to emerging topics in the field. He has also been an effective mentor to trainees in his research laboratory, who strongly praise the stimulating research environment that his laboratory provides, his approachability, and the encouragement they receive from him to think and work independently.

Research – Professor Wierzbicki's research addresses the molecular mechanisms by which a type of ribonucleic acid (RNA) regulates the structure of chromatin (the DNA and proteins that form chromosomes) and thereby influences gene expression. Since establishing his own laboratory, he has made seminal discoveries in the highly competitive field of lncRNAs and RNA-mediated DNA methylation, and his colleagues consider him to be a leader in his discipline. External reviewers acknowledged his recent work as groundbreaking. Despite working in a highly competitive field, Professor Wierzbicki has established himself as a key expert by publishing several influential papers in high profile journals. This view is also supported by the high citation rate of his first two research papers (Rowley et al. 2011 and Zhu et al. 2013) as well as the list of invited seminars at national and international meetings. His two recent research papers have been highlighted as "Featured Articles" in *The Plant Journal* (Zheng et al., 2013; Böhmendorfer et al., 2014). His membership in the Faculty of 1000 and his associate editorship of *Plant Molecular Biology* are also signs of recognition. He has received major grants from the National Institutes of Health and the National Science Foundation, and the trajectory of his research is strongly upward and promising.

Recent and Significant Publications:

- “RNA-directed DNA methylation requires stepwise binding of silencing factors to long non-coding RNA,” with G. Böhmendorfer, et al., *The Plant Journal*, 79, 2014, pp. 181-191.
- “Analysis of long non-coding RNAs produced by a specialized RNA polymerase in *Arabidopsis thaliana*,” with M. J. Rowley and G. Böhmendorfer, *Methods*, 63, 2013, pp. 160-169.
- “A SWI/SNF chromatin remodeling complex acts in non-coding RNA-mediated transcriptional silencing,” with Y. Shu and G. Böhmendorfer, *Molecular Cell*, 49, 2013, pp. 298-309.
- “The role of long non-coding RNA in transcriptional gene silencing,” *Current Opinion in Plant Biology*, 15, 2012, pp. 517-522.

Service – Both the quality and quantity of Professor Wierzbicki’s service have been exemplary. He has served on the departmental Graduate Admissions Committee, a faculty search committee, and the Information Technology Committee, which was an ad hoc committee dedicated to evaluating IT services and the needs of researchers in the department. He was also the departmental representative to the Program in Biomedical Sciences.

External Reviewers:

Reviewer (A)

“I would gauge Dr. Wierzbicki’s standing in relation to other scientists [of his cohort] in the same field as quite high. He and his lab have produced 5 solid primary research papers in good journals; one of these is a big advance in the field published in *Molecular Cell*. ... Based on Dr. Wierzbicki’s progress to date, the positive trajectory of his research program, and the interesting area that he and his group study, I think he would readily be promoted in any biological science department at [my institution].”

Reviewer (B)

“...it is safe to say that work from his lab has been shaping the molecular framework of RdDM [RNA-directed DNA methylation]. I believe that Dr. Wierzbicki is one of the most talented scientists [of his cohort] in the plant epigenetics field, and I have no doubt that he will continue to excel.”

Reviewer (C)

“I could name very few scientists of his [cohort] that contributed comparably to their particular subfields of epigenetics in such a relatively short time. Dr. Wierzbicki’s name appears on a number of widely cited seminal papers concerning RdDM and his current research clearly opens new horizons in this area. ...I heard many similar assessments of his contribution from established prominent researchers in the field of epigenetics.”

Reviewer (D)

“The role of lncRNAs in regulating DNA methylation and other chromatin modifications is currently one of the most competitive research topics in both plant biology and the general area of epigenetics. ... Andrzej has without doubt cemented his reputation as an innovative and productive researcher in RdDM and lncRNA biology. He can easily be ranked among the top scientists [in his cohort] in plant epigenetics.”

Reviewer (E)

“Andrzej and his co-workers have already made important contributions, and their expertise in the field of RNA biology, transcription, gene regulation, and chromatin biology is without doubt. ... I am very impressed by his number of high score publications, as first author in his postdoc period and now as senior author with his own lab. Further indications of his recognition by the peers are his repeated invitations to top international conferences in the field, like Keystone and Cold Spring Harbor symposia, and his membership in the Faculty of 1000.”

Reviewer (F)

“I consider Dr. Wierzbicki as one of the most impressive scientists [in his cohort] in the plant RNA silencing field. ... He has assembled a thriving research group and has published several important papers since 2009. ... Dr. Wierzbicki has also been involved in teaching undergraduate students, has recruited a PhD student and a postdoc to his group, and has been successful in obtaining funding for his research. His achievements so far provide a solid foundation for his future success.”

Reviewer (G)

“Andrzej’s ability to conduct difficult and meticulous experiments have provided novel insights into the mechanisms of siRNA mediated gene silencing in plants. His careful approach to undertaking difficult experiments has been key to his success....He is conducting, and will continue to conduct, important experiments at the forefront of our field and I am sure that he will continue to make important discoveries in the years ahead.”

Summary of Recommendation:

Professor Wierzbicki has made important discoveries in his research that have uncovered fundamental mechanisms that significantly advance our understanding of how plant and animal genomes are structured and regulated. He has demonstrated an outstanding commitment to teaching and service. The Executive Committee of the College of Literature, Science, and the Arts and I recommend that Assistant Professor Andrzej Wierzbicki be promoted to the rank of associate professor of molecular, cellular, and developmental biology, with tenure, College of Literature, Science, and the Arts.



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

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