

PROMOTION RECOMMENDATION  
UNIVERSITY OF MICHIGAN  
MEDICAL SCHOOL  
DEPARTMENT OF PATHOLOGY  
DEPARTMENT OF BIOLOGICAL CHEMISTRY

Jason E. Gestwicki, Ph.D., assistant professor of pathology, Department of Pathology, and assistant professor of biological chemistry, Department of Biological Chemistry, Medical School, is recommended for promotion to associate professor of pathology, with tenure, Department of Pathology, and associate professor of biological chemistry, without tenure, Department of Biological Chemistry, Medical School [also being promoted to research associate professor, Life Sciences Institute].

Academic Degrees:

Ph.D.	2002	University of Wisconsin/Madison.
B.S.	1997	State University of New York at Fredonia

Professional Record:

2005-present	Assistant Professor of Pathology, University of Michigan
2005-present	Assistant Professor of Biological Chemistry, University of Michigan
2005-present	Research Assistant Professor, Life Sciences Institute, University of Michigan

Summary of Evaluation:

Teaching: Over the past five years, Dr. Gestwicki has been an active educator. This includes formal teaching in several graduate level courses, including anatomy, pathology, MCDB (molecular, cellular and developmental biology) and PIBS (Program in Biomedical Sciences) courses. He co-founded a new MSTP (Medical Scientist Training Program) course, Biochemistry 552, which is literature-based and team-taught, covering basic concepts and medical biochemistry. His classroom teaching is consistently given high marks, generally between 4.6 and 5 on a scale of 5. In addition, he has been involved in extensive non-classroom teaching including mentoring 11 graduate students, three postdoctoral students, 11 undergraduates and more than 20 rotation students. He has also served on 28 candidacy committees and 31 Ph.D. thesis committees.

Research: Dr. Gestwicki's primary research areas involve applying new chemical probes to the exploration of otherwise inaccessible problems in biology; the generation of drug-like molecules as therapeutic leads and validating pathways for drug discovery; and molecular chaperones, protein quality control in neurodegenerative disease and protein-protein interactions. His research has led him to become an international expert on heat shock proteins and their interactions in cellular and animal models of neurodegenerative diseases. His work has been consistently funded. At present, he is a principal investigator on an R01 grant for chaperones in

small molecules from the NIH, an MCB from the National Science Foundation for understanding the logic of protein folding in cells, and other grants from the Alzheimer's Association, Thermal-Fisher Corporation and Johnson & Johnson. He is co-investigator on several other prominent grants. His work has been published in high-quality peer-reviewed journals including the *Journal of Biological Chemistry*, *Journal of Medicinal Chemistry*, and *Journal of Neurosciences*. He has been invited to present his work at Gordon Conferences and at numerous other institutions including Memorial Sloan Kettering Cancer Center, California Institute of Technology, University of Wisconsin, Cripps Research Institute, University of Minnesota, and a meeting of the American Chemical Society.

Recent and Significant Publications:

Wisn S, Bertelsen EB, Thompson AD, Patury S, Ung P, Evans CG, Walter GAM, Wipf P, Carlson HA, Brodsky JL, Zuiderweg ERP, Gestwicki JE: Binding of a small molecules at a protein-protein interface regulates chaperone activity in the Hsp70-Hsp40 complex. *ACS Chemical Biology* 5:611-622, 2010.

Marinec PS, Chen L, Barr KJ, Mutz MW, Crabtree GR, Gestwicki JE: FK506-binding protein partitions a modified HIV protease inhibitor into blood cells and prolongs its lifetime *in vivo*. *Proc Natl Acad Sci* 106:1336-1341, 2009.

Jinwal UK, Miyata Y, Koren J, Jones JR, Trotter JH, Weeber EJ, Chang L, Shults CL, Rousaki A, Zuiderweg ERP, Gestwicki JE, Dickey CA: Chemical manipulation of Hsp70 ATPase activity regulates tau stability. *J Neurosci* 29:12079-12088, 2009.

Chang L, Bertelsen EB, Wisn S, Larsen EM, Zuiderweg ERP, Gestwicki JE: High throughput screen for small molecules that modulate the ATPase activity of the molecular chaperone, DnaK. *Anal Biochem* 372:167-176, 2008.

Evans CG, Wisn S, Gestwicki JE: Heat shock proteins 70 and 90 inhibit early stages of amyloid beta aggregation *in vitro*. *J Biol Chem* 281:33182-33191, 2006.

Service: Dr. Gestwicki has made great contributions to his institution and to his profession. At the University of Michigan, he has been on several faculty search committees for the Department of Chemistry, a member of the Executive Committee of the Center for Chemical Genomics, the Equipment Committee for the Life Sciences Institute, and a member and chair of the Admissions Committee for the Program in Biomedical Sciences. He has also been a member of numerous other committees. At the national level, he has been an ad hoc grant reviewer for several organizations including the NIH. He has been a member of the editorial review board of *Chemical Biology & Drug Design* and a guest editor for a special issue of *Biopolymers*, as well as a manuscript reviewer for numerous journals.

External Review:

Reviewer A: "Dr. Gestwicki is by training a chemical biologist, and one focus of his studies has been Hsp70s...Simply put, his arrival in the field has been 'a breath of fresh air'. He has brought

the rigor of his chemical background, his expertise in chemical synthesis and his facility with high-throughput approaches to understanding these complex problems.”

Reviewer B: “We would promote Jason to the rank of Associate Professor with tenure [at my institution] without question; in fact we have discussed how nice it would be to have Jason as a colleague. Jason is a rapidly rising star. Few promotion and tenure decisions are no-brainers—this is one of those cases. The academic community would be much more creative and productive if there were more Jason Gestwicki’s in this world!”

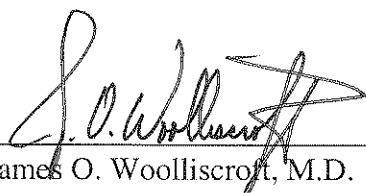
Reviewer C: “His publications are universally of high quality with several papers that are truly exceptional highlighting his diverse skills, depth of knowledge, creativity and scholarship....His science, reputation and recognition are all on a solid and accelerating upward trajectory.”

Reviewer D: “...in a short time Jason has brought unique insight to an important problem and has made outstanding progress. That progress can be directly measured in a striking set of high-quality papers....His is a true intellect and his steep trajectory will continue.”

Reviewer E: “Jason’s research accomplishments as an assistant professor have been exceptional, and he is among the very best and brightest scholars of his age in the field of Chemical Biology. During the past five years, he has published two important manuscripts in the flagship journal PNAS, and at least twenty other manuscripts in high-quality peer-reviewed journals. I am particularly impressed with the originality of his interdisciplinary research contributions.”

Summary of Recommendation:

Dr. Jason Gestwicki is an established scientist whose work has made significant national and international impact in the field of chemical probes applicable for the exploration of inaccessible problems in biology, generation of drug-like molecules as therapeutic leads and analysis of molecular chaperones, protein quality control, neurodegenerative disease and protein-protein interactions. His work has been constantly funded from external sources, and he has published the results of his studies in prestigious peer-reviewed journals. In addition, he is an accomplished educator who has taught informal classes in the laboratory setting and he has mentored a variety of students at different levels. He has taken on considerable committee work throughout the University. I am pleased to recommend Jason E. Gestwicki, Ph.D. for promotion to associate professor of pathology, with tenure, Department of Pathology, and associate professor of biological chemistry, without tenure, Department of Biological Chemistry.



---

James O. Woolliscroft, M.D.

Dean

*Lyle C. Roll Professor of Medicine*

May 2011