

PROMOTION RECOMMENDATION  
The University of Michigan  
College of Pharmacy  
Department of Clinical Pharmacy

Haojie Zhu, assistant professor of pharmacy, Department of Clinical Pharmacy, College of Pharmacy, is recommended for promotion of associate professor of pharmacy, with tenure, Department of Clinical Pharmacy, College of Pharmacy.

Academic Degrees:

Ph.D.	2004	China Pharmaceutical University, Nanjing, China
M.B.A.	2003	Nanjing University, Nanjing, China
M.S.	2001	China Pharmaceutical University, Nanjing, China
Pharmacy Diploma (college level)	1994	China Pharmaceutical University, Nanjing, China

Professional Record:

2013 – present	Assistant Professor, Department of Clinical Pharmacy, College of Pharmacy, University of Michigan
2009 – 2013	Research Assistant Professor, Center for Pharmacogenomics and Department of Pharmacotherapy and Translation Research, College of Pharmacy, University of Florida, Gainesville, FL
2008 – 2009	Research Assistant Professor, Department of Pharmaceutical and Biomedical Sciences, College of Pharmacy, Medical University of South Carolina, Charleston, SC
2004 – 2008	Post-Doctoral Fellow, Laboratory of Drug Disposition and Pharmacogenetics, College of Pharmacy, Medical University of South Carolina, Charleston, SC
2004	Research Associate, Department of Chemistry, Jackson State University, Jackson, MS
1995 – 1998	Marketing Manager, Jiangsu Branch, Qidong Gaitianli Pharmaceutical Co., Ltd., Qidong, China
1991 – 1995	Dentist, Xiaoji Central Hospital, Yangzhou, China
1990 – 1991	Residency Training Program in Dental Medicine, Yangzhou University, Subei Hospital, Yangzhou, China
1989 – 1990	Pharmacist, Xiaoji Central Hospital, Yangzhou, China

Summary of Evaluation:

Teaching: Professor Zhu is a very committed teacher and excellent mentor. He has been involved in teaching two didactic courses in the PharmD program and is responsible for coordinating the PharmD Investigations series of courses, which involves shepherding each cohort of 80-85 students through the series of courses on research proposal writing, data collection/analysis, and report generation/dissemination over three to four semesters. He has executed this time-consuming responsibility very well and has demonstrated innovation in his teaching responsibilities. In addition to coordinating the PharmD Investigations courses, he has

also mentored many pharmacy students on their research projects. Professor Zhu's student ratings on his didactic teaching are excellent with most scores in the range of 4.75-4.83 on a scale of 1-5. Student comments indicate that Professor Zhu is a dedicated teacher who connects well with his students. Professor Zhu mentors many students and trainees in his laboratory, including two post-doctoral research fellows.

**Research:** Professor Zhu is an outstanding scientist in the area of pharmacogenetics of drug metabolizing enzymes. He is a leading expert on the enzyme carboxylesterase 1 (CES1), in particular, which is responsible for the metabolism of many marketed drugs. Professor Zhu was the first to demonstrate that there were clinically significant consequences of the genetic polymorphisms of this enzyme system. He currently has two federally-funded grants as principal investigator and one as co-investigator. He is studying the determinants of ACE inhibitor activation with a focus on CES1 in order to understand the metabolism of ACE inhibitors, thereby improving their therapeutic impact on hypertension, heart failure, and chronic kidney disease. He has also filed four patent applications and was the primary inventor on two of these. Professor Zhu has 55 peer-reviewed publications, of which he is corresponding author on seven and first author on 31. His work is highly cited (1130 citations), and his current h-index is 21 according to Scopus. He has given 11 invited presentations, and he was one of 15 recipients across the country of the American Association of Colleges of Pharmacy New Investigator Award in 2015. Professor Zhu has established an independent and successful research program with bright prospects for the future.

#### Recent and Significant Publications:

\*denotes corresponding authorship

Shi J, Wang X, Nguyen J, Bleske BE, Liang Y, Liu L, Zhu HJ\*. Dabigatran Etxilate Activation is Affected by the CES1 Genetic Polymorphism G143E (rs71647871) and Gender.

*Biochemical Pharmacology* 2016 Nov 1;119:76-84. doi: 10.1016/j.bcp.2016.09.003. Epub 2016 Sep 8.

Zhu HJ, Langaee TY, Gong Y, Wang X, Pepine CJ, Cooper-DeHoff RM, Johnson JA, Markowitz JS\*. No association between the CES1P1 variant -816A>C with hepatic carboxylesterase 1 expression and activity and antihypertensive effect of trandolapril. *Eur J Clin Pharmacol.* 2016 DOI: 10.1007/s00228-016-2029-x, Feb 26. [Epub ahead of print.]

Wang X, Liang Y, Liu L, Shi J, Zhu HJ\*. Targeted absolute quantitative proteomics with SILAC internal standards and unlabeled full-length protein calibrators (TAQSI). *Rapid Commun Mass Spectrom.* 2016 Mar 15;30(5):553-61. doi: 10.1002/rcm.7482. \*This paper was selected by the journal as the cover story.

Shi J, Wang X, Nguyen J, Wu A, Bleske B, Zhu HJ\*. Sacubitril is selectively activated by carboxylesterase 1 (CES1) in the liver and the activation is affected by CES1 genetic variation. *Drug Metab Dispos.* 2016 Jan 27. pii: dmd.115.068536. [Epub ahead of print.]

Wang X, Wang G\*, Shi J, Aa J, Comas R, Liang Y, Zhu HJ\*. Evaluation of carboxylesterase 1 as a determinant of the activation of ACE inhibitor prodrugs. *Pharmacogenomics J.* 2015 Jun 16. doi: 10.1038/tpj.2015.42.

Zhu HJ, Patrick KS, Yuan HJ, Wang JS, Donovan JL, DeVane CL, Malcolm R, Johnson JA, Youngblood GL, Sweet DH, Langaee TY, Markowitz JS\*. Two CES1 gene mutations lead to dysfunctional carboxylesterase 1 activity in man: clinical significance and molecular basis. *Am J Hum Genet.* 2008 Jun;82(6):1241-1248.

Service: Professor Zhu is an excellent citizen of the College of Pharmacy and his profession. He is a member of several national and international professional societies and has recently been named councilor of the Drug Metabolism Section of the American Society for Pharmacology and Experimental Therapeutics (2016) and chair of the section “Biotransformations and Technologies in the Spotlight” in the 21<sup>st</sup> International Symposium on Microsomes and Drug Oxidations (2016). He also led a session on junior investigator mentoring at the American Association of Colleges of Pharmacy annual meeting. Professor Zhu serves on an NIH study section and has served as a reviewer for numerous journals. He serves on two committees at the College of Pharmacy and successfully chaired a faculty search committee. His service contributions are excellent for his academic rank.

External Reviewers:

Reviewer A: “His cumulative publication record is greater than most applicants at this level... He is clearly one of the world’s experts in this particular topic... Dr. Zhu’s grant productivity is outstanding... He appears to have advised or mentored n=28 trainees during his time at Michigan, which is quite impressive and more than most faculty at this level.”

Reviewer B: “What really stands out as exceptional is Dr. Zhu’s involvement in teaching/research mentoring activities... Dr. Zhu’s collective contributions in this research area have been outstanding...he already has an h-index of 20, which is outstanding for the Assistant Professor rank...has achieved national and international recognition as a leading scientist...”

Reviewer C: “Dr. Zhu’s research has significantly increased our understanding... More than 10 of Dr. Zhu’s manuscripts have been cited more than 50 times...his research program is on a steep trajectory. He is well ahead of peers working in the same field in terms of research funding and scholarly contributions... Taking on this many students and trainees in a three-year period takes tremendous time and effort and demonstrates Dr. Zhu’s devotion to teaching and training the next generation of scientists.”

Reviewer D: “Dr. Zhu has developed a very successful independent research program... Dr. Zhu’s development of a successful research program over such a short period is an outstanding accomplishment, and his contributions to education and service are seamlessly intertwined with his research expertise.”

Reviewer E: “Dr. Zhu has established an independent, externally-funded and productive research program in the fields of pharmacogenetics, drug metabolism and proteomics, and is recognized as a thought leader in these areas at the national level... These accomplishments, coupled with his recent invitation to serve on NIH study section...distinguish Dr. Zhu from others in his peer group who are working in the same field... Dr. Haojie Zhu is among the best in his field of scholarly endeavor, is nationally recognized in his area of expertise...”

Reviewer F: “These findings suggest that CES1 genetic polymorphisms may be a critical determinant of ACE1 pharmacological effects and outcomes, and as such, are highly clinically relevant... These awards speak to the novelty and impact of Dr. Zhu’s research program... Given his impressively productive track record, his clear independence, his originality and his

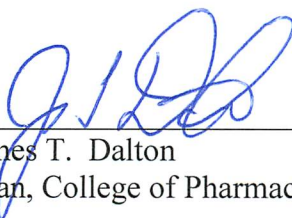
timely research foci, I have no doubt that Dr. Zhu has an extremely high likelihood of sustaining his research activities...”

Reviewer G: “His publication record is truly outstanding with respect to not only quantity but also quality...Dr. Zhu has successfully established his independent research program in the field of pharmacogenomics... He leads an international research symposium as a section chair. This is really an honor for a junior faculty.”

Reviewer H: “Dr. Zhu is a significant contributor to our field...his contributions are noteworthy and are recognized as outstanding, with a demonstration of prominence among his peers working in the same field...he has mastered the ability to be recognized for his impactful, scholarly contributions to the field.”

Reviewer I: “Of particular note, Dr. Zhu was the lead author on a seminal paper...which has been widely cited in the field...Dr. Zhu has successfully established an independent research program.”

Summary of Recommendation: Professor Zhu is an outstanding scientist and dedicated teacher, mentor, and citizen of his profession. It is with the support of the College of Pharmacy Executive Committee that I recommend Haojie Zhu for promotion to associate professor of pharmacy, with tenure, Department of Clinical Pharmacy, College of Pharmacy.



---

James T. Dalton  
Dean, College of Pharmacy

May 2017