

PROMOTION RECOMMENDATION  
The University of Michigan  
College of Pharmacy

Kathleen A. Stringer, associate professor of pharmacy, with tenure, College of Pharmacy, is recommended for promotion to professor of pharmacy, with tenure, College of Pharmacy.

Academic Degrees:

Pharm.D. 1985 University of Michigan

Professional Record:

2007–present Associate Professor, Department of Clinical, Social, and Administrative Sciences, College of Pharmacy, University of Michigan  
2006–2007 Associate Professor, Department of Pharmaceutical Sciences, School of Pharmacy, University of Colorado  
2003–2007 Associate Professor, Graduate Program in Toxicology and Pharmaceutical Sciences, Graduate School, University of Colorado  
2003–2007 Associate Member, Cancer Center, University of Colorado Health Sciences Center  
1997–2006 Associate Professor, Department of Clinical Pharmacy, School of Pharmacy, University of Colorado  
1988–1997 Assistant Professor, School of Pharmacy, University of Colorado

Summary of Evaluation:

Teaching: Professor Stringer is an extremely dedicated and innovative educator who applies her knowledge of the research process to her teaching activities in the Pharm.D. program. Recently, as course coordinator, she has devoted a significant effort to redesigning a didactic course on the principles of research and problem solving. She has incorporated innovative active learning strategies and has received university-level recognition for her teaching innovation, the “Proposal Wizard.” The “Proposal Wizard” is an interactive, web-based research proposal writing tool which facilitates the development of the skills needed to write a logical and scientifically sound research plan. In addition to teaching in the classroom, Professor Stringer has mentored several Pharm.D. students for their research investigations projects, some of which have resulted in peer-reviewed publications. She has also mentored students participating in summer research activities and has served on two dissertation committees. She contributes to the College of Pharmacy’s teaching programs through membership on the Pharm.D. Investigations Committee and the Curriculum and Assessment Committee, having made valuable contributions to the extensive revision of the curriculum with an emphasis on active learning. Professor Stringer’s teaching evaluations from students are consistently very positive, ranging from 4.0 to 4.5 on a 5-point scale, and she has been invited to participate as a teaching mentor in the UM Health Sciences Academy of Teaching.

Research: Professor Stringer has earned a national and international reputation in the area of metabolomics in acute lung injury. She has transformed her research program from a series of distinct clinical cardiology projects early in her career to a well-defined, focused program in experimental and translational pulmonology. She has been successful in developing productive collaborations and has created a novel area of investigation where her clinical training provides a valuable element in the translation from bench to bedside. Professor Stringer is among a very small number of Pharm.D.-trained investigators who have received federal funding for their work, and her pending P20 NIH program grant application is an extraordinary accomplishment for a Pharm.D. investigator. Professor Stringer's work has been published in high impact pharmacy and specialty journals and is regarded as exceptional research that has provided important new knowledge to this emerging field. She has been invited to present her work nationally and internationally.

Recent and Significant Publications:

Heath L, Ling S, Racz J, Southard S, Schmidt L, Myers J, Tsai WC, Caruthers RL, Hirsch JC, Stringer KA\*. Longitudinal pathological assessment and responsiveness of plastic bronchitis casts to tissue plasminogen activator. *Pediatr Cardiol* 2011 Jul 24 [Epub ahead of print]. PMID journal- in process.

Serkova NJ, Standiford TJ, Stringer KA\*. The emerging field of quantitative blood metabolomics for biomarker identification in critical illnesses. *Am J Resp Crit Care Med*, 2011 Jun 16. [Epub ahead of print].

Stringer KA\*, Serkova NJ, Karnovsky A, Guire K, Paine R, Standiford TJ. Metabolic consequences of sepsis-induced acute lung injury as revealed by <sup>1</sup>H-nuclear magnetic resonance spectroscopy of plasma. *Am J Physiol Lung Cell Molec Physiol* 2011;300:L4-L11. 2010 Oct 1. [Epub ahead of print]. Accompanying editorial L1-3. PMID journal- in process

Serkova NJ, Van Rheen Z, Tobias M, Pitzer JE, Wilkinson JE, Stringer KA\*. Utility of magnetic resonance imaging and nuclear magnetic resonance-based metabolomics for the quantification of inflammatory lung injury. *Am J Physiol Lung Cell Molec Physiol* 2008;295:L152-61. PMID2494785.

\*indicates corresponding author

Service: Professor Stringer has compiled an impressive record of professional service during her career, for which she is nationally recognized. Particularly noteworthy was her appointment as the American College of Clinical Pharmacy's (ACCP) representative to the Specialty Council on Pharmacotherapy. She chaired the Board of Pharmaceutical Specialties (BPS) council for two of her six years of service and was instrumental in the development and administration of the first pharmacotherapy specialty examination. Professor Stringer was also elected as a regent on ACCP's board and was involved in important work regarding the definition of clinical pharmacy, which served as the foundation for the core competencies of a clinical pharmacist white paper that followed shortly thereafter. Professor Stringer is a journal referee for several pharmacy and lung physiology journals and has served on two NIH review committees, which is unusual for someone with her background. She was a grant reviewer for the NIH Challenge Grants in 2009, and in 2011 she was a member of a Special Emphasis Panel for the NIH. Professor Stringer

brings this expertise to the College of Pharmacy by participating in the college's current grant writing workshops through which she provides important insights to colleagues about their proposals. She also serves the College of Pharmacy through her membership on the Curriculum and Assessment Committee and the Pharm.D. Investigations Committee.

External Reviewers:

Reviewer (A)

"Dr. Stringer has developed a national and international reputation in her specialty....She is clearly a persistent and successful applicant who has managed her funding wisely. ...Her publications show a sustained trend and movement towards journals with higher scientific impact in the 'applied physiology' mold of medicine."

Reviewer (B)

"...she has been successful in attracting federal funding for her research, including an R15, an R41, an R42 and a P20 grant....She has also served on two NIH study sections, which is evidence of her status in the field."

Reviewer (C)

"...these publications are of high quality, reflect well-designed studies and are insightful....I estimate that Dr. Stringer is in the top 10% of researchers working in her field. I arrived at this by considering the peer-reviewed funding she has obtained and the quality of publications to which the research is being submitted (and accepted)....These appointments [to ACCP] provide evidence of the extent of peer recognition that Dr. Stringer receives in that these activities are key leadership roles....Dr. Stringer has an exemplary record of contributing to professional meetings and innovative teaching approaches."

Review (D)

"Based upon her past and current record of sustained scholarly activity I believe she will remain very productive in this new field at the University of Michigan....Dr. Stringer has demonstrated an accomplished teaching record....She is a dynamic speaker who is well organized and develops a rapport with her audience....The development of the 'Proposal Wizard' appears to be a major step forward in assisting students in development of their proposals for graduation....Her service to the profession is exemplary."

Reviewer (E)

"To my knowledge, she is the only individual with a clinical pharmacy background working in this area, and by my evaluation, is clearly an expert in her field....Most notably, she has been PI on three NIH grants, including her R15 award which is currently active....This level of grantsmanship clearly sets her apart from her colleagues as there are only a few clinical pharmacy faculty members in the country that are NIH-funded....Both the quantity and quality of her publications clearly establish Dr. Stringer as a nationally and internationally recognized authority in her field....Her innovative work is recognized by her campus peers as she has been invited to participate as a teaching mentor in the UM Health Sciences Academy of Teaching....I have attended Dr. Stringer's presentations at national meetings and I was impressed by her knowledge of the subject matter, presentation style, and responses to questions."

Reviewer (F)

“Her approach to *in vitro* characterization of the airway casts from plastic bronchitis patients is important work, potentially leading to a more rational, scientifically informed approach to a therapy that currently is largely empirical.... Indeed, her desire to push herself to a new level of scientific creativity is laudable.... In the relatively small universe of Pharm.D.-trained faculty who have pursued an independent research program, she compares very favorably....”

Reviewer (G)

“Dr. Stringer’s service beyond the university includes leadership in ACCP, including becoming a fellow. Her contributions in that organization are positive and indicate senior leadership. She has participated in reviews of national level grants at least three times in recent years and was invited to participate in NIH events in 2011. These demonstrate both professional engagement and recognition in one’s field.”

Reviewer (H)

“She has several publications in highly regarded specialty journals....According to the Science Citation Index, each of these [3] journals is listed among the top ten most widely cited journals in the respiratory diseases category....Dr. Stringer has been very successful in obtaining peer-reviewed funding for her research....Dr. Stringer is clearly recognized for her research and expertise in cardiology and, more recently, in pulmonary diseases.”

Summary of Recommendation: Professor Stringer is a pioneering and highly respected clinical scientist among her peers, who is considered one of the top experts in metabolomics in lung injury. Her commitment to innovations in teaching and her professional leadership are outstanding. It is with the support of the Executive Committees of the College of Pharmacy that I recommend Kathleen A. Stringer for promotion to professor of pharmacy, with tenure, College of Pharmacy.



---

Frank J. Ascione  
Dean, College of Pharmacy

May 2012