

PROMOTION RECOMMENDATION
THE UNIVERSITY OF MICHIGAN
MEDICAL SCHOOL
DEPARTMENT OF INTERNAL MEDICINE

Jason S. Knight, M.D., Ph.D., assistant professor of internal medicine, Department of Internal Medicine, is recommended for promotion to associate professor of internal medicine, with tenure, Department of Internal Medicine, Medical School.

Academic Degrees:

M.D.	2007	University of Michigan
Ph.D.	2005	University of Michigan
B.S.	1999	Indiana University

Professional Record:

2014 – present	Assistant Professor of Internal Medicine, University of Michigan
2012 – 2013	Clinical Lecturer of Internal Medicine, University of Michigan

Summary of Evaluation:

Teaching: Dr. Knight is a dedicated teacher who educates learners at a variety of levels including undergraduates, medical students, residents and fellows. He teaches through didactic lectures, small group sessions, in-patient rheumatology consult service and outpatient clinics. He is engaging and passionate about teaching, honest and frank with his patients, and a role model that many hope to emulate. In 2011, Dr. Knight began leading the medical student small-group sessions for the preclinical rheumatology sequence. In addition to this, he annually presents a lecture on Systemic Lupus Erythematosus to the preclinical medical students as part of their didactic curriculum. In 2017, Dr. Knight began presenting a lecture to the rheumatology fellows and faculty on the topic of antiphospholipid syndrome. With the recent medical school curriculum redesign, the science behind medicine of lupus course has been incorporated into the scientific trunk of the first year medical student preclinical year. Dr. Knight also teaches in the laboratory and has mentored undergraduate, masters and post-doctoral students as well as fellows. He has served on two career development committees for junior faculty.

Research: Working alongside his mentor Dr. Mariana Kaplan during his fellowship and the following year, Dr. Knight pioneered the study of neutrophil extracellular traps in mouse models of lupus and atherosclerosis. As he launched his own lab, his research interests shifted to include antiphospholipid syndrome, a sister diagnosis to lupus. Dr. Knight has been successful in demonstrating a previously unknown role of neutrophil extracellular traps in the thrombotic complications of antiphospholipid syndrome. This work has since been replicated by groups in China and the Netherlands. He has numerous research collaborations throughout the Medical School. Dr. Knight has a long and sustained history of grant funding through the NIH. In 2014, he was awarded the prestigious Career Award from the Burroughs Wellcome Fund, and was honored in 2015 with the American Society for Clinical Investigation Young Investigator Award. In 2017 and 2018, he was the recipient of the Vic and Kelly Braden Memorial Award for Lupus Research. Dr. Knight has published 50 peer-reviewed articles.

Recent and Significant Publications:

Knight J, Mazza L, Yalavarthi S, Sule G, Ali R, Hodgins J, Kanthi Y, Pinsky D: Ectonucleotidase-Mediated Suppression of Lupus Autoimmunity and Vascular Dysfunction. *Front Immunol* 9:1,322, 2018.

Meng H, Yalavarthi S, Kanthi Y, Mazza L, Elflin M, Luke C, Pinsky D, Henke P, Knight J: In Vivo Role of Neutrophil Extracellular Traps in Antiphospholipid Antibody-Mediated Venous Thrombosis. *Arthritis and Rheumatology* 69(3): 655-667, 2017.

Grenn R, Yalavarthi S, Gandhi A, Kazzaz N, Núñez-Álvarez C, Hernández-Ramírez D, Cabral A, McCune W, Bockenstedt P, Knight J: Endothelial progenitor dysfunction associates with a type I interferon signature in primary antiphospholipid syndrome. *Annals of the Rheumatic Diseases* 76(2):450-457, 2017.

Knight J, Meng H, Coit P, Yalavarthi S, Sule G, Gandhi A, Grenn R, Mazza L, Ali R, Renauer P, Wren J, Bockenstedt P, Wang H, Eitzman D, Sawalha A: Activated signature of antiphospholipid syndrome neutrophils reveals potential therapeutic target. *JCI Insight* 2(18):14360, 2017.

Yalavarthi S, Gould T, Rao A, Mazza L, Morris A, Núñez-Álvarez C, Hernández-Ramírez D, Bockenstedt P, Liaw P, Cabral A, Knight J: Release of neutrophil extracellular traps by neutrophils stimulated with antiphospholipid antibodies: A newly identified mechanism of thrombosis in the antiphospholipid syndrome. *Arthritis and Rheumatology* 67(11): 2990-3003, 2015.

Service: As a rheumatologist, Dr. Knight sees patients on the inpatient consult service as well as in the outpatient clinic. His area of expertise lies in antiphospholipid syndrome, and he is well-versed in vasculitis and systemic lupus erythematosus. Institutionally, Dr. Knight serves on the Rheumatology Fellowship Clinical Competency Committee and the Animal Care and Use Program Faculty Advisory Committee. He is a member of the editorial board of *Frontiers in Immunology*, and a peer-reviewer for top-tier journals including the *Journal of Immunology*, *PLoS One*, and *Arthritis & Rheumatology*. Dr. Knight is an active member of the Steering Committee of APS ACTION, this is an international consortium dedicated to basic and translational research of antiphospholipid syndrome. Nationally, he sits on the Scientific Review Panel for the Rheumatology Research Foundation Career Development Awards and he provides service as a grant reviewer for the Vasculitis Foundation. Evidence of his stature in the field is noted by his service as an international grant reviewer for several agencies including the Dutch Arthritis Society, French National Research Agency and the Wellcome Trust, Sir Henry Dale Fellowship.

External Reviewers:

Reviewer A: “Dr. Knight has really made a great start to his career and seems to be ahead of his peers in establishing his own research program. Dr. Knight was able to obtain critical early career support from the Arthritis Foundation and the Rheumatology Research Foundation as well as a K08 award from the NIH. More importantly, he has successfully made the K to R transition within 4 years of receiving his K08 award. This is last [sic] achievement is unusual and is a mark of distinction for Dr. Knight.”

Reviewer B: “His studies have focused on several interesting research questions and he has been highly productive in his research endeavors. This success is evident in his impressive publication record and the astounding grant funding success. Additionally, since becoming an independent investigator Jason has established himself as an authority in multiple areas that have potential translational applications.”

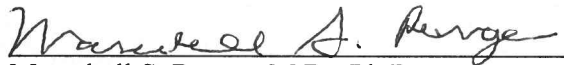
Reviewer C: “He has successfully made the challenging ‘K’ to ‘R’ transition after only 5 years in rank as Assistant Professor. This, combined with his prestigious selection as a Burroughs Welcome [sic] Fund awardee, equates to an outstanding track record of peer review funding. If that were enough, I see that Dr. Knight has won awards for his clinical and teaching activities and has actively participated in resident and fellow education. In short, he clearly fulfills the model of the academic ‘triple threat’- something that I would argue is much more difficult to do today that it was 25 years ago.”

Reviewer D: “Over a relatively short period of time, Jason has become a nationally and internationally known contributor and thought leader in the antiphospholipid field. Based on his publications and personal conversations we’ve had, I feel that Jason is an outstanding and creative physician-scientist in the very top echelon of the field. His 2015 and 2017 Arthritis and Rheumatology papers on the release of neutrophil extracellular traps induced by antiphospholipid antibodies are highly regarded and have had a significant impact on the field.”

Reviewer E: “Dr. Knight has already has [sic] a significant impact in his field of study. His work is thoughtful, creative and original. His discovery that neutrophils stimulated with antiphospholipid antibodies release of extracellular is highly original and provides a new direction to approach prevention and treatment of APS.”

Summary of Recommendation:

Dr. Knight is garnering recognition on the national and international stage as an expert in the area of antiphospholipid syndrome. His ongoing collaborations with cardiology, nephrology and chemical engineering advances collaborations within the university for antiphospholipid care and research. I am pleased, therefore, to recommend Jason S. Knight, M.D., Ph.D. for promotion to associate professor of internal medicine, with tenure, Department of Internal Medicine, Medical School.



Marschall S. Runge, M.D., Ph.D.
Executive Vice President for Medical Affairs
Dean, Medical School

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