

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

Nobuhiko Kamada, Ph.D., assistant professor of internal medicine, Department of Internal Medicine, Medical School, is recommended for promotion to associate professor of internal medicine, with tenure, Department of Internal Medicine, Medical School.

Academic Degrees:

Ph.D.	2007	Keio University School of Medicine, Tokyo
M.S.	2000	University of Tokushima, Japan
B.S.	1998	Kobe-gakuin University, Hyogo, Japan

Professional Record:

2013 – present	Assistant Professor of Internal Medicine University of Michigan
2007 – 2009	Instructor, Keio University, Tokyo
2004 – 2007	Research Associate, Keio University, Tokyo

Summary of Evaluation:

Teaching: Dr. Kamada mentors clinical fellows, post-doctoral research fellows, and graduate and undergraduate students, in basic medical research and career development. His work with these trainees has led to several of them publishing research papers in medical science journals, presenting their findings at institutional, national, and international conferences and successfully competing for postdoctoral and career development awards. In addition to his mentoring activities, Dr. Kamada is the instructor for Immunology 851, Special Topics in Immunology, which is a class that focuses on the basic mechanisms of inflammatory bowel disease (IBD). Dr. Kamada has opened his laboratory to visiting students from other institutions specifically medical students from the Nara Medical University in Japan. His willingness to accept these students then led to an official academic and scientific cooperation between the University of Michigan and the Nara Medical University as a part of the Global Reach Program.

Research: As a Ph.D. in medical research, Dr. Kamada devotes the majority of his professional effort toward his research on the role gut microbiota plays in the pathogenesis of inflammatory bowel disease and the colonization resistance to enteric pathogens. His research aims to answer the fundamental question of how the gut microbiota interacts with host immunity in the context of gastrointestinal health and disease. Specifically, Dr. Kamada and his team look at the mechanism by which the commensal beneficial microbiota work cooperatively with host immunity to combat pathogenic microorganisms within the gastrointestinal tract. He has an excellent track record of grant funding for his research from the National Institutes of Health, the Crohn's and Colitis Foundation, and the Prevent Cancer Foundation. Dr. Kamada was the recipient of the Crohn's and Colitis Foundation of American Career Development Award in 2014, and their Senior Research Award in 2017. Dr. Kamada has published more than 65 peer-reviewed articles, and has been invited to present his research on 33 occasions nationally and internationally.

Recent and Significant Publications:

Kitamoto S, Alteri CJ, Rodrigues M, Nagao-Kitamoto H, Sugihara K, Himpfl SD, Bazzi M, Miyoshi M, Nishioka T, Hayashi A, Morhardt TL, Kuffa P, Grasberger H, El-Zaatari M, Bishu S, Ishii C, Hirayama A, Eaton KA, Dogan B, Simpson KW, Inohara N, Mobley HLT, Kao JY, Fukuda S, Barnich N, Kamada N. Dietary L-serine confers a competitive fitness advantage to Enterobacteriaceae in the inflamed gut. *Nature Microbiology* (in press).

Imai J, Kitamoto S, Sugihara K, Nagao-Kitamoto H, Hayashi A, Morhardt TL, Kuffa P, Higgins PDR, Barnich N, Kamada N. Flagellin-mediated activation of IL-33-ST2 signaling by a pathobiont promotes intestinal fibrosis. *Mucosal Immunology*. 12(3):632-643, 2019.

Ochi T, Feng Y, Nagao-Kitamoto H, Kuffa P, Atarashi K, Honda K, Teitelbaum DH, Kamada N. Diet-dependent, microbiota-independent regulation of IL-10-producing lamina propria macrophages in the small intestine. *Scientific Reports*. 6:27634, 2016.

Nagao-Kitamoto H, Shreiner AB, Gilliland III MG, Kitamoto S, Ishii C, Hirayama A, Kuffa P, El-Zaatari M, Grasberger H, Seekatz AM, Higgins PDR, Young VB, Fukuda S, Kao JY, Kamada N. Functional characterization of inflammatory bowel disease-associated gut dysbiosis in gnotobiotic mice. *Cell Mol Gastroenterol Hepatol*. 2(4):468-481, 2016.

Seo SU, Kuffa P, Kitamoto S, Nagao-Kitamoto H, Rousseau J, Kim YG, Núñez G, Kamada N. Intestinal macrophages arising from CCR2⁺ monocytes control pathogen infection by activating innate lymphoid cells. *Nature Communications*. 6:8010, 2015.

Service: Dr. Kamada is a member of multiple institutional committees including the Gastroenterology Fellowship Training Program Committee, the Germ-free Animal Committee, the Inflammatory Bowel Diseases Databank Steering Committee and the Immunology Preliminary Examination Committee. His international reputation is further evidenced by his service on the Extramural Programs Committee for the Society for Mucosal Immunology and his membership on the Crohn's and Colitis Foundation Research Training Award Committee. Dr. Kamada's expertise in this field is evidenced by his service on multiple international study sections and his service on the editorial boards of *Frontiers in Medicine-Gastroenterology*, *Mediators of Inflammation*, and *Scientific Reports*.

External Reviewers:

Reviewer A: "Nobu, was appointed as an Assistant Professor in 2013 and his productivity in terms of quality and quantity of publications has been excellent...his research represents a continuum from his graduate work through his postdoctoral training and he continues to make seminal contributions to our understanding of host-microbe interactions...he is on the right trajectory and he will continue to make important contributions to our understanding of how the gut microbiome is a powerful collaborator in human health and how its dysbiosis can lead to devastating diseases."

Reviewer B: "The wide scope and scientific depth of these research contributions is very impressive and provides clear evidence that Dr. Kamada has established a successful and highly innovative research program. This is further highlighted by his recognition in his area of research, and the numerous awards and invitations for him to speak at national and international academic centers...I strongly believe that Dr. Kamada's promotion to Associate Professor with Tenure (Instructional Track) is timely and will adequately reflect his true contribution to the University of Michigan and to the mucosal immunology field at large. Most certainly, his productive research will continue to yield new and exciting data that will enable the improvement of currently available therapies for a wide range of

human diseases and, in a broader context, help us better understand complex biological systems at mucosal surfaces.”

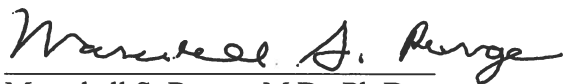
Reviewer C: “I have found Dr. Kamada’s research to be particularly insightful and highly innovative with great translational potential. Of his many publications in outstanding journals, I am especially impressed with several studies that I believe to be groundbreaking...It should come as no surprise that Dr. Kamada has gained national and international recognition for his outstanding research...there is no question that Dr. Kamada would be promoted to this rank in [my department] at [my institution].”

Reviewer D: “His work involves state-of-the-art methods in gnotobiotics and experimental immunology. This field is highly novel and has attracted considerable attention in the scientific and lay literature. His CV lists 67 peer-reviewed manuscripts, 35 in rank, with 6 as primary or senior author. These included noted papers in *Nature Communications* and *Cell Host and Microbe* (with Gabe Nunez) and independent work published in *Cell Mol Gastroenterology Hepatol* and *Mucosal Immunology*. He also has an impressive record of collaborative scholarly work.”

Reviewer E: “I have known and followed Dr. Kamada’s work over the past five years with keen interest as his publications often open up new ways of thinking about and approaching host-microbe interactions. In fact, I have used Dr. Kamada’s senior author publication in *Cellular and Molecular Gastroenterology* as a teaching tool for an immunobiology graduate school course here at [my institution]. He has clearly defined himself as a leader in the field of host-microbe interactions related to gastrointestinal disease and has moved the field in new directions.”

Summary of Recommendations:

Dr. Kamada is an internationally recognized expert in the field of gut microbiota and the role it plays with host immunity in the context of gastrointestinal health and disease. He and his laboratory have produced seminal research in this field, which has contributed significantly to the understanding of host-microbiome interactions. I am pleased, therefore, to recommend Nobuhiko Kamada, 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 of Medical Affairs
Dean, Medical School

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