

PROMOTION RECOMMENDATION
THE UNIVERSITY OF MICHIGAN
MEDICAL SCHOOL
DEPARTMENT OF SURGERY
DEPARTMENT OF MICROBIOLOGY AND IMMUNOLOGY

Katherine A. Gallagher, M.D., associate professor of surgery, with tenure, Department of Surgery, and associate professor of microbiology and immunology, without tenure, Department of Microbiology and Immunology, Medical School, is recommended for promotion to professor of surgery, with tenure, Department of Surgery, and professor of microbiology and immunology, without tenure, Department of Microbiology and Immunology, Medical School.

Academic Degrees:

M.D.	2002	University of Maryland
B.S.	1998	University of Maryland

Professional Record:

2019 - Present	Associate Professor of Microbiology and Immunology, without tenure, University of Michigan
2017 - Present	Associate Professor of Surgery, with tenure, University of Michigan
2011 – 8/2017	Assistant Professor of Surgery, University of Michigan

Summary of Evaluation:

Teaching: Dr. Gallagher is a dedicated teacher of trainees at all levels. She is the current director for the Section of Vascular Surgery Medical Student Clerkship Program, and the director of the Peripheral Arterial Disease (PAD) Program. She has served as an oral board examiner, written questions for national in-service training exams, as well as the Vascular Education and Self-Assessment Program (VESAP), and developed curriculum for a clinical board review for vascular surgery trainees. Dr. Gallagher is active with the Society of Vascular Surgery (SVS) as a co-chair of their Research and Education Committee, and has been an invited speaker to discuss work-life balance and research funding for residents and trainees. She has served as the primary mentor for NIH-funded trainees on F32, T32, K12 grants, co-mentor on K08 and F31 grants, mentor for trainee societal grants, and has been on the defense committee for two immunology Ph.D. students.

Research: Dr. Gallagher's research investigates the role of immunity, inflammation and epigenetics in wound healing, commonly in the setting of diabetes. She is a foremost authority in this translational area, working to advance understanding of the basic mechanisms, pathways and proteins involved in regulating inflammation in wounds. The goal of this work, motivated in part by Dr. Gallagher's active vascular surgery clinical practice, is to identify new drug targets and therapies to improve wound healing in patients with diabetes and peripheral artery disease. The Gallagher lab was the first to show that epigenetic changes in bone marrow stem cells lead certain wound macrophages to assume inflammatory rather than reparative states. Her laboratory has recently expanded on these common themes and is examining the role of the innate immune system and epigenetics in aortic aneurysm formation, venous disease, and other vascular diseases. Dr. Gallagher has published 70 peer-reviewed articles and has been invited to present her research on 87 occasions regionally, nationally and internationally. She is well-funded through the NIH, the Doris Duke Foundation, Vascular Cures Foundation, American College of Surgeons, Society of Vascular Surgery, the Wolfe Stem Cell Foundation, as well as intramural grants from the Cardiovascular Center Heart of Campion, CVC McKay and Michigan Institute of Clinical and Health Research. Her mentees have also received

significant NIH/foundation funding and won national awards from the American Heart Association, Society of University Surgeons, Society of Vascular Surgery, and the NIH. She is both a Wylie Scholar and a Taubman Foundation Scholar.

Recent and Significant Publications:

Davis FM, denDekker A, Kimball A, Joshi A, El Azzouny M, Obi AT, Lipinski J, Gudjonsson JE, Xing X, Audu C, Melvin W, Singer K, Henke PK, Moore BB, Burant C, Kunkel SL, Gallagher KA.: Epigenetic Regulation of TLR4 in Diabetic Macrophages Modulates Immunometabolism and Wound Repair *The Journal of Immunology* 1;204(9):2503-2513, 2020.

denDekker A, Davis FM, Joshi A, Allen R, Lipinski J, Wolf SJ, Nycz D, Bermick J, Moore BB, Gudjonsson JE, Kunkel SL, Gallagher KA: TNF α Regulates Diabetic Macrophage Function through the Histone Acetyl-transferase, MOF *JCI Insight* 5(5):e132306, 2020.

Kimball AS, Davis FM, denDekker A, Joshi A, Schaller M, Bermick J, Burant C, Obi A, Nycz D, Robinson S, Allen R, Lukacs N, Henke PK, Moore BB, Kunkel SL, Gallagher KA: The Histone Methyltransferase, Setdb2, Modulates Macrophage Phenotype and Uric Acid Production in Normal and Diabetic Wound Repair. *Cell Immunity* 51(2): 258-271, 2019.

Boniakowski A, denDekker A, Davis FM, Joshi A, Kimball AS, Schaller M, Allen R, Bermick J, Nycz D, Skinner M, Robinson S, Obi A, Moore B, Gudjonsson JE, Lombard D, Kunkel S, Gallagher KA: Sirt3 Regulates Macrophage-Mediated Inflammation in Diabetic Wound Repair *Journal of Investigative Dermatology* 139(12):2528-2537.e2, 2019.

Kimball AS, Schaller M, Joshi A, Davis FM, denDekker A, Boniakowski AE, Bermick J, Obi AT, Moore B, Henke PK, Kunkel S, Gallagher KA.: Ly6CHi Blood Monocyte/Macrophage Drive Chronic Inflammation and Impair Wound Healing in Diabetes Mellitus. *Arteriosclerosis, Thrombosis, and Vascular Biology Journal* 38(5): 1102-1114, 2018.

Service: Dr. Gallagher is an outstanding physician and vascular surgeon. Her appointment with vascular surgery has included participation in all aspects of outpatient, inpatient and operative clinical care, multi-disciplinary clinics, call responsibilities, and as a reader in Diagnostic Vascular Laboratory studies at both the Samuel and Jean Frankel Cardiovascular Center and the Ann Arbor Veterans Administration Medical Center. She has a combined arterial and venous surgical practice with an emphasis on PAD in patients with diabetes and a nationally recognized program on popliteal entrapment. Dr. Gallagher's service includes her role as a permanent member of the NIH Bioengineering Technology and Surgical Sciences and American Heart Association study sections, as well as ten other study sections in an ad hoc and recurring capacity. She was a founding member of the NIH National Institute of Diabetes and Digestive and Kidney Diseases Wound Consortium. Dr. Gallagher also serves regularly as a grant reviewer for international science foundations from England, Ireland and France and is on the editorial board for *Diabetes*, *JCI Insight*, *Immunohorizons*, and the *Journal of Vascular Surgery*. She provides leadership to the SVS Research and Education Committee as a co-chair, and is a member of the Research Council.

External Reviewers:

Reviewer A: "Dr. Gallagher has maintained consistent extramural funding for the past 22 years and is currently the Principal Investigator or Co-Principal Investigator of 12 grants from the NIH, industry, and foundations...Her translational research has largely focused on defining the epigenetic mechanisms responsible for macrophage-mediated inflammation in normal and pathological wound

healing, primarily in diabetic patient, with additional clinical interests in the management of the patient with an abdominal aortic aneurysm and peripheral artery disease...There is little doubt that Dr. Gallagher is highly regarded by peers, and I would easily rank her in the top 10% of academic surgeons in the field of vascular surgery.”

Reviewer B: “I sincerely believe that Dr. Gallagher is one the most important vascular surgeon-scientists in the country and represents the finest qualities of our specialty. Most importantly, Dr. Gallagher’s clinical work is well respected; she is well-known to be a strong clinician and technical surgeon...Dr. Gallagher embodies the highest ideals of excellence in vascular surgery, performing meticulous and important work driving the field, with clear evidence of a national reputation for quality and excellence, as well as clinical care and teaching of the highest caliber. I give Dr. Gallagher my strongest and unreserved support; she would qualify for similar promotion to Professor at [my institution].”

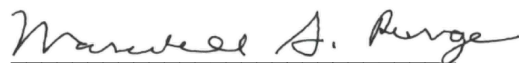
Reviewer C: “Dr. Gallagher has few peers who meet her standards of innovative research contributions. The quality and impact of her work is truly world class. She is nationally and internationally recognized for her work in wound repair/regeneration especially in Type 2 Diabetes...Dr. Gallagher should clearly qualify for this promotion. She would be qualified for such a promotion and tenure here at [my institution].”

Reviewer D: “Dr. Gallagher has distinguished herself with her research program and mentorship... Dr. Gallagher’s expertise in the field is further validated through her service as a peer reviewer for grants and journal submissions, as an editorial board member of several important journals, and as an ad hoc member of three NIH study sections, as well as four other NIH committees...Her national reputation continues to grow through her engagement in professional organizations.”

Reviewer E: “Dr. Gallagher’s work as a surgeon-scientist is exemplary...Her extramural funding record is similarly [sic] impressive and goes hand-in hand with her publication output... Within the community of vascular surgeon-scientists, Dr. Gallagher ranks in the top 1-2%...There is no doubt Dr. Gallagher would easily qualify for promotion to Professor at [my institution].”

Summary of Recommendation:

Dr. Gallagher’s clinical interest in peripheral arterial disease, when added to her research interest focused on immunity, inflammation and epigenetics in wound healing and vascular disease makes her an important national and international contributor for the vascular surgery community. She has strong educational contributions and exemplary service. I am pleased to recommend Katherine A. Gallagher, M.D. for promotion to professor of surgery, with tenure, Department of Surgery, and professor of microbiology and immunology, without tenure, Department of Microbiology and Immunology, Medical School.



Marshall S. Runge, M.D., Ph.D.
Executive Vice President of Medical Affairs
Dean, Medical School

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