Approved by the Regents
May 18, 2023

PROMOTION RECOMMENDATION
THE UNIVERSITY OF MICHIGAN
MEDICAL SCHOOL
DEPARTMENT OF EMERGENCY MEDICINE
COLLEGE OF ENGINEERING
DEPARTMENT OF MACROMOLECULAR SCIENCE AND ENGINEERING

J. Scott VanEpps, M.D., Ph.D., assistant professor of emergency medicine, Department of Emergency Medicine, Medical School, and assistant professor of macromolecular sciences and engineering, Department of Macromolecular Sciences and Engineering, College of Engineering, is recommended for promotion to associate professor of emergency medicine, with tenure, Department of Emergency Medicine, Medical School, and associate professor of macromolecular science and engineering, without tenure, Department of Macromolecular Sciences and Engineering, College of Engineering.

Academic Degrees:

M.D.	2009	University of Pittsburgh
Ph.D.	2009	University of Pittsburgh
B.S.E.	2001	University of Pittsburgh
B.S.	2001	University of Pittsburgh

Professional Record:

2018-present	Assistant Professor of Macromolecular Science and Engineering, University of Michigan
2016-present	Assistant Professor of Emergency Medicine, University of Michigan
2013-2016	Clinical Lecturer of Emergency Medicine, University of Michigan

Summary of Evaluation:

Teaching: Dr. VanEpps is a dedicated teacher. He has mentored a variety of learners, including medical students, post-doctoral fellows, and residents. This mentoring has been both in the clinical setting and in the lab setting and has allowed these learners to gain a variety of knowledge in Dr. VanEpps' area of expertise, the use of nanoparticles in the creation of antimicrobial medicines and beyond. Dr. VanEpps has also been invited to present at institutional conferences, both here at the University of Michigan and at the University of Pittsburgh, on a variety of topics, including antimicrobial coatings, applying machine learning to infectious diseases, and engineering solutions to combat life-threatening infections. Dr. VanEpps has also served on numerous dissertation committees here at the University of Michigan. In recognition of these efforts, he was awarded the University of Michigan, Department of Emergency Medicine, Gold Apple teaching award in 2020.

Research: Dr. VanEpps' current research interest is focused on using nanoparticles in the creation of antimicrobial medicines, as well as looking at how they could have even further areas of use in a hospital setting. He has secured external and internal funding for his research including a National Institutes of Health R01, a Michigan Economic Development Corporation grant, and a Taubman Institute grant. He is currently the principal investigator on three grants.

Dr. VanEpps has clearly shown he is a dedicated researcher. His research has also led to an established scholarly portfolio that includes 29 peer-reviewed publications and abstracts in high-impact journals such as *PLOS One, Nature Computational Science*, and the *Journal of Rheology*. In 2021, he was also awarded the University of Michigan Biointerfaces Institute Innovator Award in recognition of his accomplishments.

Recent and Significant Publications:

Vitale C, Ma TM, Sim J, Altheim C, Martinez-Nieves E, Kadiyala U, Solomon MJ, VanEpps JS, "Staphylococcus epidermidis Has Growth Phase Dependent Affinity for Fibrinogen and Resulting Fibrin Clot Elasticity," *Front Microbiol* 12: 649534, 2021. PM34220741/PMC8241941

Beckwith JK, VanEpps JS, Solomon MJ, "Differential Effects of Heated Perfusate on Morphology, Viability, and Dissemination of Staphylococcus epidermidis Biofilms," *Appl Environ Microbiol* 86(20):e01193-20, 2020. PM32801173/PMC7531952

Wang Y, Kadiyala U, Qu Z, Elvati P, Altheim C, Kotov NA, Violi A, VanEpps JS, "Anti-Biofilm Activity of Graphene Quantum Dots via Self-Assembly with Bacterial Amyloid Proteins," *ACS Nano* 13(4): 4278-4289, 2019. PM30912922/PMC6528478

Shi X, Kadiyala U, VanEpps JS, Yau ST, "Culture-free bacterial detection and identification from blood with rapid, phenotypic, antibiotic susceptibility testing," *Sci Rep* 8(1): 3416, 2018. PM29467368/PMC5821834

Kadiyala U, Turali-Emre ES, Bahng JH, Kotov NA, VanEpps JS, "Unexpected insights into antibacterial activity of zinc oxide nanoparticles against methicillin resistant Staphylococcus aureus (MRSA)," *Nanoscale* 10(10): 4927-4939, 2018. PM29480295/PMC5847298

Service: Dr. VanEpps has served on several national study sections, including serving as the chair of the Society of Academic Emergency Medicine Large Project Grant Study Section, and serving on two National Institutes of Health study sections. He is also a reviewer for a multitude of journals, including *IET Nanobiotechnology*, *Nanomedicine: Nanotechnology, Biology, and Medicine*, and *BMC Microbiology*. Dr. VanEpps also serves on both national and institutional committees. On a national level, he served on the American College of Emergency Physicians (ACEP) Research Committee and is currently a member-at-large for the Society for Academic Emergency Medicine (SAEM) Foundation Board of Trustees. He has also served on the University of Michigan, Emergency Medicine Residency Program Director Search Committee, and currently serves on the University of Michigan, Associate Chair of Research Search Committee. In addition to these committees, Dr. VanEpps also holds important administrative appointments. Since 2018, he has served as the associate director for the Weil Institute for Critical Care Research and Innovation, and since 2015, he has served as a faculty member for the University of Michigan Biointerfaces Institute. Along with his research efforts, Dr. VanEpps is also a dedicated clinician, continuing to provide patient care in the adult emergency service department. His clinical work has allowed him to apply his research findings, as well as to continue to teach residents and medical students within the clinical setting not only about patient care techniques and best practices but how they can apply research principles to the area of patient care in order to improve outcomes and treatment options.

External Reviewers:

Reviewer A: "Dr. VanEpps has been exceptionally active in research, serving as PI on 3 current grants and 7 past grants. He also works well as a collaborator, by serving as Co-PI or Co-I on 10 additional funded projects. He participates in many professional societies (12), and most interesting they consist of both clinical and basic science disciplines."

Reviewer B: "Dr. VanEpps has been very involved with teaching students at all levels. He has participated in teaching courses in the medical school, and he has mentored biomedical engineering projects. He has mentored 11 students, residents, and postdoctoral fellows in his research, and he has personally served on 17 dissertation committees (including 6 as chair or co-chair). He has been recognized with the University of Michigan Gold Apple Pin twice (2014 and 2020) for excellence in clinical teaching. These accomplishments show evidence of ongoing mentoring relationships of a variety of learners, and they also reflect Dr. VanEpps' commitment to teaching excellence."

Reviewer C: "Compared to his peers, there are few emergency physicians in the nation who are performing the type of innovative, mechanistic, translational, and clinically applicable work that Dr VanEpps is conducting. In my opinion, he is unique amongst his peers at this academic rank nationally, with a combination of benchtop and translational research skills backed by clinical acumen with an eye towards viable end-products that will directly benefit patient care."

Reviewer D: "Dr. VanEpps is exceptionally active in service to his institution and specialty, lending his expertise to areas as expected based on his research track record. He has served as a reviewer on an impressive number of journals, and he is an ad hoc reviewer for two NIH Study Sections. Given his role as a regular ad hoc member of study section, I anticipate he will be asked to join one section as a permanent member soon. More importantly, he is not only a reviewer for the Society of Academic Emergency (SAEM) Grants Committee, but also serves as chair of the SAEM Large Project Grant Study Section. This is a level of responsibility that is only assigned to excellent grant reviewers who are able to manage a review committee to efficiently and effectively review a large number of grants and provide applicants high quality feedback."

Reviewer E: "Dr. Van Epps [sic] publication and grant record demonstrate that he is highly accomplished and that his future holds great promise…Accomplishments such as these by a physician are rare and for an emergency medicine physician, even more so. In addition to these scientific discoveries, he has an outstanding record of national and institutional service as demonstrated by his numerous memberships on committees, his leadership positions, his teaching record, and his volunteer actions in the community."

Reviewer F: "Dr VanEpps is far above others in his peer group. Emergency Medicine is a clinical and service focused specialty that lacks significant history and investment in basic and translational biomedical research. This reality makes Dr. VanEpps success even more impressive. Dr. VanEpps is also in the unique and notable position to span the disciplines of clinical science, basic science, and engineering. He has clearly demonstrated a national reputation in his discipline."

Summary of Recommendation:
Dr. VanEpps has made outstanding contributions to research teaching, scholarship, and service contributions. Therefore, we are pleased to recommend J. Scott VanEpps, M.D., Ph.D. for promotion to associate professor of emergency medicine, with tenure, Department of Emergency Medicine, Medical School, and associate professor of macromolecular science and engineering, without tenure, Department of Macromolecular Science and Engineering, College of Engineering.

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

Alec D. Gallimore, PhD
Robert J. Vlasic Dean, College of Engineering

May 2023