

PROMOTION RECOMMENDATION  
THE UNIVERSITY OF MICHIGAN  
MEDICAL SCHOOL  
DEPARTMENT OF EMERGENCY MEDICINE  
DEPARTMENT OF PHARMACOLOGY

Colin F. Greineder, M.D., Ph.D., assistant professor of emergency medicine, Department of Emergency Medicine, and assistant professor of pharmacology, Department of Pharmacology, Medical School, is recommended for promotion to associate professor of emergency medicine, with tenure, Department of Emergency Medicine, and associate professor of pharmacology, without tenure, Department of Pharmacology, Medical School.

Academic Degrees:

Ph.D.	2013	University of Pennsylvania, Philadelphia, PA
M.D.	2003	Yale School of Medicine, New Haven, CT
B.S.	1997	Yale University, New Haven, CT

Professional Record:

2018-Present	Assistant Professor, Department of Emergency Medicine, University of Michigan, Ann Arbor, MI
2018-Present	Assistant Professor, Department of Pharmacology, University of Michigan, Ann Arbor, MI
2008-2013	Instructor, Department of Emergency Medicine, University of Pennsylvania, Philadelphia, PA
2008	Adjunct Clinical Instructor, Department of Emergency Medicine, University of Michigan
2007-2008	Clinical Assistant Professor, Department of Emergency Medicine, University of Michigan, Ann Arbor, MI

Summary of Evaluation:

Teaching: Dr. Greineder is an outstanding clinical teacher and research mentor. Learners include residents, medical students, graduate students, undergraduate students (including UROP students), and visiting scholars. He has been a member of several dissertation committees in biomedical engineering, chemical engineering, and pharmacology. Didactically, he has provided lectures in pharmacology to dental students, teaches in the emergency medicine clerkship, participates in research mentoring for groups of residents and fellows, organizes a journal club for residents, and helps fellows grant applications via “Wolverine Den.” On average his teaching evaluations are very good to excellent. He is the director of resident research and scholarly development in his department.

Research: Dr. Greineder’s research interests are in neuroprotective antibodies in Alzheimer’s disease and delivering therapy across the blood brain barrier for treating neurodegenerative disease and traumatic brain injury, and nanoparticles for glioblastoma. He has been successful in obtaining research funding from the National Institutes of Health (NIH), the Department of Defense (DoD), and foundations. His current funding as a principal investigator totals more than \$7.8M, and he is a co-investigator of several additional awards. His past funding is also noteworthy and includes a completed K08 award. He has authored 53 peer reviewed manuscripts in outstanding journals such as the *New England Journal of Medicine*, *PLoS One*, and *Nature Technology*. He has been awarded a patent for

fusion proteins and antibodies targeting human red blood cell antigens and has two pending patents. He has delivered three local extramural presentations, and many abstracts at the national level.

Five Recent and Significant Publications:

- Pornnoppadol G, Bond LG, Lucas MJ, Zupancic JM, Kuo Y, Zhang B, Greineder CF, Tessier PM, “Bispecific antibody shuttles targeting CD98hc mediate efficient and long-lived brain delivery of IgGs,” *Cell Chem Biology*. 4, 10/2023. PM37162883
- O'Hare C, Grace KA, Schaeffer WJ, Hyder SN, Stover M, Liles AL, Khaja MS, Cranford JA, Kocher KE, Barnes GD, Greineder CF, “Adverse Clinical Outcomes Among Patients With Acute Low-risk Pulmonary Embolism and Concerning Computed Tomography Imaging Findings,” *JAMA Netw Open*. 6(5): e2311455, 05/2023. PM37256624
- Kiseleva RY, Glassman PG, LeForte KM, Walsh LR, Villa CH, Shuvaev VV, Myerson JW, Aprelev PA, Marcos-Contreras OA, Muzykantov VR, Greineder CF, “Bivalent engagement of endothelial surface antigens is critical to prolonged surface targeting and protein delivery in vivo,” *FASEB J*. 34(9): 11577-11593, 09/2020. PM32738178
- Glassman PM, Walsh LR, Villa CH, Marcos-Contreras OA, Hood ED, Muzykantov VR, Greineder CF, “Molecularly Engineered Nanobodies for Tunable Pharmacokinetics and Drug Delivery,” *Bioconjug Chem*. 31(4): 1144-1155, 04/2020. PM32167754
- Marcos-Contreras OA, Greineder CF, Kiseleva RY, Parhiz H, Walsh LR, Zuluaga-Ramirez V, Myerson JW, Hood ED, Villa CH, Tombacz I, Pardi N, Seliga A, Mui BL, Tam YK, Glassman PM, Shuvaev VV, Nong J, Brenner JS, Khoshnejad M, Madden T, Weissmann D, Persidsky Y, Muzykantov VR, “Selective targeting of nanomedicine to inflamed cerebral vasculature to enhance the blood-brain barrier,” *Proc Natl Acad Sci U S A*. 117(7): 3405-3414, 02/2020. PM32005712

Service: Dr. Greineder has a strong record of service. He is a superb clinician who provides patient care in the adult emergency department. Nationally, he serves on committees with the Society for Academic Emergency Medicine including his role as a co-chair for the abstract subcommittee and on the scientific review subcommittee of the American College of Emergency Physicians. He has provided ad hoc reviews for several journals including the *European Journal of Pharmaceutics and Biopharmaceutics*, the *American Journal of Pathology*, and *Circulation: Cardiovascular Genetics*, and was named three times as a Top 50 Reviewer for *Annals of Emergency Medicine*. Institutionally, he serves on his departmental awards committee and the Venous Health Program Steering Committee.

External Reviewers:

Reviewer A: “In summary, Dr. Greineder has been an active and engaged member of his institution during his time at rank, and during that period he has transitioned to research independence. In addition to his stellar record of scholarship and research, he has distinguished himself in his mentorship activities, his publication record, his funding record, and his professional and scientific national service activities. I can personally attest to Dr. Greineder’s reputation and the impact of his innovative research that straddles his expertise in both emergency medicine and drug delivery.”

Reviewer B: “Dr. Greineder’s commitment to advancing scientific knowledge and addressing critical issues in emergency medicine and pharmacology is clear. Among Colin’s scholarly publications, several stand out as exceptional in terms of their impact and significance.”

Reviewer C: “The quality of his work is superb and clearly exceeds his peers. His funding level is truly extraordinary for our specialty, with two active R01s as MPI, and multiple pending large awards as PI. For reference, there are few full professors with or without tenure in our specialty [sic] who

have ever reached this level of funding success. He additionally has several patents or patents pending, which again is quite rare.”

Review D: “Dr. Greineder is a dedicated educator with an extensive record of successful mentorship of medical students, residents, fellows, and faculty, many of whom have achieved significant success in research and academia. In addition, he has served on several Dissertation Committees and as a mentor for a Visiting Scholar. As a result of his strong commitment to teaching, Dr. Greineder received the Senior Resident Teaching Award in Emergency Medicine at the University of Michigan. At the national level, Dr. Greineder is a member of the SAEM Program Committee. The Program Committee provides oversight for the national didactic program, research presentations, and offerings for the annual academic meeting in the specialty which is generally attended by over 3,500 academicians annually.”

Reviewer E: “Dr. Greineder’s longstanding commitment to EM research is evident in his service and leadership in national organizations. He has important roles in the Society for Academic Emergency Medicine (SAEM) and more recently, on the scientific review subcommittee of the American College of Emergency Physicians (ACEP). ACEP and its funding arm, the Emergency Medicine Foundation, is the primary EM organization supporting research and particularly focuses on the development of junior investigators.”

Summary of Recommendation:

Dr. Greineder is an expert in both emergency medicine and drug delivery. He continues to be highly productive with excellence in teaching, mentorship, as well as service. I am pleased to recommend Colin F. Greineder, M.D., Ph.D. for promotion to associate professor of emergency medicine, with tenure, Department of Emergency Medicine, and associate professor of pharmacology, without tenure, Department of Pharmacology, Medical School.



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

May 2024