Approved by the Regents
May 19, 2022

PROMOTION RECOMMENDATION
THE UNIVERSITY OF MICHIGAN
MEDICAL SCHOOL
DEPARTMENT OF INTERNAL MEDICINE
DEPARTMENT OF CELL AND DEVELOPMENTAL BIOLOGY

Rami N. Khoriaty, M.D., assistant professor of internal medicine, Department of Internal Medicine, and assistant professor of cell and developmental biology, Department of Cell and Developmental Biology, Medical School, is recommended for promotion to associate professor of internal medicine, with tenure, Department of Internal Medicine, and associate professor of cell and developmental biology, without tenure, Department of Cell and Developmental Biology, Medical School.

Academic Degrees:

M.D.	2005	American University of Beirut, Lebanon
B.S.	2001	American University of Beirut, Lebanon

Professional Record:

2020 – present	Assistant Professor of Cell and Developmental Biology, University of Michigan
2017 – present	Assistant Professor of Internal Medicine, University of Michigan
2012 – 2016	Clinical Lecturer of Internal Medicine, University of Michigan

Summary of Evaluation:

Teaching: Dr. Khoriaty has mentored several undergraduate, graduate, and medical students, along with fellows, residents and faculty. He routinely teaches didactic sessions on approaching clinical cases and how to manage various hematologic disorders. He has served on five dissertation committees. In addition, he teaches at the bedside during inpatient hematology service and outpatient service. The overall goal of Dr. Khoriaty's teaching is to foster a supportive environment that also enables graduate students to independently develop their technical and analytical skills.

Research: Dr. Khoriaty's research efforts focus on the study of congenital hematologic disorders with particular interest on the congenital dyserythropoietic anemias (CDA). Additionally, he is interested in the study of the protein secretion from the endoplasmic reticulum (ER) to the golgi, which has therapeutic implications for human disease. His recent studies have shown thatSEC23A demonstrates a novel strategy for treatment of CDA-II and has led to several funded grants, including a NIH R01 award. Dr. Khoriaty's work has been published in high impact journals including *Molecular and Cellular Biology*, *PLoS One* and *Science Advances*. In the past four years, he haspublished 15 peer reviewed publications and has many published abstracts covering presentations at national and international meetings. He has also published 16 book chapters, including a chapter in Williams Hematology, the premier international Hematology textbook. In 2019, Dr. Khoriaty was the recipient of the national Young Physician Scientist Award from the American Society of Clinical Investigation, and in 2020, he received the institutional MaxWicha Award for Research by Early to Mid-Career Investigator. He has also served on several grant review panels, including the American Society of Hematology Scholar Awards and NIH Hematology study section.

Recent and Significant Publications:

Everett L, Khoriaty R, Zhang B, Ginsburg D: Altered phenotype in LMAN1-deficient mice withlow levels of residual LMAN1 expression. *Blood Adv.* 2020 Nov 24;4(22):5635- 5643. PMID: 33196840.

Lin Z, King R, Tang V, Myers G, Balbin-Cuesta G, Friedman A, McGee B, Desch K, Ozel AB, Siemieniak D, Reddy P, Emmer B, Khoriaty R: The Endoplasmic Reticulum Cargo Receptor SURF4 Facilitates Efficient Erythropoietin Secretion. *Mol Cell Biol* 2020 Nov 6;40(23): e00180-20. PMID: 32989016.

Khoriaty R, Ozel AB, Ramdas S, Ross C, Desch K, Shavit JA, Everett L, Siemieniak D, Li JZ,Ginsburg D: Genome-Wide Linkage Analysis and Whole-Exome Sequencing Identifies and ITGA2B Mutation in a Family with Thrombocytopenia. Br *J Haematol.* 2019 Aug;186(4):574-579. PMID: 31119735.

Khoriaty R: Hesketh GG, Bernard A, Weyand AC, Mellacheruvu D, Zhu G, Hoenerhoff MJ, McGee B, Everett L, Adams EJ, Zhang B, Saunders TL, Nesvizhskii AI, Klionsky DJ, Shavit JA, Gingras AC, Ginsburg D: The Functions of the COPII Gene Paralogs SEC23A and SEC23B Are Interchangeable In Vivo. *Proc Natl Acad Sci U.S.A.* 2018 Aug 14; 115(33): E7748-7758. PMID: 30065114.

Khoriaty R, Vogel N, Hoenerhoff M, Sans MD, Zhu G, Everett L, Nelson B, Durairaj H, McKnight B, Zhang B, Ernst S, Ginsburg D, Williams JA: SEC23B is Required for the Pancreatic Acinar Cell Function in Adult Mice. *Mol Biol Cell*. 2017 Jul 15;28(15):2146-2154.PMID 28539403.

Service: Dr. Khoriaty's clinical work focuses on the myeloproliferative neoplasmas. He rounds on the consult/inpatient hematology service where patients with aggressive hematologic malignancies are admitted for treatment. He also has a weekly outpatient clinic in classical (benign) hematology where he has established a reputation as a leader in the field. In addition to his busy clinical schedule, Dr. Khoriaty serves as a member on six institutional committees including the Hematology/Oncology Fellowship Clinical Competency Committee and Cancer Hematopoiesis and Immunology Program. He serves as section head for Benign Hematology, and in this role, he addresses all clinical issues, mentors junior faculty, streamlines clinic workflow and hiresfaculty. He is a member of several professional societies, including the International Society of Experiment Hematology and American Society of Hematology. Additionally, Dr. Khoriaty is an ad hoc journal reviewer for greater than 15 journals.

External Reviewers:
Reviewer A: "Dr. Khoriaty has attracted several graduate and medical students to his laboratory and has even received awards for his teaching/training. Dr. Khoriaty remains interested in erythroid development and has recently developed an innovative CRISPR screen platform for the discovery of novel factors involved in erythropoietin secretion. With this platform Dr. Khoriaty recently described SURF4 as a regulator of erythropoietin secretion (Lin et al 2020), and possibly other hits will be described in the near future. At the national level, Dr. Khoriaty has been invited to present his research at different meetings that focus on hematopoiesis…This indicates that he is a well-respected within his scientific community, which I believe is a cornerstone for promotion to Associate Professor."

Reviewer B: "I believe that Dr. Khoriaty's accomplishments as an Assistant Professor and ongoing trajectory merit promotion…He has developed a body of important scholarly contributions in his area of research as well as the field of hematology and successfully competed for multiple external grants. He also has made solid contributions to service and teaching in his field, both locally and the national level. He clearly has a national and an emerging international reputation, as evidenced by being asked to review for journals and funding agencies, and invited lectures."

Reviewer C: "I am impressed by Dr. Khoriaty's work and productivity. He has acquired numerous grants and is currently funded by grants from the American Society of Hematology and an RO1 from NIH...The CDA field now counts Dr. Khoriaty as a member and looks to him for his expertise...Some of the intangible assets of Dr. Khoriaty that have become apparent to meare his outstanding work ethic, his ability to work with others, and, in parallel, to effectively seekout advice, technical assistance, and reagents from others as needed. His attention to detail and thoughtful manner are obvious in his work. His infectious enthusiasm for his work, which he communicates well, is apparent when he talks about his research…In summary, I recommend Dr. Rami Khoriaty for promotion to the rank of Associate Professor at the University of Michigan Medical School. He is an excellent representative of the University of Michigan on thenational and international stage."

Reviewer D: "He has nicely developed his independent research program studying the basic mechanisms of ER-Golgi transport and the hematologic consequences of perturbation of normal ER-Golgi function. Notably, he has followed the science and his observations to dissect the roles of these systems and become an expert in erythropoiesis, on which he has an R01…Rami's work is of scientific high quality and his papers are focused and relevant in his area of research…This is clearly his original work and collectively he his scholarly impact [h]as been rising to the challenge of eliciting the distinct roles of SEC paralogs in ER-Golgi function. Rami's level of productivity, scholarship, and national reputation would be more than sufficient to support promotion to this equivalent Associate Professor rank at my institution."

Reviewer E: "In a paper published in Molecular and Cellular Biology as senior author, Dr. Khoriaty demonstrated that the endoplasmic reticulum cargo receptor, SURF4, is central to the production of the hormone responsible for red blood cell formation, erythropoietin, under stress. This is a key finding that could lead to more effective production of erythropoietin, obviating the need for exogenous hormone and improving red cell mass in anemic individuals…As a Hematologist, I can attest to the value his research has and will continue to bring to the field. In summary, Dr. Khoriaty has demonstrated independence, depth of research, and evidence of national recognition."

Summary of Recommendation:
Dr. Khoriaty has made significant research contributions to developing innovative therapies, particularly in the area of Congenital Dyserythropoietic Anemia. His research has garnered national and international recognition as a leader in his field. I am pleased to recommend Rami N. Khoriaty, M.D. for promotion to associate professor of internal medicine, with tenure, Department of Internal Medicine, and to associate professor of cell and developmental biology, without tenure, Department of Cell and Developmental Biology, Medical School.

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

May 2022