PROMOTION RECOMMENDATION UNIVERSITY OF MICHIGAN MEDICAL SCHOOL

DEPARTMENT OF INTERNAL MEDICINE DEPARTMENT OF MICROBIOLOGY AND IMMUNOLOGY

<u>Kathleen L. Collins, M.D., Ph.D.</u>, associate professor of internal medicine, with tenure, Department of Internal Medicine, and associate professor of microbiology and immunology, without tenure, Department of Microbiology and Immunology, Medical School, is recommended for promotion to professor of internal medicine, with tenure, Department of Internal Medicine, and professor of microbiology and immunology, without tenure, Department of Microbiology and Immunology, Medical School.

Academic Degrees:

M.D.	1993	Johns Hopkins University
Ph.D.	1993	Johns Hopkins University
B.A.	1985	Wellesley College

Professional Record:

2010–present	Associate Professor of Microbiology and Immunology, University
	of Michigan
2005-present	Associate Professor of Internal Medicine, University of Michigan
1998–2005	Assistant Professor of Microbiology and Immunology, University
	of Michigan
1998-2005	Assistant Professor of Internal Medicine, University of Michigan

Summary of Evaluation:

Teaching: Dr. Collins is actively involved in teaching and mentoring at many levels. She plays a role in the education of undergraduate students, graduate students, medical students, postdoctoral fellows, residents and clinical infectious disease fellows. Her activities span instruction in laboratory research, classroom instruction and instruction in clinical medicine. Dr. Collins is a member of the Graduate Program in Cellular and Molecular Biology and the Graduate Program in Immunology, and has mentored the thesis research of nine Ph.D. students in her laboratory since her last promotion. Her students are frequently the recipients of fellowships and travel awards. Dr. Collins also lectures in graduate school and Medical School courses, is a participant in a three month postdoctoral course in bench laboratory research, and provides clinical instruction as an attending physician on the infectious diseases consult service at the VA Hospital. Additionally, she makes a substantial contribution to education administration as the associate director of the Cellular and Molecular Biology Graduate Program.

<u>Research</u>: Dr. Collins' research focuses on how HIV establishes a persistent infection despite an anti-viral immune response and highly effective drugs. She is recognized as a leader in this field, and her recent publication on latent HIV reservoirs in *Nature Medicine* was highlighted in

several scientific reviews and reported by national and international news media. She has 30 peer-reviewed manuscripts with 21 as first or senior author, and three additional first author manuscripts are pending review. Dr. Collins currently holds two individual NIH R01 grants, plus two NIH R21 grants and a Burroughs Wellcome Award for her research; she is the prior recipient of a Pew Scholars award and an NIH K08 award. Her international reputation is evident in her national and international invited plenary talks, and service on the editorial board of two journals and as a section editor for a third. She has also served as a permanent member of the NIH AIDS Immunology and Pathogenesis Study Section since 2006. In 2005, Dr. Collins was elected to the American Society of Clinical Investigation in recognition of her many accomplishments.

Recent and Significant Publications:

Carter CC, Onafuwa-Nuga A, Riddell J, Bixby D, Savona MR, Collins KL: HIV-1 infects multipotent progenitor cells causing cell death and establishing latent cellular reservoirs. *Nature Medicine* 16:446-451. Epub 2010 Mar 7.

Schaefer M, Roeth JF, Wonderlich E, Leonard H, Collins KL: HIV-1 Nef targets MHC-I and CD4 for degradation via a common βeta-COP-dependent pathway in T lymphocytes. *PLoS Pathogens* 4:e1000131 doi:10.1371/journal.ppat.1000131, 2008.

Schaefer M, Williams M, Gonzalez P, Collins, KL: The HLA-C cytoplasmic tail contains trafficking signals that allow regulated expression with differentiation of macrophages. *J Immunol* 180:7804-7817, 2008.

Wonderlich E, Williams M, Collins KL: The tyrosine-binding pocket in the AP-1 mu 1 subunit is necessary for Nef to recruit AP-1 to the MHC-I cytoplasmic tail. *J Biol Chem* 283:3011-3022. Epub 2007 Dec 11.

Roeth JF, Kasper MR, Williams M, Filzen TF, Collins KL: HIV-1 Nef re-directs MHC-I from the TGN to lysosomes by stabilizing an interaction between MHC-I and AP-1. *J Cell Biol* 167:903-913, 2004.

Service: Dr. Collins has a strong track record of service at the University of Michigan, having served on numerous department, school, and university committees. Since 2005 she has served as the associate director of the Cellular and Molecular Biology Graduate Program, and since 2001 has chaired the Biological Scholars Research Symposium organizing committee. Dr. Collins also remains active clinically as an attending physician on the infectious diseases consult service at the VA Hospital.

External Review:

Reviewer A: "Dr. Collins has had a substantial impact on her field....She has developed a record of important scientific advances that are driving her field. This is reflected in her invitations to speak at major meetings and impressive level of grant support."

<u>Reviewer B</u>: "...I would place Kathy squarely in the middle of her peer group of researchers of her generation interested in HOIV [sic] pathogenesis. This group is very strong,... so the middle is a very good place to be."

<u>Reviewer C</u>: "Kathy is obviously best known for her work on HIV-1 nef....Much of Dr. Collin's [sic] work since moving to U. Michigan has revolved around fleshing out the mechanism of this phenotype, and in this Dr. Collins has done better work than anyone else....her work is of the highest quality and she is much better than most in the field."

<u>Reviewer D</u>: "Dr. Collins is extremely well-known and highly respected in the retrovirus community....Her work is lovely, creative, and significant, and this promotion is an obvious and appropriate acknowledgement of her contributions -- crudely put, this is a no-brainer."

Reviewer E: "Suffice it to say that I know of only [a] few investigators who compare with her in her ability to ask critical and timely questions and to come back with convincing answers. Kathy is a highly talented, internationally recognized scientist, who continues to make major contributions in her field. Her impressive funding record shows that she works on cutting edge problems. She is a sought-after speaker, editorial board member, and study section member. She is also a passionate mentor and teacher, as well as an outstanding clinician."

Reviewer F: "...Kathy is an outstanding, innovative scientist, who is clearly continuing to make significant contributions to the field of HIV pathogenesis and will I am confident continue to do so....She has served and is on three Editorial Boards, reviews for multiple journals, and has served on the AIDS Immunology and Pathogenesis Study Section for the past 6 years. In addition, in 2005 she was elected to the American Society for Clinical Investigation. This is clear national recognition of her scientific contributions."

Reviewer G: "...she proved herself as a quality bench scientist who is able to bring new techniques into the lab and train students and postdocs how to pursue important questions wherever they may lead. This work has been published in quality journals. It is clear Dr. Collins values science that is of high quality and can stand up to rigorous peer review....Everything points to an extended period of creativity, productivity, and funding support and this will happen as there is increasing recognition of her work. She represents a member of the next generation of AIDS researchers who will provide our future leadership. Dr. Collins is a real success story and should be viewed as a highly valued faculty member."

Reviewer H: "...Dr. Collins continues to publish outstanding papers that are highly regarded in the field. Attesting to this, she remains well funded by the NIH and other funding sources. I have heard Dr. Collins speak at several national and international meetings, and have also heard some of her trainees present data from their laboratory on several occasions. These presentations are always outstanding, and lead me to believe that Dr. Collins is an outstanding lecturer and mentor."

Summary of Recommendation:

Dr. Collins is an extremely well-funded investigator who is recognized internationally for her contributions to HIV research. She also contributes significantly to education and service institutionally. Therefore, Dr. Collins is an outstanding candidate for promotion to professor of internal medicine, with tenure, and professor of microbiology and immunology, without tenure, Medical School.

James O. Woolliscroft, M.D.

Dean

Lyle C. Roll Professor of Medicine

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