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

Approved by the Regents
May 15, 2008

Sean Morrison, Ph.D., 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, is recommended for promotion to Professor of Internal Medicine, with tenure, Department of Internal Medicine, and Professor of Cell and Developmental Biology, without tenure, Department of Cell and Developmental Biology, Medical School [also being promoted to Research Professor, Molecular & Behavioral Neuroscience Institute, and Research Professor, Life Sciences Institute].

Academic Degrees:

Ph.D.	1996	Stanford University
B.Sc.	1991	Dalhousie University, Halifax, Canada

Professional Record:

2007-Present	Research Associate Professor, Molecular and Behavioral Neuroscience Institute, University of Michigan
2004-Present	Associate Professor of Internal Medicine, University of Michigan Associate Professor of Cell and Developmental Biology, University of Michigan
2005-Present	Research Associate Professor, Life Sciences Institute, University of Michigan
2003-2007	Research Assistant Professor, Molecular and Behavioral Neuroscience Institute, (Formerly Mental Health Research Institute), University of Michigan
1999-2004	Assistant Professor of Internal Medicine, University of Michigan Assistant Professor of Cell and Developmental Biology, University of Michigan

Summary of Evaluation:

Teaching: Dr. Morrison has distinguished himself with a number of significant contributions to the educational mission of the Medical School. Over the last several years, Dr. Morrison has expended considerable effort in formal didactic interactions within the Department of Internal Medicine, the Department of Cell and Developmental Biology and, at the undergraduate level, with lectures in the Research Training Program for Clinical Fellows. Furthermore, from 2002-2006 he was one of the primary faculty involved in the University of Michigan Medical School Postdoctoral Research Training Program (a three-month long course of study designed to provide postdoctoral fellows interested in pursuing a career as physician-scientists with an intensive introduction to cell and molecular biology). In each of these endeavors, Dr. Morrison has been

evaluated as an excellent to outstanding educator. Indeed, in the Postdoctoral Program, which is largely staffed with many of our most honored senior faculty, Dr. Morrison was ranked consistently above all of the other instructors. In recognition of his effectiveness as a teacher and mentor, no fewer than nine graduate and 15 postdoctoral fellows have sought training. Dr. Morrison currently serves on five dissertation committees. Finally, his skills as an educator are perhaps best exemplified by the fact that since his appointment in 2004, Dr. Morrison has been invited to present at no fewer than 20 intramural presentations throughout the University.

Research: Dr. Morrison studies the mechanisms that regulate stem cell function in the hematopoietic and nervous systems, where he has developed an international reputation. Since Dr. Morrison's promotion to Associate Professor in 2004, he has published 15 articles in peer-reviewed journals such as *Cell, Nature, Developmental Biology, Development* and *Blood.* His most recent work includes i) the identification of new techniques for characterizing hematopoietic stem cells (*Cell*, 2005), ii) the molecular machinery that distinguishes normal from neoplastic stem cells (*Nature*, 2006), iii) new roles for Ink4a in neurogenesis (*Nature*, 2006) and iv) new insights into hematopoietic stem cell function (*Nature* 2007; *Cell*, 2007).

Dr. Morrison's work has been recognized in numerous other ways since 2004. His appointment as an Associate Investigator in the Howard Hughes Medical Institute was renewed in 2005. In addition to HHMI support, he is funded by two NIH R01 grants and a grant from the Department of Defense. In further recognition of his success, Dr. Morrison was awarded the Dean's Award for Basic Science in 2004, the *Detroit News'* Michiganian of the Year in 2006 and the Pfizer Young Michigan Biomedical Investigator of the Year Award in 2007. He has been invited to speak at major national and international meetings, including Keystone Symposia, the Cold Spring Harbor Symposium on Quantitative Biology, and annual meetings of the Society for Neuroscience, the United Kingdom Cancer Research Institute, the Society for Developmental Biology, the AACR, the ASCB, and the AAAS. He is the only person to speak at all of the International Society for Stem Cell Research Annual Meetings since their inception in 2003. In the coming year, he is scheduled to speak at no fewer than seven major national or international meetings.

Recent and Significant Publications:

Kiel MJ, He S, Ashkenazi R, Gentry SN, Teta M, Kushner JA, Jackson TL and Morrison SJ: Hematopoietic stem cells do not asymmetrically segrate chromosomes or retain bromodeoxyuridine *Nature* Epub Aug 29, 2007.

Kim I, Saunders TL, and Morrison SJ: Sox17 dependence distinguishes the transcriptional regulation of fetal from adult hematopoietic stem cells. *Cell* 130:470-483, 2007.

Yilmaz OH, Valdez R, Theisen B, Guo W, Ferguson D, Wu H, and Morrison SJ: Pten dependence distinguishes hematopoietic stem cells from leukemia-initating cells. *Nature* 441:475-482, 2006.

Molofsky AV, Slutsky SG, Joseph NM, He S, Pardal R, Krishnamurthy J, Sharpless N, and Morrison SJ: Increasing Ink4a expression decreases forebrain progenitor function and neurogenesis during ageing. *Nature* 443:448-452, 2006.

Kiel MJ, Yilmaz OH, Iwashita T, Terhorst C, and Morrison SJ: SLAM family receptors distinguish hematopoietic stem and progenitor cells and reveal endothelial niches for stem cells. *Cell* 121:1109-1121, 2005.

Service: Dr. Morrison has made numerous contributions both locally and nationally. Since September of 2005, Dr. Morrison has been the Director of the University of Michigan Center for Stem Cell Biology. He was elected Director (2004–present) and Treasurer (2006–present) of the International Society for Stem Cell Research. Since his promotion in 2004, he has been on the Public Policy Committee of the American Society for Cell Biology. In each of these positions, he has promoted effective stem cell policies regionally, nationally, and internationally. In addition to these duties, Dr. Morrison also serves on the editorial boards of *Cell Stem Cell*, and *Stem Cells* while also acting as the Section Head for the Faculty of 1000. In addition, he is on the Advisory Board for the UCLA Stem Cell Center and has organized stem cell meetings for the American Society for Cell Biology (July, 2006) and for Keystone Symposia (February, 2008). He is also a grant reviewer for the California Institute for Regenerative Medicine, the Italian Association for Cancer Research, and for the NIH (ad hoc in Feb. 2004 and Feb. 2008).

External Review:

Reviewer A: "I believe that Sean is a particularly outstanding candidate whose scientific achievements and future potential well surpass those of many professors at our country's most prestigious medical schools....He is among the very best and brightest at his home institution. Indeed, I know that many have tried to recruit him away, and I have no doubt that other organizations, including my own, would hire him at a full Professor rank."

Reviewer B: "Sean continues to be in great demand as a speaker at meetings and is considered one of the very best reviewers in the stem cell field....Sean has a very special gift also as a teacher....In the field of stem cell biology in Sean's age group, there is no other investigator nationally or internationally as original and productive as Sean."

Reviewer C: "Sean is an aggressive researcher who is always seeking to do definitive experiments relating to important problems in the stem cell field....He is an effective and beloved mentor by his students and fellows....Perhaps the best comment I can make is that virtually every other institution in the country would be pleased to recruit Sean to its faculty."

Reviewer D: "Sean rapidly became an international figure in the stem cell field and also was appointed to the prestigious position of HHMI investigator. He continues to publish highly visible and seminal papers in the very best journals....His level of productivity and quality of work is of a uniformly high level."

Reviewer E: "Sean is a major investigator in the stem cell biology field and really should be promoted to Professor. He is one of the most talented investigators in the field and Michigan is luck to have him."

Summary of Recommendation:

Dr. Sean Morrison is clearly one of the most sought after and highly regarded scientists at the University of Michigan. He is an international leader in the field of stem cell biology, and consistently ranked as a true "superstar." I am delighted to recommend, with the highest possible level of enthusiasm, the promotion of Dr. Sean Morrison to Professor, with tenure, in the Department of Internal Medicine and Professor, without tenure, in the Department of Cell and Developmental Biology.

James O. Woolliscroft, M.D.
Dean
Lyle C. Roll Professor of Medicine

May 2008