

Approved by the Regents
May 19, 2011

PROMOTION RECOMMENDATION
UNIVERSITY OF MICHIGAN
MEDICAL SCHOOL
DEPARTMENT OF PEDIATRICS AND COMMUNICABLE DISEASES
DEPARTMENT OF PATHOLOGY

Elizabeth R. Lawlor, M.D., Ph.D., assistant professor of pediatrics and communicable diseases, Department of Pediatrics and Communicable Diseases, and assistant professor of pathology, Department of Pathology, Medical School, is recommended for promotion to associate professor of pediatrics and communicable diseases, with tenure, Department of Pediatrics and Communicable Diseases, and associate professor of pathology, without tenure, Department of Pathology, Medical School.

Academic Degrees:

PhD	2001	University of British Columbia
M.D.	1989	McMaster University
B.S.	1986	McMaster University

Professional Record:

2010-present	Assistant Professor of Pediatrics and Communicable Diseases and Assistant Professor of Pathology, University of Michigan
2004–2009	Assistant Professor of Pediatrics and Assistant Professor of Pathology, University of Southern California
2004–2009	Research Scientist, Division of Pediatric Hematology-Oncology, Saban Research Institute, Children's Hospital Los Angeles

Summary of Evaluation:

Teaching: Dr. Lawlor has extensive teaching experience at all levels. While at the University of Southern California, she provided core curriculum lectures to medical students, served on six Ph.D. dissertation committees and served as a research mentor for undergraduates, PIBS program graduates and medical students. She has educated and mentored post-doctoral fellows who now hold faculty positions at other academic institutions. Additionally, Dr. Lawlor has three graduate students and two post-doctoral fellows who accompanied her to the University of Michigan. Dr. Lawlor has quickly integrated herself into the educational missions of the department. She is now supervising a graduate student in neurosciences and recently was appointed as faculty to the Cancer Biology Training Program, a graduate studies program where she will be providing a lecture series. Most recently, Dr. Lawlor has been appointed to the Pediatric Hematology and Oncology Fellow Research Steering Committee. This is an important role where she will help guide first-year fellows toward their research focus for years two and three. She will also join other faculty on the T32 NIH Training Grant in Molecular Hematology.

Dr. Lawlor has already had opportunity to impress trainees and faculty as an investigator and educator. She has given a research presentation as part of our Pediatric Hematology and Oncology Grand Rounds, participated in the Pediatric Hematology and Oncology Clinical Conference and, in July, she gave Pediatric Grand Rounds.

Research: Dr. Lawlor's major areas of investigation include: 1. Biology of the Ewing sarcoma family of tumors, 2. Function of polycomb genes in tumor initiation and maintenance, 3. Disruption of genetic and epigenetic regulation in human neural crest-derived tumors. Her current studies have primarily been focused on four major projects: 1. Evaluating the role of BMI-1 as a cooperative oncogene in Ewing's Sarcoma and its molecular relationship with EWS-FLI1, 2. Studies of EWS-FLI1 oncogene expression human embryonic stem-derived neural crest stem cells (effects on gene expression, DNA methylation, tumor initiation), 3. Gene expression signatures of Ewing sarcoma as tools for clinical prognostication and biologic classification and 4. Evaluation of the clinical and biologic significance of stem cell gene expression in Ewing's sarcoma. As an independent investigator she has been provided with the necessary resources to establish a productive research laboratory that includes undergraduates, graduate students and post-doctoral fellows that is now funded from multiple extramural agencies including the NIH.

Recent and Significant Publications:

van Doorninck J, Ji L, Schaub B, Shimada H, Wing M, Krailo MD, Lessnick SL, Marina N, Triche TJ Sposto R, Womer R, Lawlor ER: Current treatment protocols have eliminated the prognostic advantage of type 1 fusions in Ewing sarcoma: A report from the Children's Oncology Group. *J Clin Oncol* 28:1989-1994, 2010.

Jiang XH, Gwye Y, Russell D, Cao C, Douglas D, Hung L, Kovar H, Triche TJ, Lawlor ER: CD133 expression in chemo-resistant Ewing sarcoma cells. *BMC Cancer* 10:116 (26 March 2010).

Jiang X, Gwye Y, McKeown SJ, Bronner-Fraser M, Lutzko C, Lawlor ER: Isolation and characterization of neural crest stem cells derived from *in vitro*-differentiated human embryonic stem cells. *Stem Cells Dev* 18:1059-1070, 2009.

Coles E, Lawlor ER, Bronner-Fraser M: EWS-FLI1 causes neuroepithelial defects and abrogates emigration of neural crest cell stem cells. *Stem Cells* 26:2237-2244, 2008.

Douglas D, Hsu JH, Hung L, Cooper A, Abdueva D, van Doorninck J, Peng G, Shimada H, Triche TJ, Lawlor ER: BMI-1 promotes Ewing sarcoma tumorigenicity independent of *CDKN2A* repression. *Cancer Res* 68:6507-6515, 2008.

Service: Dr. Lawlor is utilized as an expert ad hoc reviewer for key peer-reviewed journals. She has served on institutional committees at USC for research cooperative groups, their Stem Cell Research Oversight Committee, Admissions Committee, Executive Committee for a training grant, and the Pathology Graduate Program committee. Nationally, she serves on the several committees within the Children's Oncology Group related to translational research agendas and bone tumor research. Dr. Lawlor will continue to participate in her external committee responsibilities and has

already been appointed to her divisional research advisory council and serves on the Fellowship Research Steering committee.

External Review:

Reviewer A: “Dr. Lawlor’s studies have established her as a leading physician-investigator in the field of cancer biology focused on pediatric solid tumors, and Ewing sarcoma particularly....Dr. Lawlor has established an independent research program of high quality and national recognition. She is a creative physician-scientist studying diseases with major impact on children’s health.”

Reviewer B: “Her work has focused on ewings sarcoma [sic] a rare pediatric malignancy. Very few scientists have focused on this disease and her work has provided pivotal new insights. Dr. Lawlor’s work is highly regarded. She has become a leader in her field. She has published several important papers of broad interest.”

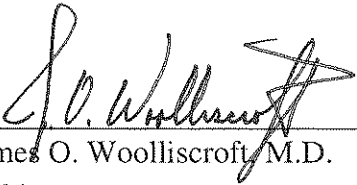
Reviewer C: “She is broadly viewed as a national research leader....She has won numerous honors and serves on multiple Editorial Boards. Her list of trainees is quite impressive attesting to her being a strong educator as well.”

Reviewer D: “Dr. Lawlor has become well established as a national leader in the area of Ewing’s sarcoma biology over the past several years. I consider her current major area of focus – the role of neural crest derived stem cells and polycomb genes in the biology of Ewing’s sarcoma – to be highly innovative and leading the field.”

Reviewer E: “In the challenging and competitive field of cancer stem cell research, Dr. Lawlor has emerged from being a recognized expert in the relatively narrower field of sarcoma stem cell work, to a nationally sought after speaker and researcher in the broader field, most recently confirmed by her invitation to be a member of one of the Roundtable Discussions at the 2010 annual meeting of the American Association for Cancer Research.”

Summary of Recommendation:

Dr. Lawlor’s record attests to a proven commitment to excellence in the areas of scholarship, teaching and service and she is most deserving of advancement to the level of associate professor, with tenure, in the Department of Pediatrics and Communicable Diseases and, without tenure, in the Department of Pathology.



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

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