Approved by the Regents
May 20, 2010

PROMOTION RECOMMENDATION
UNIVERSITY OF MICHIGAN
MEDICAL SCHOOL
UNIT FOR LABORATORY ANIMAL MEDICINE
DEPARTMENT OF MICROBIOLOGY AND IMMUNOLOGY

Kathryn A. Eaton, D.V.M., Ph.D., associate professor of comparative veterinary pathology, with tenure, Unit for Laboratory Animal Medicine, and associate professor of microbiology and immunology, without tenure, Department of Microbiology and Immunology, Medical School, is recommended for promotion to professor of comparative veterinary pathology, with tenure, Unit for Laboratory Animal Medicine, and professor of microbiology and immunology, without tenure, Department of Microbiology and Immunology, Medical School.

Academic Degrees:

Ph.D.	1990	The Ohio State University
D.V.M.	1984	Tufts University
B.A.	1978	Amherst College

Professional Record:

2003-present	Associate Professor of Comparative Veterinary Pathology, Unit for Laboratory Animal Medicine and the Department of Microbiology and Immunology, University of Michigan
1996-2003	Associate Professor of Veterinary Biosciences, The Ohio State University
1991-1996	Assistant Professor of Veterinary Biosciences, The Ohio State University

Summary of Evaluation:

Teaching: Dr. Eaton is responsible for providing pathology training to laboratory animal medicine residents. This training includes both didactic and practical elements, the latter because she is responsible for pathologic evaluation of clinical laboratory animal medicine cases university-wide. She is an excellent teacher. Her seminars in the training program are always well prepared and illustrated. She has superior grasp of the laboratory animal pathology literature and it comes through in her presentations to the residents. In addition to her teaching within ULAM, Dr. Eaton has taught in the undergraduate infectious disease course (Microbiology 405) and has taught a special topics seminar for microbiology graduate students on pathologic evaluation of animal models of human disease (Microbiology 619).

Research: Dr. Eaton is a national expert on animal models of *Helicobacter pylori* gastritis. Her research has contributed significantly to our understanding of the role of the immune system in the pathophysiology of this disease. Her recent studies on enterohemorrhagic *E. coli* infections in germ free mice opens up an important new area of study for her laboratory. This model has important similarities to the disease in humans. Dr. Eaton is a recognized expert in germ free

technology. She has established a germ free mouse facility to support her own research and that of other faculty at the University of Michigan. There are only a small number of such facilities at academic institutions in the United States. Finally, she provides collaborative research support as a pathologist to several investigators in ULAM, Microbiology and Immunology, and other departments in the Medical School and at other institutions. Her support includes consultation and training of staff and investigators, direct interpretation of gross and microscopic lesions, experimental protocol development, and manuscript preparation.

Recent and Significant Publications:

Eaton KA, Friedman DI, Francis GJ, Tyler JS, Young VB, Haeger J, Abu-Ali G, Whittam TS: Pathogenesis of renal disease due to enterohemorrhagic *Escherichia coli* in germ-free mice. *Infect Immun* 76:3054-3063, 2008.

Eaton KA, Danon SJ, Krakowka S, Weisbrode SE: A reproducible scoring system for quantification of histologic lesions of inflammatory disease in mouse gastric epithelium. *Comparative Medicine* 57:57-65, 2007.

Eaton KA, Benson LS, Haeger J, Gray BM: Role of transcription factor T-bet expression by CD4+ cells in gastritis due to *Helicobacter pylori* in mice. *Infect Immun* 74:4673-4684, 2006.

Zavros Y, Eaton KA, Kang W, Rathinavelu S, Katukuri V, Kao JY, Samuelson LC, Merchant JL: Chronic gastritis in the hypochlorhydric gastrin-deficient mouse progresses to adenocarcinoma. *Oncogene* 24:2354-66, 2005.

Eaton KA, Logan SM, Baker PE, Peterson RA, Monteiro MA, Altman E: *Helicobacter pylori* with a truncated lipopolysaccharide O chain fails to induce gastritis in SCID mice injected with splenocytes from wild-type C57BL/6J mice. *Infect Immun* 72:3925-3931, 2004.

Service: As part of her service to ULAM, Dr. Eaton provides pathology support for the clinical veterinary care program, overseeing gross and histopathologic evaluation of laboratory animal cases submitted by the veterinary staff. She also has oversight responsibility for the Germ Free Animal Facility. This is a unique resource used by a number of university investigators. She has served a term on the NCRR study section and frequently serves as a consultant for other study sections. She is active in her professional certifying organization, the American College of Veterinary Pathologists, having organized educational sessions for their yearly meetings and served on their Board Examination Committee. She also serves on the review board of the American Society of Microbiology journal, *Infection and Immunity*.

External Review:

Reviewer A: "Dr. Eaton's research exemplifies the best of what a comparative pathologist can do with animal models of infectious diseases, both as a Principal Investigator (and senior author) and as a collaborative pathologist...She stands tall among the rising generation of veterinary pathologists and is destined for leadership in our field, as well as continued research productivity and respect in the scientific community."

Reviewer B: "Dr. Eaton's work has been unique and she is one of a very small number of experimental pathologists in the United States who is conducting studies on microbial pathogenesis. She has had a distinguished career, which is marked by her scientific rigor, by her integrity, and by the strong network of collaborators she has assembled."

Reviewer C: "Among investigators who use animal models to study *H. pylori*, she would be ranked as one of the leading [investigators] worldwide...Dr. Eaton's research has consistently demonstrated a high level of innovation and originality, and she has had a significant impact on this field of research. She has achieved both national and international recognition for her work. Her current projects address important scientific questions, and she is well-poised to continue making major scholarly contributions."

Reviewer D: "At the *Helicobacter* meeting and in listening to my colleagues who work in the *Helicobacter pylori* field, it is clear that Dr. Eaton is considered a leading expert in animal models of *H. pylori* infection...I believe strongly that her interdisciplinary approach and her rather novel (and sought after) combination of skills in veterinary medicine and basic bacterial pathogenesis and immunity would be recognized as a real asset to the research community [at my institution]."

Reviewer E: "Her work on Helicobacter pylori and host immune responses clearly is seminal in the field. In addition, Dr. Eaton has borne a significant teaching, mentoring, service and administrative load throughout her career further emphasizing the leadership, consistency, and dedication that she is known for in the veterinary pathology community...her distinguished record of research, teaching and service make her the classical triple-threat academic. She is a skilled scientist with excellent intellectual abilities, strong interpersonal skills, and an outstanding reputation in her field."

Summary of Recommendation:

Kathryn A. Eaton, D.V.M., Ph.D. has exhibited outstanding academic and educational productivity and has made significant contributions to the service mission of the Unit for Laboratory Animal Medicine. Her potential for continued excellence in academic medicine is clear and she will play a key role in advancing the Medical School, ULAM and Microbiology and Immunology for many years. I am, therefore, pleased to recommend Dr. Eaton for promotion to professor in both the Unit for Laboratory Animal Medicine and the Department of Microbiology and Immunology.

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

May 2010