

PROMOTION RECOMMENDATION
UNIVERSITY OF MICHIGAN
MEDICAL SCHOOL
DEPARTMENT OF PATHOLOGY

Peter C. Lucas, M.D., Ph.D., assistant professor of pathology, Department of Pathology, Medical School, is recommended for promotion to associate professor of pathology, with tenure, Department of Pathology, Medical School.

Academic Degrees:

M.D.	1996	Vanderbilt University
Ph.D.	1992	Vanderbilt University
B.A.	1987	Carleton College

Professional Record:

2004-present	Assistant Professor of Pathology, University of Michigan
2001-2004	Lecturer, Department of Pathology, University of Michigan

Summary of Evaluation:

Teaching: Dr. Lucas has been involved in teaching at all levels. For medical students, he has been one of the laboratory instructors for the second-year course and has also lectured and supervised first-year students in the histology/pathology laboratory, and has been a mentor for at least one four-week senior medical student elective in pathology each year. He has consistently been rated highly by the medical students, in the range of very good to excellent. He also lectures to the medical students for one hour a year. For residents in pathology, he is mainly involved in teaching them during their rotations on the breast pathology service, where he instructs them in proper handling of specimens and diagnosis; this covers approximately 10 weeks per year. He is also intimately involved in training the subspecialized breast pathology fellow. His overall ratings by the residents are 4.79 out of 5, the excellent level. Furthermore, he is assistant director of the pathology residency/fellowship training program where he is involved with overall curriculum development for all residents and fellows, and he is involved in resident and fellow selection for the coming year. Because the residency and fellowship program curriculum is under intense revision, this is an extraordinarily heavy time commitment for Dr. Lucas. He is also involved in graduate student training and postdoctoral student training in the laboratory setting. It is obvious that Dr. Lucas has made a strong commitment to all of the teaching programs of the Department of Pathology.

Research: Dr. Lucas has been studying the link between inflammation and disease pathogenesis. Early on, his great contributions involved the identification of a novel signal transduction pathway that mediates NF- κ B activation in lymphocytes and the other molecules involved in the pathway. He recently discovered an analogous signaling pathway that functions outside the context of the immune system. This is a pathway that contributes to the development of atherosclerosis, type 2 diabetes and certain forms of breast cancer. The importance of this work is recognized by the fact that he currently is the principal investigator of two R01 grants from the NIH, one for a novel signaling pathway mediating hypertension and obesity-dependent insulin resistance, and the other for

angiotensin II signaling through a novel NF- κ B pathway. His work has been continually published in high-quality, peer-reviewed journals, including *Nature Immunology*, *Cancer Cell*, *PNAS*, and *Journal of Biological Chemistry*. He has been invited to present his work at a Keystone Symposium, Vanderbilt University, the University of Iowa, and an ASIP Symposium.

Recent and Significant Publications:

McAllister-Lucas LM, Jin X, Gu S, Siu K, McDonnell S, Ruland J, Delekta P, VanBeek M, Lucas PC: The CARMA3/Bcl10/MALT1 signalosome contributes to Angiotensin II-dependent atherogenesis by mediating pro-inflammatory effects in the vasculature. *J Biol Chem* 285:25880-25884, 2010.

McAllister-Lucas LM and Lucas PC: Finally, MALT1 is a caspase! *Nature Immunol* 9:231-233, 2008.

Lucas PC, Kuffa P, Gu S, Kohrt D, Kim DSL, Siu K, Jin X, Swenson J, McAllister-Lucas LM: A dual role for the AP12 moiety in AP12-MALT1-dependent NF- κ B activation; heterotypic oligomerization and TRAF2 recruitment. *Oncogene* 26:5643-5654, 2007.

McAllister-Lucas LM, Ruland J, Siu K, Jin X, Gu S, Kim DSL, Kuffa P, Kohrt D, Mak TW, Nunez G, Lucas PC. CARMA3/Bcl10/MALT1-dependent NF- κ B activation mediates angiotensin II-responsive inflammatory signaling in nonimmune cells. *Proc Natl Acad Sci USA* 104:139-144, 2007.

Lucas PC, Yonezumi M, Inohara N, McAllister-Lucas LM, Abazeed ME, Chen FF, Yamaoka S, Seto M, Nunez G: Bcl10 and MALT1, independent targets of chromosomal translocation in MALT lymphoma, cooperate in a novel NF- κ B signaling pathway. *J Biol Chem* 276:19012-19019, 2001. (This article is cited because it lays the foundation for most of Dr. Lucas' subsequent publications and grants.)

Service: Dr. Lucas has made enormous contributions to his institution and to his profession. At the University of Michigan he has been a member of numerous committees including the Pathology Department Graduate School Admissions Committee, the Graduate Program Preliminary Exam Committee, several graduate student thesis committees, Cancer Research Committee and the Internal Grant Review Board for the Cancer Center, the Cancer Biology Faculty Recruitment Search Committee for the School of Dentistry, and currently he serves as assistant director for the Pathology Resident/Fellowship Training Program, a major time and effort commitment. Regionally, he has been a member of the Michigan Cancer Consortium Breast Cancer Advisory Committee. Nationally he is a co-chair for the 2011 ASIP Annual Symposium, an ad hoc reviewer for the NIH Diabetes Research and Training Center and an ad hoc reviewer for multiple prestigious journals. Dr. Lucas is a highly accomplished surgical breast pathologist. He is assigned to the diagnostic breast pathology service for approximately 20% of his time, during which time he is responsible for handling and diagnosis of all cases derived from University Hospital and its clinics as well as cases referred here from other institutions. He also is responsible for the external consultation cases submitted by other pathologists for final diagnosis. He is an effective consultant and interacts at all levels with the clinicians involved in the breast services, including surgeons, oncologists and radiologists.

External Review:

Reviewer A: "This outstanding work (angiotensin II signaling, the downstream molecules Bcl10 and MALT1 in diverse pathologic conditions, including hypertension, vascular inflammation and lymphomagenesis) has been a significant contribution to the angiotensin II signaling field.

...Peter's work has clearly garnered national recognition in terms of its impact and number of invited reviews."

Reviewer B: "Dr. Lucas is one of the few scientists who is both an active surgical pathologist and a basic investigator. In my view, this is much to be commended and he, clearly, carries out both tasks to a very high standard indeed....He is clearly a medical scientist with a bright future."

Reviewer C: "This discovery (a novel signaling pathway in which the CARMA3/Bcl10/MALT1 complex mediates GPCR-induced NF- κ B activation) will have a significant impact for the field of GPCRs and vascular biology, as well as cancer research, since it provides a potential therapeutic target for cardiovascular diseases and cancer....Dr. Lucas is an outstanding physician scientist. He has made significant contributions to our field, and proved his excellence as an independent scientist."

Reviewer D: "There is a great need in our profession for scientifically sophisticated academic pathologists who can contribute intellectually to a wide range of collaborative research projects while at the same time providing essential patient-care service. Dr. Lucas fills that role admirably. The fact that he has, in addition, built a productive basic research program of his own, and achieved a commendable level of NIH funding in these harrowing times, would make him a strong candidate for promotion at any leading academic Pathology department."

Reviewer E: "Dr. Lucas comes as the whole package....In addition to his research and teaching, Dr. Lucas serves as a reviewer for several scientific journals and is an invited speaker in Keystone Symposium which speak highly of his national and international reputation as an outstanding scientist."

Summary of Recommendation:

Dr. Peter Lucas is an established scientist whose work has had significant national and international impact in the field of cellular signal transduction, especially lymphocyte biology and the link between inflammation and disease pathogenesis. His work is well funded from the NIH. He is also an excellent diagnostician in the highly subspecialized area of breast surgical pathology, and he handles a significant component of that service. He is an effective and enthusiastic educator whose students continually give him high marks for teaching. He has also taken on considerable committee work in the medical center and nationally. I am pleased to recommend Peter C. Lucas, M.D., Ph.D. for promotion to associate professor of pathology, with tenure, Department of Pathology, Medical School.



James O. Woolliscroft, M.D.

Dean

Lyle C. Roll Professor of Medicine

May 2011