PROMOTION RECOMMENDATION
UNIVERSITY OF MICHIGAN MEDICAL SCHOOL
DEPARTMENT OF PATHOLOGY
DEPARTMENT OF INTERNAL MEDICINE

Colin S. Duckett, Ph.D., Assistant Professor of Pathology, Department of Pathology, and Assistant Professor of Internal Medicine, Department of Internal Medicine, Medical School, is recommended for promotion to Associate Professor of Pathology, with tenure, Department of Pathology, and Associate Professor of Internal Medicine, without tenure, Department of Internal Medicine, Medical School.

Academic Degrees:

Ph.D.	1993	University of London
B.Sc.	1989	University of London

Professional Record:

2002-Present	Assistant Professor of Pathology and Assistant Professor of Internal Medicine, University of Michigan
1997-2001	Investigator, Metabolism Branch, Center for Cancer Research, National Cancer Institute, Bethesda, Maryland

Summary of Evaluation:

Teaching: Dr. Duckett's major educational activities involve the training of graduate students and postdoctoral fellows, both in formal course work and in his research laboratory. There are four to five postdoctoral fellows and graduate students in his laboratory at any time, with the graduate students being part of both the pathology and the cell and molecular biology programs. Most of his trainees have been coauthors on manuscripts in high-quality peer-reviewed journals and on published abstracts. He teaches graduate students in three required courses, Pathology 581 and 582 and Immunology 850, and he has also been course director of Immunology 815 which is a graduate student journal club/research colloquium. Formal evaluations indicate that his teaching is outstanding. He also serves on student doctoral dissertation committees and is a member of the immunology graduate student advisory committee, biological scholars committee and immunology graduate program, and he is a member of the cellular and molecular biology graduate program. He also serves on several education committees within the Department of Pathology.

Research: Dr. Duckett has focused on regulatory proteins of the apoptotic pathway, and he is responsible for cloning a novel H-link inhibitor of apoptosis. He was able to prove that one of these proteins has caspase-inhibitory properties as well as having critical signaling roles outside of apoptotic regulation. Recently his work has focused on the role of one of these proteins in copper sensing, and he has defined another novel role for this inhibitory function. His work holds tremendous promise for future studies which will examine aspects of this apoptotic inhibitory family of proteins and their roles in cellular homeostasis. His work has been

consistently funded, and he is currently a principal investigator on one NIH RO1 and USARMC cancer award, and a coprincipal investigator on a second USARMC award. He has received numerous invitations to present his research including three Gordon Research Conferences, one Keystone Symposium, and presentations at the Universities of North Carolina, Massachusetts, Utrecht in the Netherlands, Texas, Miami, Harvard University and Albert Einstein College of Medicine, as well as the Beatson Institute in Glasgow. Since his appointment as an assistant professor at the University of Michigan, his work has resulted in fifteen publications in high-quality peer-reviewed journals of which he is the senior author on five, and there are additional book chapters. He holds a joint appointment in the Department of Internal Medicine where he has had a critical role in developing the molecular mechanisms of disease program.

Recent and Significant Publications:

Lewis J, Burstein E, Birkey Reffey SB, Bratton SB, Roberts AB, and Duckett CS: Uncoupling of the signaling and caspase-inhibitory properties of XIAP. J Biol Chem 279:9023-9029, 2004.

Burstein E, Ganesh L, Dick RD, van De Sluis B, Wilkinson JC, Lewis J, Klomp LWJ, Wijmenga C, Brewer GJ, Nabel GJ and Duckett CS: A novel role for XIAP in copper homeostasis through regulation of MURR1. EMBO J 23:244-254, 2004.

Wilkinson JC, Cepero E, Boise LH and Duckett CS: Upstream regulatory role for XIAP in receptor-mediated apoptosis. Mol Cell Biol 24:7003-7014, 2004.

Wilkinson JC, Wilkinson AS, Scott FL, Csomos RA, Salvesen GS, and Duckett CS: Neutralization of Smac/DIABLO by IAPs: a caspase-independent mechanism for apoptotic inhibition. J Biol Chem 279:51082-51090, 2004.

Reffey SB, Wurthner JU, Parks WT, Roberts AB and Duckett CS: X-linked inhibitor of apoptosis protein functions as a cofactor in transforming growth factor-β signaling. J Biol Chem 276:26542-26549, 2001.

Service: Dr. Duckett, in recognition of his excellence in research and his ability to think critically, has become a regular member of two NIH study sections and one American Cancer Society study section, and he has been an ad-hoc reviewer for the NIH, the NSF, the USAMRMC and the BDAD-D as well as the Wellcome Trust and the Italian Association for Cancer Research. Furthermore, he is on the editorial boards for both the *Journal of Biological Chemistry* and *Biochemical Journal*, and he has been an ad-hoc reviewer for twenty-three other journals within the last three years, including *Cancer Research, Cell, Journal of Clinical Investigation, Nature Cell Biology* and *PNAS*. At the University of Michigan, he has had administrative appointments as members of the Comprehensive Cancer Center, the Rheumatic Disease Core Center, the Immunology Graduate Program and the Gastrointestinal Peptide Research Center. He is also on the Scientific Advisory Board of Aegera Therapeutics.

External Review:

Reviewer A: "...Dr. Duckett brings a creative perspective that is both refreshing and insightful. He is a skilled speaker and a quick thinker, and for that reason frequently presents at national and international meetings. I have no doubt that we have only begun to see great things from this talented scientist [of his cohort]."

Reviewer B: "...I consider Colin one of the most creative, thorough, and careful researchers working in the area of apoptotic regulation. His work is of consistently high quality and, as such, is highly respected."

Reviewer C: "Colin is an extremely thoughtful and intelligent scientist, who managed to combine the highest degree of scientific rigour with an ability to be adventurous and explore new areas of interest..."

Reviewer D: "...he has a rare streak of courage, an all too rare virtue among scientists [of his cohort], and one that supports his originality and perspicacity. As an example of this, his recent identification of the entirely new family of *COMMD* genes is set to make a big splash over the upcoming months."

Reviewer E: "This work [on the biologic activities of mammalian inhibitor of apoptosis proteins] has been crucial to our current understanding of IAP proteins in apoptotic control and other cellular processes....His recent work linking xIAP to copper homeostasis is quite novel, and may open up an entirely new and clinically relevant direction for him to pursue."

Reviewer F: "His recognition within the extremely competitive field of programmed cell death is evident based on Duckett's service on numerous grant review panels, editorial boards of the Journal of Biological Chemistry and Biochemical Journal, and as organizer of international meetings. Such leadership not only reflects well on Dr. Duckett and his laboratory, but also on the University of Michigan."

Summary of Recommendation:

Colin S. Duckett, Ph.D., has developed a national and international reputation for his novel and creative studies on inhibitor of apoptosis proteins. He is recognized as an independent thinker whose studies on occasion run counter to currently accepted thought, but are proven to be correct and exciting. His work has been consistently funded. He has been invited to present his work at numerous national and international research meetings and conferences and he has been an active regular member and ad hoc reviewer for grants for numerous agencies. He is also a superb educator in the graduate and postdoctoral student areas. His accomplishments are commensurate with this promotion to Associate Professor.

Allen S. Lichter, M.D., Dean
Newman Family Professor
of Radiation Oncology

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