Approved by the Regents
May 17, 2012

PROMOTION RECOMMENDATION
UNIVERSITY OF MICHIGAN
MEDICAL SCHOOL
DEPARTMENT OF PATHOLOGY
DEPARTMENT OF BIOLOGICAL CHEMISTRY

Yali Dou, Ph.D., assistant professor of pathology, Department of Pathology, and assistant professor of biological chemistry, Department of Biological Chemistry, Medical School, is recommended for promotion to associate professor of pathology, with tenure, Department of Pathology, and associate professor of biological chemistry, without tenure, Department of Biological Chemistry, Medical School.

Academic Degrees:

Ph.D.	2000	University of Rochester
M.S.	1998	University of Rochester
B Medicine	1996	Beijing Medical University

Professional Record:

2006–present	Assistant Professor of Pathology, University of Michigan
2006–present	Assistant Professor of Biological Chemistry, University of Michigan

Summary of Evaluation:

Teaching: Dr. Dou has been involved in several teaching activities during the past five years. She has had formal course work in lectures and seminars in three different graduate courses varying from 1½ to 7½ hours per year. These courses are both in the pathology and biochemistry departments. Her evaluations range from good to very good in these courses. In addition, in the past four years she has had five postdoctoral students and two pre-doctoral students in her laboratory, four of whom are still there. She has been on doctoral thesis committees (12 students) and has been on preliminary examination committees for 12 additional students. In the laboratory setting, she is regarded as a highly effective and dedicated teacher.

Research: Dr. Dou's research activities center on structural functional analysis of histone-modifying enzymes, drug targeting of MLL, and epigenetic regulation of cell fate determination and of hematologic malignancies. Some of her key contributions have included the discovery that MOF exists in two complexes that have a differential activity in acetylating p53 and regulating its tumor suppressor activity. Her laboratory generated an MOF knockout mouse model, and she demonstrated that the DNA repair defects in cell cycle progression are caused by a block of the recruitment of the repair proteins for the damaged foci. She has also collaborated with Dr. Shaomeng Wang at Michigan to develop small molecule inhibitors that prevent the binding of MLL to WDR5 and thus inhibited enzymatic activities. These small molecules are currently being evaluated for anti-leukemia activity. Thus, the major impact of her work has been on the elucidation of alterations in the MLL pathway and potential development of

inhibitors that may be therapeutically useful in treating leukemia. Her work has been continually funded from external sources, and currently she is the primary investigator on a R01 grant from the NIH, an RSG grant from the American Cancer Society, and an innovative research grant from Stand Up to Cancer (SU2C). She has been invited to present her work at 14 venues during the past four years including a Keystone symposium, University College of London, University of Minnesota, and a university in China. During this time, she has had 16 manuscripts published in high-impact, peer-reviewed journals including *Molecular Cell Biology*, *Blood*, *Molecular Cell*, *Cell* and *PNAS*. She is also the co-author of three invited reviews which have been published in equally important journals.

Recent and Significant Publications:

Wu L, Zee BM, Wang Y, Garcia BA, Dou Y: The RING finger protein MSL2 in the MOF complex is an E3 ubiquitin ligase for H2B K34 and is involved in crosstalk with H3 K4 and K79 methylation. *Molecular Cell* (in press).

Cao F, Chen Y, Cierpicki T, Liu Y, Basrur V, Lei M, Dou Y: An Ash2L/RbBP5 heterodimer stimulate the MLL1 methyltransferase activity through coordinated substrate interactions with the MLL 1 SET domain. *PLos One* 5:E14102, 2010.

Karatas H, Townsend E, Bernard D, Dou Y, Wang S: Analysis of the binding of MLL1 and Histlne H3 peptides to WDR5 for the design of inhibitors targeting MLL1-WDR5 interaction. *J Med Chem* 53:5179-5185, 2010.

Li X, Corsa CAS, Pan PW, Wu L Ferguson D, Yu X, Min J, Dou Y: MOF and H4K16 acetylation play important roles in DAN damage repair by modulating recruitment of DNA damage repair protein Mdc1. *Mol Cell Biol* 30:5335-5347, 2010.

Li X, Wu L, Corsa CAS, Wu L, Dou Y: Two mammalian MOF complexes regulate transcription activation through distinct mechanisms. *Molecular Cell* 36:29-301, 2009.

Service: Dr. Dou has committed considerable time and energy to her profession and to her institution. For instance, at the University of Michigan, she has been a member of the Medical School Research Assessment Team for North Campus, the Big Science Committee, the Graduate Recruitment Committee for International Students for Pathology, the Research Stimulatory Compensation Committee for Pathology and the Graduate Recruitment Committee for Biological Chemistry. At the national level, she has been an ad hoc reviewer for a number of journals, including *Molecular Cell*, *PNAC*, *Blood*, *Oncogene*, and *Cancer Research*, and she is currently an associate member of the editorial board of the *Journal of Clinical and Experimental Pathology*. She also reviews grants for the National Science Foundation of China.

External Reviewers:

Reviewer A: "We share an interest in understanding how histone modifying enzymes contribute to gene regulation and other DNA-mediated processes. Dr. Dou has made important contributions to this area of research since joining your department.....Dr. Dou has obtained extramural funding to support her work, including a Research Scholar Grant from the American Cancer Society. These grants are highly competitive and prestigious."

Reviewer B: "Yali has a bright future in the field of epigenetic regulation....given her record of accomplishments, Yali Dou would be granted promotion to Associate Professor with tenure at those institutions with which I am personally familiar."

Reviewer C: "Dr. Dou's productivity, measured in numbers and impact, is excellent. She is well-funded for an investigator of her rank, obtaining R01 funding during difficult times. If I were to compare Dr. Dou to other scientists at a similar stage of their careers, I would say she is among the top three."

Reviewer D: "She seems incredibly strong, with a significant number of high profile papers and multiple NIH grants....She has been, and is, on a number of academic committees and is reviewing papers for a number of journals."

Reviewer E: "I would rank her in the top 10% of scientist [sic] at her level at this point....Dr. Dou is nicely funded from the ACS and NIH and has additional applications pending indicating that she is still expanding her research group. She has published some excellent high impact papers as an independent scientists [sic] and her work is highly regarded in the field....Her independent research program is excellent and yet highly integrated with other groups at Michigan."

Reviewer F: "Dr. Dou has made significant contribution [sic] to the epigenetics and chromatin field and consequently, is qualified for this promotion....Yali is a rising star and compares favorably to her peers. She would have no problem being promoted if she was at my University."

Summary of Recommendation:
Yali Dou, Ph.D. is a highly-productive investigator whose work has involved biochemical characterization of histone methyltransferase complexes, rearrangements and amplifications in human acute leukemia. Her work is well funded from external sources, she has published the results of her work in prestigious journals, and she has had numerous invitations to present her work outside the institution. She is an accomplished educator, both in the lecture and laboratory setting, and she has made considerable contributions to her profession in terms of committee work at the University of Michigan, membership on editorial boards and reviews of manuscripts and grants. I am pleased to recommend Yali Dou, Ph.D. for promotion to associate professor of pathology, with tenure, Department of Pathology, and associate professor of biological chemistry, without tenure, Department of Biological Chemistry, Medical School.

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

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