**Approved by the Regents**
**May 19, 2016**

PROMOTION RECOMMENDATION
THE UNIVERSITY OF MICHIGAN
MEDICAL SCHOOL
DEPARTMENT OF MOLECULAR AND INTEGRATIVE PHYSIOLOGY
DEPARTMENT OF INTERNAL MEDICINE

Lei Yin, M.D., Ph.D., assistant professor of molecular and integrative physiology, Department of Molecular and Integrative Physiology, and assistant professor of internal medicine, Department of Internal Medicine, Medical School, is recommended for promotion to associate professor of molecular and integrative physiology, with tenure, Department of Molecular and Integrative Physiology, and associate professor of internal medicine, without tenure, Department of Internal Medicine, Medical School.

Academic Degrees:

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| Ph.D. | 2002 | University of Connecticut |
| M.D. | 1996 | Sun Yat-sen University of Medical Sciences, Guangzhou, P.R. China |

Professional Record:

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| 2010-present | Assistant Professor of Internal Medicine, University of Michigan |
| 2009-present | Assistant Professor of Molecular and Integrative Physiology, University of Michigan |

Summary of Evaluation:

Teaching: Dr. Yin has made excellent contributions in teaching graduate students. Most notably she served as the course director for PHY 591 (signaling transduction in metabolic regulation) and led classes in the Program in Biomedical Sciences (PIBS), Physiology, and Cell and Molecular Biology. In addition, she has taught an M1 medical student small group session. Feedback from the students indicated their appreciation of her teaching style and effective teaching materials. Her contributions in the classroom are considered to be excellent. In her laboratory, Dr. Yin has mentored one post-doctoral fellow, one visiting Ph.D. graduate student, and 12 undergraduate students. She has served on two preliminary exams for molecular and integrative physiology and three thesis committees.

Research: Dr. Yin has made significant progress with her research. She has a total of 21 peer-reviewed original research papers and two review articles. Her independent research program focuses on molecular circadian clocks and circadian regulation of liver metabolism and their roles in the pathogenesis of metabolic disease. Since joining the University of Michigan in 2010, Dr. Yin published as a senior corresponding author four papers in the *Journal of Biological Chemistry*, one paper in *PLoS One*, a state-of-the-art review in *Comprehensive Physiology*, and co-authored five additional papers with UM colleagues. She also published a first author paper in the *Proceedings of the National Academy of Sciences*. She has one manuscript submitted and three additional manuscripts in preparation as corresponding author. Dr. Yin has demonstrated

steady growth in funding her research. Initially, she was supported by a NIH (K99-R00) and three University of Michigan Centers pilot grants: Nutrition and Obesity Research Center, Michigan Diabetes Research and Training (MDRTC), and the Gastroenterology Peptide Center. She successfully generated sufficient preliminary data from these early endeavors to secure her first R01 and is currently supported as principal investigator by two NIH grants (an R01 and R21). In addition, Dr. Yin has two grants pending (an NIH R01 and an innovation research award from the American Diabetes Association). Dr. Yin is on an excellent trajectory for continued success of her research program.

Recent and Significant Publications:

Tong X, Muchnik M, Patel M, Chen Z, Wu N, Joshi SU, Rui L, Lazar MA, Yin L: Transcriptional repressor E4-binding protein 4 (E4BP4) regulates metabolic hormone FGF21 during circadian cycles and feeding. *J Biol Chem* 285:36401-36409, 2010.

Tong X, Buelow K, Guha A, Rausch R, Yin L: USP2a protein debuiquitinates and stabilizes the circadian protein CRY1 in response to inflammatory signals. *J Biol Chem* 287:25280-25291, 2012.

Tong X, Zhang D, Buelow K, Guha A, Rausch R, Yin L: Recruitment of histone methyltransferase G9a mediates transcriptional repression of *Fgf21* gene by E4BP4 protein. *J Biol Chem* 288:5417-5425, 2013.

Zhang D, Tong X, Arthur B, Guha A, Rui L, Inoki K , Yin L: Liver clock protein BMAL1 promotes *de novo* lipogenesis through insulin-mTORC2-AKT signaling. *J Biol Chem.* 289: 25925-25935, 2014.

Tong X, Zhang D, Arthur B, Li P, Durudogan L, Gupta N, L. Yin: Palmitate inhibits SIRT1-dependent BMAL1/CLOCK interaction and disrupts circadian gene oscillations in hepatocytes. *PLOS ONE* 10(6):e0130047, 2015.

Service: Dr. Yin has made signification contributions to her field both on the national stage and within the University of Michigan. Nationally, she is a leader in the field of the regulation of liver metabolism by circadian clock transcription regulators. As such, she has been invited to present her research at various institutions and international meetings, including MD Anderson Cancer Center (2010), Baylor College of Medicine (2015), University of Toledo (2015), Wayne State University (2015), and Boston University (2015). Additionally, she is a member of several prominent societies, including the American Society of Cell Biology, the Endocrine Society, and the American Diabetes Association. She serves on the editorial board for two journals (*Molecular and Cellular Endocrinology* and *FEBS OPEN*), and as an ad hoc reviewer for ten scientific journals. Dr. Yin has also served as an ad hoc reviewer for several study sections, including NIH/Hepatobiliary Pathophysiology (HBPP) study section, NIH/R13 mechanism, UK Diabetes Research Foundation, University of Pennsylvania Diabetes Research and Training Center, and the University of Michigan MNORC Pilot/Feasibility grant. Within the Medical School, Dr. Yin has made important contributions to the research environment. She has organized the Biological Rhythms seminar series since 2012, co-organized (with Dr. Yatrik Shah)

the molecular and integrative physiology (MIP) departmental monthly research update series since 2013, and organized the department's liver focus group meeting since 2014. She has additionally made contributions to graduate student training. She has served as MIP graduate committee member since 2013. Overall her contributions to service are outstanding.
External Reviewers:

Reviewer A: "She has been invited to give seminars at major international conferences and is a peer-reviewer for major journals and has ad-hoc'ed on NIH study sections. Thus it is clear that not only has Dr. Yin successfully established an independent and well-funded research program, but she has also exhibited strong scientific productivity, which has been recognized by her peers....Dr. Yin has achieved all the milestones that would grant her a promotion to Associate Professor on the tenure track in most institutions, including my own. She has clearly established a strong trajectory, is productive and is being recognized for her work in the transcriptional regulation of hepatic metabolism."

Reviewer B: "In addition to providing insight into how the liver clock protein BMAL1 interfaces with the mTOR system to regulate lipogenesis, her work has defined a new pathway for the regulation of the key mediator FGF21. These studies appear well executed and apply contemporary methods to important questions....The impact of the work is also significant based on the several seminar invitations she has received."

Reviewer C: "She has clearly developed national recognition due to her expertise in the liver circadian biology. She forged a number of successful collaborations with prominent investigators outside her home institution..., serves on the editorial boards of Molecular and Cellular Endocrinology (since 2013) and FEBS OPEN (since 2014) and was invited to attend NIH study section meetings in 2014 and 2015."

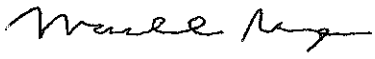
Reviewer D: "In her own laboratory Dr. Yin has clearly established a growing presence in the area of the molecular regulation of the circadian clock and its outputs....She is also an active contributor to educational activities, including coordinating a course in signal transduction in metabolic regulation and mentoring numerous undergraduate students."

Reviewer E: "Dr. Yin is an exceptional scientist and one that possesses all the qualities required to lead a scientific field to a new ground....in terms of her original research contribution, publication and funding record, and involvement with the wider scientific community, Dr. Yin has performed at an extraordinary level, one that would be recognized at my institution with a promotion to a similar rank."

Reviewer F: "...Dr. Yin is an extremely hard-working, dedicated and collaborative scientist, and is well regarded by her peers. I am very impressed by the group she has put together and what her group has achieved so far at Michigan in the last six years. I strongly believe that she will have a great scientific career and will make significant contributions to the field in many years to come. She will have no problem in getting tenured here at [my institution]"

Summary of Recommendation:

Dr. Lei Yin is an outstanding candidate for promotion to associate professor, with tenure, based on her contributions on all missions: research and scholarly activities, education and mentoring, and service. We anticipate that she will continue to excel and grow in her academic career at the University of Michigan, and to serve as a superb role model. Therefore, I wholeheartedly recommend Lei Yin, M.D., Ph.D. for promotion to associate professor of molecular and integrative physiology, with tenure, Department of Molecular and Integrative Physiology, and associate professor of internal medicine, without tenure, Department of Internal Medicine, Medical School.



Marschall S. Runge, M.D., Ph.D.
Executive Vice President for Medical Affairs
Dean, Medical School

May 2016