Approved by the Regents
May 19, 2022

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

Jun Wu, 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 [also being promoted to research associate professor, Life Sciences Institute].

Academic Degrees:

Ph.D.	2007	University of Michigan
M.S.	2004	University of Michigan
B.S.	2001	University of Science and Technology of China, Hefei, China

Professional Record:

2016 - present	Assistant Professor of Internal Medicine, University of Michigan
2013 - present	Assistant Professor of Molecular and Integrative Physiology, University of Michigan
2013 - present	Research Assistant Professor in Life Sciences Institute, University of Michigan

Summary of Evaluation:

Teaching: Dr. Wu's teaching experience involves working with undergraduate, graduate and post-doctoral students in the research laboratory, as well as through undergraduate and graduate didactic lectures. In the CDB582 course that she taught for two consecutive years, she introduced recent advancements in the metabolic field with focus on new research evolving on thermogenic adipocytes. She has also taught two session of Biochemistry 522 to first and second year Medical Science Training Program students discussing landmark papers in metabolism and teaching students how to critically analyze the scientific literature. Most recently, Dr. Wu has taught two sessions of PHYS576, which is a graduate level course for first and second year students. Her lectures focused on G-protein coupled receptors and phosphoinositides in cell biology. During the COVID-19 pandemic, she and other instructors of this course worked together to successfully develop and implement a hybrid teaching opportunity for students. Dr. Wu continues to provide mentorship in the laboratory to post-doctoral fellows, graduate students and undergraduate students as well, and has served on four dissertation committees.

Research: Dr. Wu's research focus is the regulation of thermogenic brown and beige adipocytes, and the role of these cells in obesity and diabetes. She continues to push the limits of discovering new molecular and cellular studies investigating signaling pathways that regulate these adipose tissues and has recently extended her studies to liver metabolism. She is the current holder of two

R01 grants. Her laboratory has established new model organisms to study the roles of these pathways in obesity related metabolic disease and alcoholic liver disease. Dr. Wu has 42 peer-reviewed publications and has published her findings in highly regarded journals such as, *Developmental Cell*, *Nature Medicine*, *Endocrinology* and *FASEB Journal*. During the COVID-19 pandemic, she published in *Science*, *Hepatology Communications* and *Nature Aging*, and *The EMBO Journal*.

Five Recent Significant Publications:

Jun H, Ma Y, Chen Y, Gong J, Liu S, Wang J, Knights AJ, Qiao X, Emont MP, Xu XZS, Kajimura S, Wu J: Adrenergic-independent signaling via CHRNA2 regulates beige fat activation. *Dev Cell* 54(1):106-116.e5. 2020. PM32533922/PMC7343629

Kim DI, Liao J, Emont MP, Park MJ, Jun H, Ramakrishnan SK, Lin JD, Shan YM, Omary MB, Wu J: An OLTAM system for analysis of brown/beige fat thermogenic activity. *Int J Obes* (Lond) 42(4): 939-945, 2018. PM29359735/PMC5962373

Jun H, Yu H, Gong J, Jiang J, Qiao X, Perkey E, Kim DI, Emont MP, Zestos AG, Cho J, Liu J, Kennedy RT, Maillard I, Xu XZS, Wu J: An immune-beige adipocyte communication via nicotinic acetylcholine receptor signaling. *Nat Med* 24(6): 814-822, 2018. PM29785025

Jiang J, Emont MP, Jun H, Qiao X, Liao J, Kim DI, Wu J: Cinnamaldehyde induces fat cell-autonomous thermogenesis and metabolic reprogramming. *Metabolism: Clinical and Experimental* 77:58-64, 2017. PM29046261/PMC5685898

Emont MP, Yu H, Jun H, Hong X, Maganti N, Stegemann JP, Wu J: Using a 3D culture system to differentiate visceral adipocytes in vitro. *Endocrinology* 156(12):4761-8, 2015. PM25452867/PMC4655212

Service: Dr. Wu is a highly sought-after speaker at national and international conferences, including Keystone conferences which are reserved for those scientists making high impact discoveries. Her service to the greater scientific community continues as a journal reviewer for over 50 top journals. Dr. Wu is also an ad hoc study section reviewer for the NIH, a reviewer for the American Diabetes Association, and an editorial board member for a leading journal in her field, *Diabetes*. Dr. Wu's institutional committee service is quite impressive as well. She is a voting faculty member for the Institutional Animal Care and Use Committee and is the associate chair for the Molecular and Integrative Physiology Seminar Series.

External Reviewers:

Reviewer A: "Especially impressive is her speaking slot at Keystone conferences, which is prestigious and reserved for scientists who make high impact discoveries. Based on these distinguished accomplishments, it is clear that Dr. Wu has advanced to the stage in her career where she is appreciated as one of the highly intelligent and thoughtful early-stage scientists in her field."

Reviewer B: "As an independent investigator, she has focused on thermogenic fat. She has made a number of contributions to the field, including the discovery of a non-adrenergic pathway that

regulates glycolytic beige fat (Jun et al., (2018) *Nature Medicine* 24, 814-822; Jun et al. (2020) *Dev. Cell* 54, 106-116). These are important contributions to the field that rank similarly to those of other leading scientists at a similar stage of development of their scientific career."

Reviewer C: "It takes an increasing amount of time and effort to secure NIH funding and publish high impact papers. The fact that Dr. Wu has obtained two R01 grants currently speaks for the quality and importance of the work her lab is conducting. What Dr. Wu has accomplished so far regarding her ability to secure extramural funding, maintain a steady and strong publication record and mentor trainees is impressive."

Reviewer D: "It is a recognized challenge when junior faculty try to renew their first R01 and/ or apply for the second R01. Many of my [junior] colleagues struggle at this step of their career, often times for a couple of years. The relatively smooth process that Jun has accomplished this transition from a junior investigator to a mid-career PI indicates strong endorsement towards her research track record as a pioneer, trajectory as a future leader, from the study section panelists, expert reviewers for her manuscripts and her peers in general in the metabolic field."

Reviewer E: "I think that it is fair to say that Dr. Wu, by force of her hard work, intellect, and determination, has become a recognized and highly respected player on the national and international stages. And she is recognized as being a truly independent scientist who 'makes things happen'. At national and international meetings, she is always a great speaker as well as a great participant. Her involvement improves the quality of meetings."

Summary of Recommendation:
Dr. Wu is an outstanding researcher who is an established leader in the metabolic field and is expanding her research to include studying the role of immune-hepatocyte interactions in the context of liver function and alcoholic liver disease. I am pleased, therefore, to recommend Jun Wu, 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 of Medical Affairs
Dean, Medical School

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