Approved by the Regents
May 19, 2022

PROMOTION RECOMMENDATION
The University of Michigan
School of Public Health
Department of Nutritional Sciences

David E. Bridges, assistant professor of nutritional sciences, Department of Nutritional Sciences, School of Public Health, is recommended for promotion to associate professor of nutritional sciences, with tenure, Department of Nutritional Sciences, School of Public Health.

Academic Degrees:

Ph.D.	2005	University of Calgary, Biochemistry, Calgary, Canada
B.S.	2000	University of Calgary, Biochemistry, Calgary, Canada

Professional Record:

2016 – present	Assistant Professor, Department of Nutritional Sciences, School of Public Health, University of Michigan, Ann Arbor, MI
2013 – 2016	Assistant Professor, Departments of Physiology and Pediatrics, University of Tennessee Health Sciences Center, Knoxville, TN
2013 – 2016	Director, Mouse Metabolic Phenotyping Core, University of Tennessee Health Sciences Center, Knoxville, TN

Summary of Evaluation:

Teaching: Professor Bridges is a dedicated, creative and rigorous educator. He has taught or co-taught three courses, two graduate courses and one undergraduate course. NUTR 630 is a required graduate course for all first year nutritional sciences students that Professor Bridges co-taught. After receiving a grant from the Center for Research on Learning and Teaching (CRLT) in 2018, Professor Bridges with his co-instructor modified the assessment structure of the course to use a Gameful Learning approach that resulted in substantially improved student ratings with Q1 and Q2 scores now in the range of 4.7 to 4.84. Professor Bridges co-developed a new undergraduate course, PUBHLTH 403: Obesity from Cells to Society, that has been well received by students receiving Q1 and Q2 scores ranging between 4.61 and 4.85. He also developed a new course, NUTR 830: Advanced Topics in Micronutrient Metabolism, that was offered for the first time in Fall 2018 and received Q1 and Q2 scores of 5.0 for the last two years.

Professor Bridges currently serves on two doctoral student committees, one from kinesiology and one from environmental health sciences, and one nutritional sciences master's student committee. He currently mentors three nutritional sciences doctoral students and one master's student in his laboratory. Three former students he mentored in his laboratory include two who are now assistant professors and one who is in a post-doctoral fellowship. Professor Bridges is also currently mentoring three undergraduate students in his lab through the Undergraduate Research Opportunity Program.

Research: Professor Bridges' research program is centered around understanding the causes and consequences of obesity from the perspective of macronutrient homeostasis. Three major areas

of his research are the relationship between obesity and glucocorticoid signaling, developmental exposures and their effects on chronic disease, and the role of mTORC1 in energy balance and obesity. Professor Bridges has made major contributions as an independent investigator through his focus on functional, targeted repercussions of mTORC1 activation and inactivity in different tissues (muscle, adipose, liver). He was the first to demonstrate that glucocorticoid signaling is increased in animals with obesity. He is currently testing the hypothesis that obesity results in cell-specific chromatin remodeling to allow for greater glucocorticoid-receptor signaling access. He is also investigating how gestational particulate exposures affect the metabolism of mouse offspring. Professor Bridges and his collaborators were the first to demonstrate that early life exposure to environmentally persistent free radicals re-programs energy expenditure. Additional research investigates how glucocorticoids, obesogenic diets, and metformin affect offspring metabolic risk with a focus on placental biology.

Professor Bridges is an author on 52 publications with eight more currently under review and one book chapter. Since 2013, he has 37 publications and one book chapter. Of these, one is as first author, six are as senior author, and four are as second author. Twenty-four of his publications have come since 2016. Professor Bridges' papers have appeared in high-impact journals in basic and molecular nutrition and biochemistry, including *Endocrinology*, *Journal of Lipid Research*, *Human Molecular Genetics*, *FASEB Journal*, *American Journal of Physiology*, *PLOS One*, *Journal of Molecular Endocrinology*, *Journal of Biological Chemistry*, and *Scientific Reports*. Professor Bridges' research has been consistently funded by both external and internal funding. Since 2013, he has been awarded 11 grants, eight of which were as the principal or co-principal investigator. Eight of his grants have been awarded since 2016, all as the principal investigator or co-principal investigator, including an R01 from the National Institutes of Health (NIH). Additionally, Professor Bridges has one R21 application and three R01 proposals under review at the NIH, including an R01 as multiple principal investigator that was scored at the 23rd percentile on the initial review.

Recent and Significant Publications:

Hatfield, I., Harvey, I., Yates, E.R., Redd, J.R., Reiter, L., and Bridges, D. (2015). The role of TORC1 in muscle development in Drosophila. *Scientific Reports*, 13(5):9676.

Hochberg, I., Harvey, I., Tran, Q., Stephenson, E.J., Barkan, A.R., Saltiel, A.R., Chandler, W.F., and Bridges, D. (2015). Gene expression changes in subcutaneous adipose tissue due to Cushing's disease. *Journal of Molecular Endocrinology*, 55(2): 81-94.

Stephenson, E.J., Ragauskas, A., Jaligama, S., Redd, J.R., Parvathareddy, J., Peloquin, M.J., Saravia, J., Han, J.C., Cormier, S.A., and Bridges, D. (2016). Exposure to environmentally persistent free radicals during gestation lowers energy expenditure and impairs skeletal muscle mitochondrial function in adult mice. *American Journal of Physiology - Endocrinology and Metabolism*, 310: E1003-E1015.

Harvey, I., Stephenson, E.J., Redd, J.R., Tran, Q.T., Hochberg, I., Qi, N., Bridges, D. (2018). Glucocorticoid-Induced Metabolic Disturbances are Exacerbated in Obesity. *Endocrinology*, 159(6):2275-2287.

Gunder, L.C., Harvey, I., Redd, J.R., Davis, C.S., AL-Tamimi, A., Brooks, S.V., and Bridges, D. (2020). Obesity Augments Glucocorticoid-Dependent Muscle Atrophy in Male C57BL/6J Mice. *Biomedicines*, 8(10): 420

Service: Professor Bridges has served as a highly engaged member of several committees at the departmental and school levels since joining the University of Michigan faculty in 2016. These include the Nutritional Sciences Admissions Committee, the Nutritional Sciences Curriculum Committee and the school-level Advisory Committee for Academic Programs (ACAP). Professor Bridges co-led departmental efforts in re-aligning current nutritional sciences curriculum to be congruent with both departmental goals and new Council on Education for Public Health (CEPH) guidelines. On the national level, Professor Bridges has demonstrated excellent levels of service including as the chair and co-chair of sessions at two major scientific conferences (Obesity Society, Keystone Symposium) in 2017. He is also an associate editor for *Scientific Reports* and regularly provides reviews to a number of key journals in his field. Additionally, Professor Bridges has served as a reviewer for two study sections and as an ad hoc reviewer for the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) K applications. He also has served as a reviewer for international grant panels including for the Italian Ministry of Health and the French Agence Nationale de la Recherche.

External Reviewers:
Reviewer A: "Overall, Dr. Bridges progress over the last 8 years has been very good. I am particularly excited by his published work on cell signaling and the regulation of metabolism. His funding status is good... However, this concern is offset by a truly outstanding teaching and mentoring record, which is uncommon among other researchers in his field….he would likely be successfully promoted to Associate Professor at institutions similar to my own."

Reviewer B: "Dr. Bridges has demonstrated a superior level of dedication to both research and teaching and is most certainly deserving of tenure. I strongly support promotion from the rank of Assistant to Associate Professor."

Reviewer C: "…it is apparent to me that Dr. Bridges has clearly achieved all the benchmarks required for tenure at the Associate Professor level… I estimate that his achievements are the top 15% of faculty at his career stage…[he has] the track record of achievements that merit promotion to Associate Professor with tenure at the UMSPH."

Reviewer D: "Overall, my assessment of Dr. Bridges' scientific output is that he has done well, likely in the top 25% of all academic appointees at his level... Dr. Bridges stacks up extremely favorably to other colleagues of mine at tenure granting institutions that have been promoted to tenured Associate Professor… I wholeheartedly endorse his promotion to Associate Professor with tenure.."

Reviewer E: "…he has established an independent and sustainable research career, supported by uninterrupted extramural and institutional funding …my recommendation is positive … Dr. Bridges would receive tenure at [my institution]…"

Reviewer F: "He is a triple threat across research, teaching, and service… The Department of Nutritional Sciences, the School of Public Health, and the University of Michigan are lucky to have him… I highly recommend you promote [him]"

Reviewer G "Dr. Bridges has demonstrated excellence in education and service and strength in scholarly activity… I rate Dr. Bridges as an outstanding candidate for promotion to Associate Professor"

Reviewer H "[He] is at or above his peers in terms of his standing, productivity and impact… a rising star and someone who is very well respected….I am strongly supportive of Dr. Bridges and enthusiastically support his promotion to Associate Professor."

Summary of Recommendation: Professor Bridges is an outstanding scientist whose research centers on understanding the causes, consequences and reversion of obesity from the perspective of macronutrient (carbohydrates, fat, and protein) homeostasis. He is a dedicated, creative and rigorous educator and provides outstanding service to the school, university, and professional community. It is with the support of the School of Public Health Executive Committee that I recommend David E. Bridges for promotion to associate professor of nutritional sciences, with tenure, Department of Nutritional Sciences, School of Public Health.

F. DuBois Bowman, Ph.D.
Dean, School of Public Health

May 2022