PROMOTION RECOMMENDATION
THE UNIVERSITY OF MICHIGAN
MEDICAL SCHOOL
DEPARTMENT OF INTERNAL MEDICINE
DEPARTMENT OF COMPUTATIONAL MEDICINE AND BIOINFORMATICS

<u>Elizabeth K. Speliotes, M.D., Ph.D., M.P.H.</u>, associate professor of internal medicine, with tenure, Department of Internal Medicine, and associate professor of computational medicine and bioinformatics, without tenure, Department of Computational Medicine and Bioinformatics, Medical School, is recommended for promotion to professor of internal medicine, with tenure, Department of Internal Medicine, and professor of computational medicine and bioinformatics, without tenure, Department of Computational Medicine and Bioinformatics, Medical School.

<u>Academic Degrees:</u>
M.P.H.	2008	Harvard University
M.D.	2002	Harvard University
Ph.D.	2000	Massachusetts Institute of Technology
M.S.	1990	Yale University
B.S.	1990	Yale University

<u>Professional Record:</u>
2016-present	Associate Professor of Computational Medicine and Bioinformatics, without tenure, University of Michigan
2016-present	Associate Professor of Internal Medicine, with tenure, University of Michigan
2011-2016	Assistant Professor of Computational Medicine and Bioinformatics, University of Michigan
2011-2016	Assistant Professor of Internal Medicine, University of Michigan
2008-2010	Instructor of Medicine and Gastroenterology, Harvard University

<u>Summary of Evaluation:</u>
<u>Teaching:</u> Dr. Speliotes instructs residents and fellows, in the clinical setting and through didactic lectures. She thrives in clinical and research mentoring, helping her advisees become independent physicians, scientists and teachers. She is a member of the Gastroenterology Fellowship Research Committee, and lectures research trainees in such settings as the Computational Medicine and Bioinformatics Kickoff Meeting, the Michigan Diabetes Research Center Symposium, and the Proteomics Alliance for Cancer Research. Dr. Speliotes provides extensive mentoring for clinical trainees while attending on the gastroenterology consult and inpatient services, as well for fellows in endoscopy and the gastroenterology clinic. She is also involved in research mentoring on a one-on-one basis with undergraduate students, graduate students, and post-doctoral fellows conducting research projects in her laboratory. Her trainees have won research awards and gone on to academic faculty positions. In 2019, Dr. Speliotes was the recipient of the Medical Students Token of Appreciation Award.

Research: Dr. Speliotes' research focuses on the use of human genetics to define the pathophysiology of human obesity and nonalcoholic fatty liver disease (NAFLD). She has played a key role in large multi-center consortiums, including the Genetic Identification of Anthropometric Traits (GIANT) Consortium and the Genetics of Obesity-related Liver Disease (GOLD) Consortium. Her current research has led to the identification of genetic markers and genes that can define common disease subtypes, their mechanism of disease and matching them to gene targets or better precision therapeutics. While her work is highly collaborative, her lead role in these projects is evidenced by her first or senior authorship on many of the resulting papers. Dr. Speliotes has a successful record of funding; she is the principal investigator of two NIH R01 grants and a co-principal investigator of one Joint Institute for Translational and Clinical Research grant. He expertise is reflected by the numerous invited national and international presentations, and peer-review service for high impact journals and NIH study sections. Since her last promotion in 2016, she has published more than 20 peer-reviewed articles in high impact journals, including *Nature Genetics*, *PLoS Genetics*, *Hepatology*, *Nature*, *Gastroenterology*, and the *New England Journal of Medicine*.   In 2016, Dr. Speliotes received the Dean's Award for Basic Science Research and was appointed as the Keith S. Henley MD Collegiate Professor of Gastroenterology in 2018.

Recent and Significant Publications:
Zhou X, Li Y, Guan YY…Speliotes EK, Ji L: Independent markers of non-alcoholic fatty liver disease in a gentrifying population based Chinese cohort. *Diabetes Metab Res Rev* Mar 20:e3156, 2019.

Barata L, Feitosa MF, Bielak LF, Halligan B, Baldridge AS, Guo X, Yerges-Armstrong LM, Smith AV…Speliotes EK, Province MA: Insulin Resistance Exacerbates Genetic Predisposition to Nonalcoholic Fatty Liver Disease in Individuals Without Diabetes. *Hepatol Commun* 3(7): 894-907, 2019.

Chen VL, Wright AP, Halligan B… Speliotes EK: Body Composition and Genetic Lipodystrophy Risk Score Associate with Nonalcoholic Fatty Liver Disease and Liver Fibrosis. *Hep Comm.* June 18;3(8):1073-1084, 2019.

Chen VL, Chen Y, Du X, … Speliotes EK: Genetic Variants that associate with cirrhosis have pleiotropic effects on human traits. *Liver Int.,* Dec 9:1432, 2019.

Maguire LH, Handelman SK, Du X, Chen Y, Pers TH, Speliotes EK: Genome-wide association analyses identify 39 new susceptibility loci for diverticular disease. *Nat Genet.* Oct;50(10):1359-1365, 2018.

Service: Dr. Speliotes treats patients on the gastroenterology inpatient and consult services and in the gastroenterology clinic, and also performing endoscopy. Institutionally, she serves as a member of the ADVANCE Program, and is also the director of Precision Medicine for the Department of Internal Medicine. In this role, she has developed biobank and genomic resources for faculty which have directly led to six new grants on this work. She has also expanded biobank recruitment to more diverse populations and increased the use of genomic resources and the biobank in medicine. Nationally, Dr. Speliotes is an active member of several professional

societies, including the American Society for Clinical Investigation and American Gastroenterology Association. She is a member of the American Association for the Study of Liver Diseases Research Awards Committee, and also provides ad hoc peer-review service for an NIH study section, the North Carolina Diabetes Research Center, and the Doris Duke Innovations in Clinical Research Awards.

External Reviewers:

Reviewer A: "The primary reason to consider Dr. Speliotes' professorial promotion is her scholarly contributions to the field of Hepatology and Gastroenterology…Dr. Speliotes has been able to take her genetics background with translational study designs to achieve likely impact on therapeutic development for NASH…Given today's climate for funding success and the work it takes to submit NIH grant applications, her grant participation is without question a mark of a highly accomplished and successful faculty investigator that many professorial promotion packets I have examined do not contain…Having examined other professorial promotion packets over the past decade in which the primary reason for promotion is scholarship, Dr. Speliotes would be rated as 'outstanding' in scholarship. She clearly has a national and international reputation and is a highly accomplished physician-scientist. Compared to other hepatology investigators, it is fair to say that Dr. Speliotes is at the forefront of the field and is making a tremendous impact."

Reviewer B: "Dr. Spelliotes [sic] has had tremendous accomplishments in genetics research. She has been a leading investigator of anthropomorphic related traits, particularly obesity as related to body mass index (BMI). Her anthropomorphic trait studies have been produced by very large consortia, however, she has been among the leaders of these efforts…Dr. Spelliotes [sic] has also excelled as a mentor, with many successful trainees and in particular, noting that she currently has two junior faculty with NIH K awards under her mentorship…I am confident that Dr. Spelliotes [sic] would earn the position of Professor of Medicine with Tenure at [my institution]. I support her promotion without reservation."
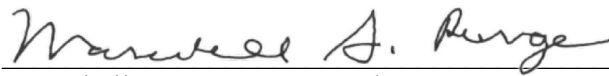
Reviewer C: "She is a canonical physician-scientist who has a well-deserved national and international reputation. Dr. Speliotis's [sic] credentials and qualifications are impeccable. As a scientist, she has made significant strides in our understanding of the genetics of NAFLD and NASH, using sophisticated approaches, spanning GWAS studies to bioinformatics to functional studies…As an educator and mentor, she has made a strong imprint in the training of the next generation of leaders through her providing opportunities to undergraduate, graduate, medical students; residents; fellows and [junior] faculty. She is also a wonderful clinician. Overall, she is most deserving of promotion and would achieved this honor at a multitude of other elite universities, without doubt."

Reviewer D: "Dr. Speliotes' academic work as well as her contribution in the field of genetics of obesity is acknowledged among peers who are working in the same field. More specifically, her work and academic trajectory is linked to large Consortiums that perform GWAS…Based on my experience on evaluating researchers I would say that Dr. Speliotes would deserve being promoted to the next category in which she is at the present moment."

Reviewer E: "Reviewing her [Dr. Speliotes'] research and mentoring activities; she undoubtedly had a stellar performance…she has achieved national and international stature and became a well-known expert in the genetics of NAFLD…In a seminal paper published in 2018 in Nature Genetics she identified novel susceptibility loci for diverticular disease. This is a landmark paper that now drives efforts towards drug design and precision medicine…Dr. Speliotes has been a well-sought for speaker both at national and international conferences…Dr. Speliotes's [sic]achievements in my opinion exceed many of her peers at a similar stage in their career. This is mainly based on her research excellence, teaching efforts, and leadership roles in her society. Therefore I highly support her promotion without any reservation."

Summary of Recommendations:
Dr. Speliotes is a nationally and internationally renowned expert in the area of genetics of obesity and liver disease, who has made seminal discoveries in genetic variants that affect obesity, nonalcoholic fatty liver disease, and related cardio-metabolic diseases. She is also a dedicated educator, and outstanding clinician with strong service. I am pleased to recommend Elizabeth K. Speliotes, M.D., Ph.D., M.P.H. for promotion to professor of internal medicine, with tenure, Department of Internal Medicine, and professor of computational medicine and bioinformatics, without tenure, Department of Computational Medicine and Bioinformatics, Medical School.

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

May 2021