

# Basic Science Research Award



## Elizabeth K. Speliotes, M.D., Ph.D., MPH

Associate Professor of Internal Medicine  
Associate Professor of Computational Medicine and  
Bioinformatics

For years, researchers have devoted countless hours and launched thousands of research inquiries targeted at the study of weight gain and obesity. The link between genetics and obesity is another area of intense interest, and the recipient of this year's Basic Science Research Award is leading the way from her laboratory at the University of Michigan.

Elizabeth K. Speliotes, M.D., Ph.D., MPH, is a physician-scientist who is leading efforts to understand population-based human obesity and nonalcoholic fatty liver disease (NAFLD). From her unique vantage point as a physician and basic science researcher, she is integrating basic science, population science, genomics and medicine to better define disease stereotypes in order to improve the care of patients suffering from these diseases.

Speliotes, who joined the U-M faculty through the Basic Sciences Scholars Program, has been a major contributor to the understanding of complex metabolic diseases. She helped to organize the Genetic Investigation of Anthropometric Traits (GIANT) Consortium, through which she led efforts to characterize genetic variants that associate with overall obesity measured using body mass index (BMI), and with abdominal obesity measured using waist-to-hip ratio (WHR). She also helped to design a new chip that can be used to affordably assay hundreds of thousands of variants that associate with metabolic disease.

In her study of the genetics of NAFLD, she organized the Genetics of Obesity-related Liver Disease (GOLD) Consortium, through which she identified and characterized many genetic variants that reproducibly associate with NAFLD in individuals of European ancestry. Her leadership with the GIANT and GOLD consortiums, her nominators say, is part of the reason she is considered one of the most creative and innovative physician-scientists whose work will truly have an impact in disease pathogenesis.

"Her work has already changed how we think about obesity and NAFLD and is respected nationally and internationally," says Chung Owyang, M.D., the H. Marvin Pollard Professor of Internal Medicine, professor of molecular and integrative physiology and chief of the Division of Gastroenterology. "She has an exceptional ability to bridge population-based studies with basic science to identify new disease subtypes that will redefine and treat these diseases in the future."

Speliotes earned election to the American Society for Clinical Investigation as an assistant professor. She has been a successful principal investigator on numerous R01 grants, including: "Identification and Functional Impact of NAFLD Associated Genetic Variants," and "Human Population-based Genetic Studies to Elucidate the Biology of NAFLD."



**"Dr. Speliotes is clearly within the top 1% of researchers in her generation."**

— Juanita L. Merchant, M.D., Ph.D., H. Marvin Pollard Professor of Gastrointestinal Sciences, Division of Gastroenterology