

02 Jul 2018

Re: PA-18-484; RO1 Investigator-Initiated Application

Dear Dr. Krasnewich and NIH staff,

I am currently a Tenure-Track Associate Research Scientist at the Marshfield Clinic Research Institute and I hold a Faculty position in the Computation and Informatics in Biology and Medicine program at the University of Wisconsin-Madison. Enclosed you will find my resubmission RO1 application in response to PA-18-484, titled "**Multi-Omics Prediction of Eight Common Diseases in the Central Wisconsin Population.**" This application describes the measurement of exome genotype data, circulating cytokines and metabolic markers, and antibodies in samples from the Marshfield Clinic biobank obtained prior to disease diagnosis. We will use these data to create machine learning-based predictive models for each of eight common diseases. We have assembled an exceptional multidisciplinary team to do so with complementary expertise in genetics, immunology, clinical diagnoses, and statistical/computational methods. Importantly, the results from this study will serve to inform other efforts using large biobanks with linked electronic medical records to advance disease prediction.

Previously, the initial RO1 application was evaluated by the Biostatistical Methods and Research Design Study Section. The proposed study is not primarily focused on methodological development. Rather, the overarching goal of the study is to measure and use molecular data on case and control samples to predict diseases using established statistical and machine learning methods. Hence, I kindly request that the resubmitted application be reviewed by a study section focused on the molecular aspects of disease pathogenesis, such as the Genetics and Health of Disease Study Section.

Title: Multi-Omics Prediction of Eight Common Diseases in the Central Wisconsin Population

Funding Number: PA-18-484

PI: Steven J. Schrodi, Ph.D.

eRA Commons: SCHRODIS

Disciplines involved: genetics, medical informatics, statistical methods, and molecular biology

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Sincerely,



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