

Functional Impairments in Multiple Organ Systems in a Mouse Model of Severe Malnutrition

Amber Farooqui

Translational Medicine Program, Peter Gilgan Centre for Research and Learning, The Hospital for Sick Children, Toronto, Canada

ABSTRACT

Severe malnutrition (SM) underlies the high risk of morbidity and mortality in children under five in resource-poor settings. Structural and functional changes in the liver and intestine of children with SM are reported. Repeated exposure to pathogens, poor host immune responses, and metabolic disturbances are thought to promote systemic inflammation and tissue damage that underlies the life-threatening complications. The underlying immune and metabolic dysregulations are, however, not corrected by the standardized WHO guidelines. Therefore, relapse is common, and hospital fatality rate remains high. In our lab, we use mouse models to understand the pathogenesis of the metabolic dysadaptation and perturbed tissue homeostasis in severe malnutrition. With this focus, our research program aims to develop novel yet simple evidence-based interventions that can be taken to clinical trials to reduce mortality in malnourished children.
