Interdisciplinary Research Grant
2018 Round 3

[Lead PI (Li, Sheng)]

Project Summary

Participating Faculty

1. Lead PI
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Rank: Assistant Professor
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Name: Feng Gu
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Rank: Assistant Professor
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(Please insert additional PIs as necessary)

Project Title: An Integrated Agent-Based Model with Geographic Information System of Childhood Obesity in the Urban Communities in New York City

Summary (200 words maximum): Childhood obesity is a continuing and growing major national and global problem. To understand its complex etiology and inform appropriate environmental and policy interventions, we propose a community-based integrated Agent-based model (ABM) with Geographic Information System (GIS) in New York City (NYC) based on a transdisciplinary methodology. We will recruit and interview 100 families (one adult and one child from each family) from New York metropolitan area to assess obesity status and various environmental driving factors for childhood obesity. Based on the new survey data and other existing resources, we will develop an agent-based model with GIS to explore childhood obesity driving factors and effective interventions in NYC urban settings. The expected results from this study will advance our understanding of the etiology of childhood obesity in social, cultural, and physical urban environment. It will also provide insights into how to implement multiple childhood obesity interventions simultaneously in urban populations. Moreover, the work will provide the important evidences to convince our former funding agency and collaborator to fund our new external project proposal.