

**Overview/Abstract**

The United States is facing the most challenging public health crisis in its history, and winning the battle requires a significant number of Americans to vaccinate themselves against COVID-19. A recent poll showed that 39% of American adults expressed strong hesitancy towards a COVID-19 vaccine. Urgent research attention is needed to focus on the vaccine hesitancy causes during the pandemic and possible interventions and strategies to address it.

Recently, NIH has announced a notice of special interest to address COVID-19 related vaccine hesitancy. Based on our prior research on Zika and COVID-19, we are well suited to develop a research program that identifies personal, contextual, and communication-related factors that contribute to COVID-19 vaccine hesitancy and explore effective interventions that can increase vaccine acceptance among Americans, especially among populations that experience health disparities. This project will also be the first to investigate the longitudinal causal impact of media exposure and information seeking on vaccine hesitancy, which will advance our understanding of vaccine hesitancy and provides important insights for mass media interventions promoting COVID-19 vaccines.

Specifically, the project's objectives include: 1) Pinpoint groups that hold strong hesitancy towards a COVID-19 vaccine, explore the individual and contextual factors that contribute to their COVID-19 vaccine hesitancy, and monitor the impact of these factors as the COVID-19 vaccine campaign unfold; 2) Identify hesitant groups' specific media usage and preferences, monitor their media usage and exposure, and examine the impact of media usage on vaccine hesitancy 3) Test the causal relationship between individuals' vaccine hesitancy and their online information seeking and processing behaviors; and 4) Design tailored interventions and strategies to effectively address vaccine hesitancy and increase vaccine uptake among selected hesitant groups.

Consistent with the SEED Grant Program's objectives, our project will provide important baseline data and preliminary findings, which will largely strengthen our competitiveness in applying for extramural funds, including the NIH Special Interest grant on vaccine hesitancy and the NSF CAREER program. The project will offer valuable insights for researchers and public health practitioners to better understand the causes of vaccine hesitancy, which can facilitate the implementation of the COVID-19 vaccine campaign, end the pandemic, and save lives.