U.S. NATIONAL SCIENCE FOUNDATION
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ALEXANDRIA, VIRGINIA 22314

NSF 24-067

Dear Colleague Letter: Emerging Mathematical Tools applied to Ecology and Evolution of Infectious Disease

March 15, 2024

Dear Colleagues:

The Ecology and Evolution of Infectious Diseases (EEID) program (https://new.nsf.gov/funding/opportunities/ecology-evolution-infectious-diseases-eeid) supports research that provides predictive understanding of pathogen transmission dynamics. This program includes partnerships with the US Department of Agriculture, National Institute of Food and Agriculture (USDA/NIFA), National Institutes of Health (NIH), United Kingdom Research and Innovation (UKRI), United States-Israel Binational Science Foundation (BSF), and National Natural Science Foundation of China (NSFC). The intent of the program is discovery of principles of infectious disease (re)emergence and transmission and testing mathematical or computational models that elucidate infectious disease systems. Those models can be of any type that advance causal or mechanistic understanding, including, but not limited to, models that use artificial intelligence or machine learning. The Program also encourages projects that take advantage of emerging technologies, such as remote sensing and precision treatment, especially those that will enhance food security.

The history of the EEID program has shown that the most competitive proposals are those that are organized around an overarching conceptual framework that advances broad, conceptual knowledge that reaches beyond the specific system under study and that may be useful for understanding public, agricultural or ecosystem health, natural resource use and wildlife management, and/or economic development. Such proposals are typically interdisciplinary in their approach and/or the nature of the question(s) being addressed. Projects should bring together such areas as anthropology, behavior, bioinformatics, computational science, ecology, economics, epidemiology, evolution, food science, genomics, geography, global health, immunology, mathematics, medicine, microbiology, oceanography, plant science, population biology, sociology, physical environmental sciences, systems science, and veterinary medicine.

The next deadline for the EEID program is **November 20, 2024**. Consult the solicitation for

information about proposal content and submission criteria.

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