**附件1 资助领域说明（英文）**

The Ecology and Evolution of Infectious Diseases program supports research on the ecological, evolutionary, and social principles and processes that influence the transmission dynamics of infectious diseases. The central theme of submitted projects must be quantitative or computational understanding of pathogen transmission dynamics. The intent is discovery of principles of infectious disease transmission and testing mathematical or computational models that elucidate infectious disease systems. Projects should be broad, interdisciplinary efforts that go beyond the scope of typical studies. They should focus on the determinants and interactions of transmission among humans, non-human animals, and/or plants. This includes, for example, the spread of pathogens; the influence of environmental factors such as climate; the population dynamics and genetics of reservoir species or hosts; the feedback between ecological transmission and evolutionary dynamics; and the cultural, social, behavioral, and economic dimensions of pathogen transmission. Research may be on zoonotic, environmentally-borne, vector-borne, or enteric diseases of either terrestrial or fresh water systems，and organisms, including diseases of animals and plants, at any scale from specific pathogens to inclusive environmental systems. Proposals for research on disease systems of public health concern to developing countries are strongly encouraged, as are disease systems of concern in agricultural systems. Investigators are encouraged to develop the appropriate multidisciplinary team, including for example, modelers, ecologists, bioinformaticians, genomics researchers, social scientists, economists, epidemiologists, evolutionary biologists, entomologists, parasitologists, microbiologists, bacteriologists, virologists, pathologists or veterinarians, with the goal of integrating knowledge across disciplines to enhance our ability to predict and control infectious diseases.

The history of the EEID program has shown that the most competitive proposals are those that advance broad, conceptual knowledge that reaches beyond the specific system under study and that maybe useful for understanding public, agricultural or ecosystem health, natural resource use and wild life management, and/or economic development. Such proposals are typically interdisciplinary in their approach and/or the nature of the question(s) being addressed.

**Investigations that are outside the scope of this EEID announcement include:**

* those limited solely to genetic patterns of evolutionary change (e.g., comparative genomics),
* those that focus solely on human diseases without considering the broader ecological context,
* those that focus solely on pathogen discovery,
* those that focus solely on within-host biological processes,
* those that focus solely on vector species ecology, and
* those that have not pre-identified at least one pathogenic organism that will be the focus of the study.