NATIONAL INSTITUTE OF ENVIRONMENTAL HEALTH SCIENCES
Division of Extramural Research and Training
Cellular, Organs and Systems Pathobiology Branch

NATIONAL ADVISORY ENVIRONMENTAL HEALTH SCIENCES COUNCIL
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Concept Clearance

New P01 Program

Introduction

Environmental health sciences research has traditionally been organized into broad areas of scientific interest with limited integration across disciplines. This approach is reflective in the NIEHS grants portfolio, which supports diverse research activities aimed at understanding the effects of environmental agents using a wide variety of research mechanisms. The application of new technological advances to biomedical research has provided unprecedented insight into the dynamic and complex nature of biological systems. Investigators in the field of environmental health sciences have begun to integrate these tools into their investigations to gain a global view of the relationship between exposure and disease initiation, progression and also issues of genetic susceptibility. However, these efforts are currently restricted to a few select laboratories due to availability of resources, research expertise, or access to technology. The field as a whole would benefit from a more coordinated and integrated research continuum to facilitate translational research between basic laboratory-based research and human studies.

NIEHS recognizes that the need to facilitate the integration of transdisiplinary and translational research approaches in a more systematic sustained fashion is essential to improving the impact of our research to support clinical application and policy. To a limited extent, several of NIEHS's larger grant programs such as DISCOVER, Centers for Children's Environmental Health Research, Centers for Population Health and Health Disparities, Breast Cancer and the Environment Research Centers and Centers for Neurodegeneration Science have moved in this direction by requiring basic and human- based translational research. We believe it is time to expand the translational research focus in other ways within our portfolio.

We also recognize that it is important to embed concepts and approaches of disease susceptibility, use of biomarkers of exposure and effect as well as study earlier phases in the disease trajectory in translational studies of disease outcomes. Focus on understanding the role of environmental exposures in the etiology and nature history of human diseases increases the impact of our research program to both public health and clinical applications. Since most other NIH institutes are disease focused, this program will help us align more successfully with their current programs, further enhancing collaboration and integration of research.

Research Goals and Scope

The objective of this initiative is to develop a research program that would not only stimulate translational research, but one that would focus primarily on the role of environmental exposures in disease development. Another programmatic goal will be to improve the impact of the research on public health and clinical applications. The proposed P01 program would also position the current and future NIEHS grant portfolios with other NIH institutes, thus encouraging increased interaction and collaborations.

Mechanism and Justification

NIEHS proposes to use the PAR mechanism to develop a new P01 program focused on the role of environmental exposures in the development of diseases. This program would have one receipt date per year. Each year the goal would be to fund P01s in specific disease areas. The goal would be to develop a critical research mass in several important disease areas in order to not only expand translational research into the role of environmental exposures in the diseases but also to improve the impact of the research on clinical research and policy. The program is currently planned for 10 years, followed by thorough assessment which will determine future directions of the program.

The P01s funded in related disease areas would be expected to both interact with each other and also to foster collaborations with other research programs investigating the role of environmental exposures in similar disease areas and endpoints. Accordingly, NIEHS would fund grantee meetings that would bring together all research funded in the disease areas every other year with the P01 centers working to integrate the research across all mechanisms.