Title: Maximizing the Scientific Value of Data Generated by the Environmental influences on Child Health Outcomes (ECHO) Program (R36/F32)

Mission: ECHO'S mission is to enhance the health of children for generations to come, with the overall scientific goal of investigating how exposure to a broad range of early environmental factors affects child health and development.

Background: ECHO has longitudinal data from more than 40,000 pregnancies and 60,000 children from 69 maternal-child cohorts in the U.S. Combining data across these cohorts has yielded large and diverse participant samples, enabling power for important child health research questions and generalizability of findings. Prenatal and child exposure data include natural and built environments, and physical, chemical, social, behavioral, and biological factors. ECHO's five pediatric outcome areas are: pre-, peri-, and postnatal outcomes, e.g., preterm birth, birth weight for gestational age; upper and lower airway, e.g., asthma, allergies; obesity; neurodevelopment, e.g., general cognition, behavior and emotion regulation, attention deficit disorder, autism spectrum disorder; and positive health, or well-being.

Since August 2022 harmonized, near-anonymized data from ECHO's first 41,000 participants are available through the NICHD Data and Specimen Hub (DASH). ECHO's Data Analysis Center will deposit additional data at 6-month intervals. DASH is a centralized resource that allows researchers to access data from ECHO and other studies via a controlled-access mechanism. A key ECHO goal is to catalyze research using this accessible resource by the broad scientific community, especially among emerging researchers not supported by the ECHO Program. ECHO data in DASH provide an exceptional opportunity for training early investigators in pursuing important scientific questions in large longitudinal studies of child health outcomes.

Objective: This concept seeks to advance research and training in high-priority areas of child health outcomes by stimulating the use of ECHO data broadly by members of relevant scientific communities.

Two companion efforts for FY24 and FY25 are:

1) R36 RFA: Dissertation grant to support training through data access and analysis of currently available ECHO data within the NICHD DASH repository
2) F32 RFA: Postdoctoral fellowship award to support training through data access and analysis of currently available ECHO data within the NICHD DASH repository

Funds Available: The ECHO program plans to commit ~$960,000 total costs over FYs 2024 and 2025 for up to 8 two-year awards

Award Mechanisms: R36 Dissertation Grant, and F32 Individual Postdoctoral Fellowship Award

Award Project Period: 2 years (FY 2024 to FY 2025)

Anticipated Timeline: ECHO anticipates publishing FOAs in Summer 2023 for funding starting in FY 2024.