SPARK-EHS:
Supporting Programs to Advance Research Knowledge in Environmental Health Sciences

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NAEHS Council Meeting

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Discussion Outline

Overview of the current NIEHS T32 training program

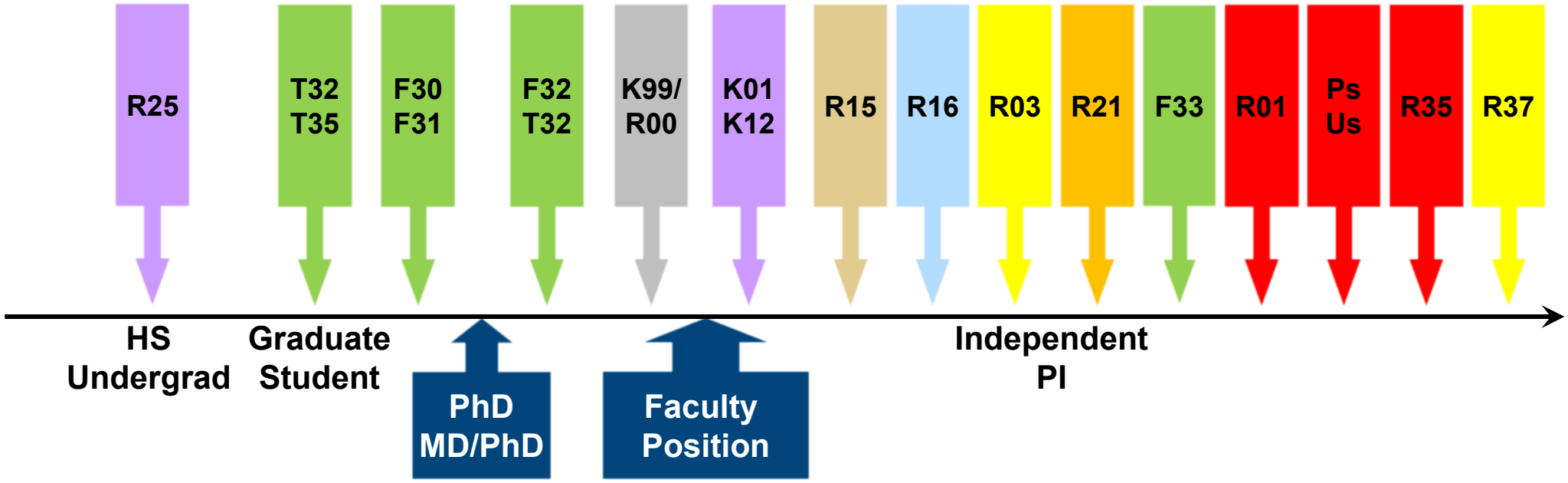
Rationale for a new program

Scope & objectives of the proposed program

Council discussion

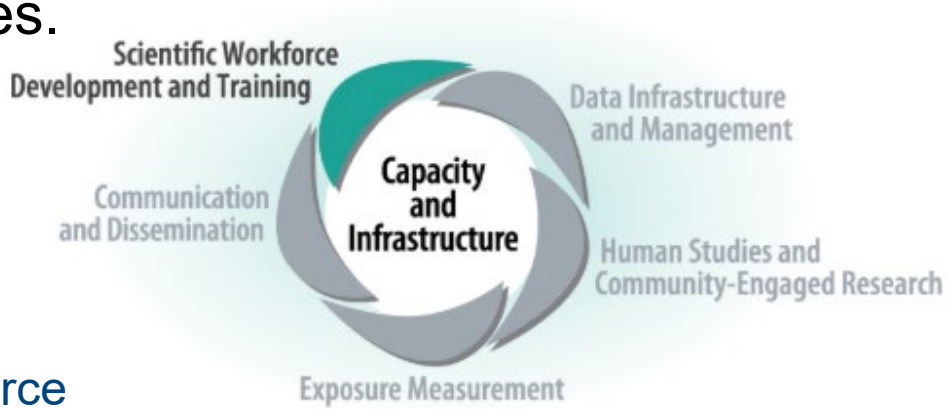
Overview of the Current NIEHS T32 Training Program

NIEHS Training & Research Career Support Mechanisms



Ruth L. Kirschstein National Research Service Award (NRSA) (T32)

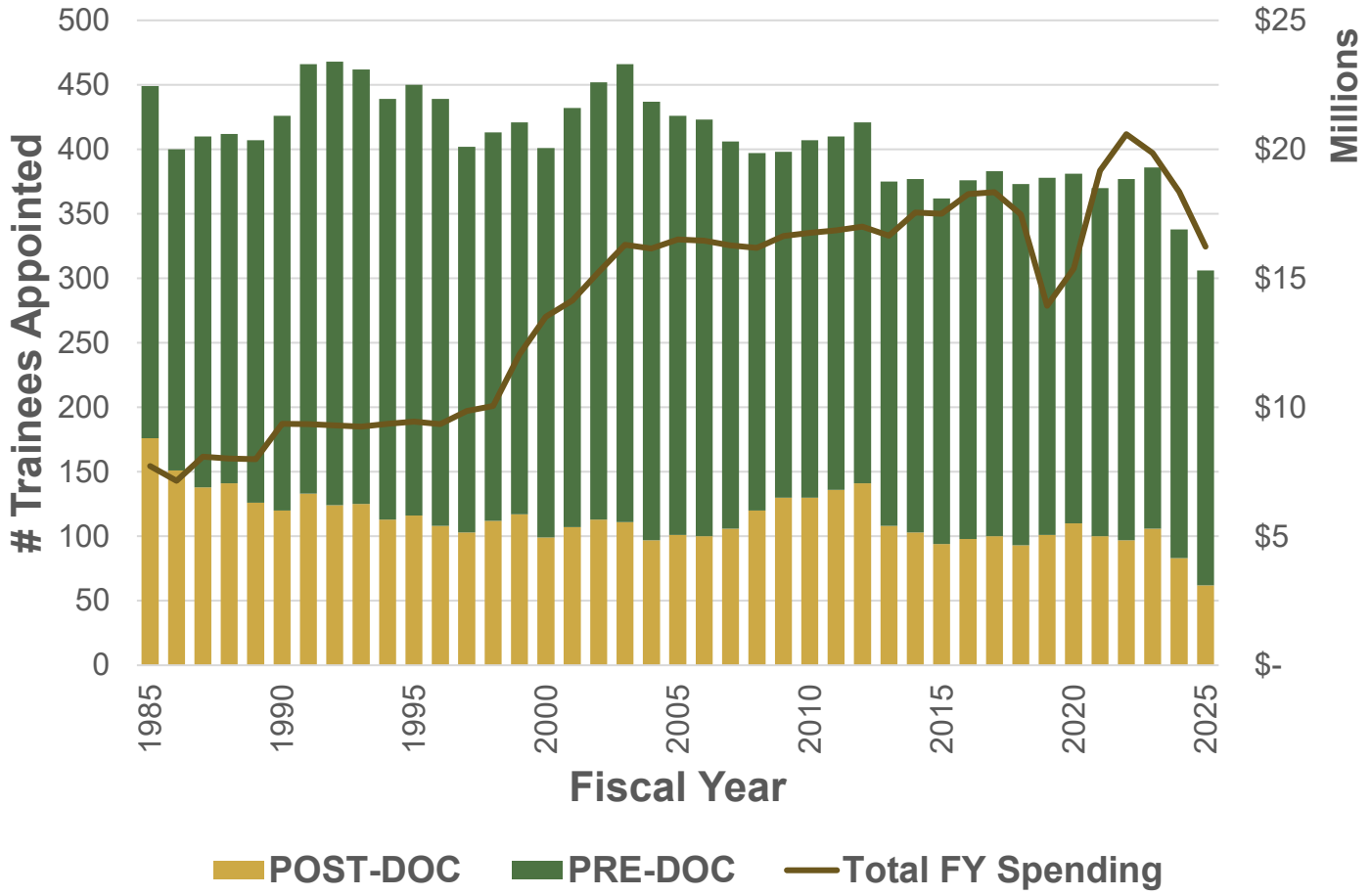
- NIEHS's **primary means of supporting predoctoral and postdoctoral research training** since 1974.
- Provides training in appropriate methods, technologies, relevant quantitative and computational approaches, rigorous experimental design, and interpretation of data.
- Fosters development of communication, management, leadership, and teamwork skills.
- Supports research in fields related to the environmental health sciences, including basic, behavioral, clinical, and epidemiologic sciences.



https://www.niehs.nih.gov/about/strategicplan/capacity/scientific-workforce

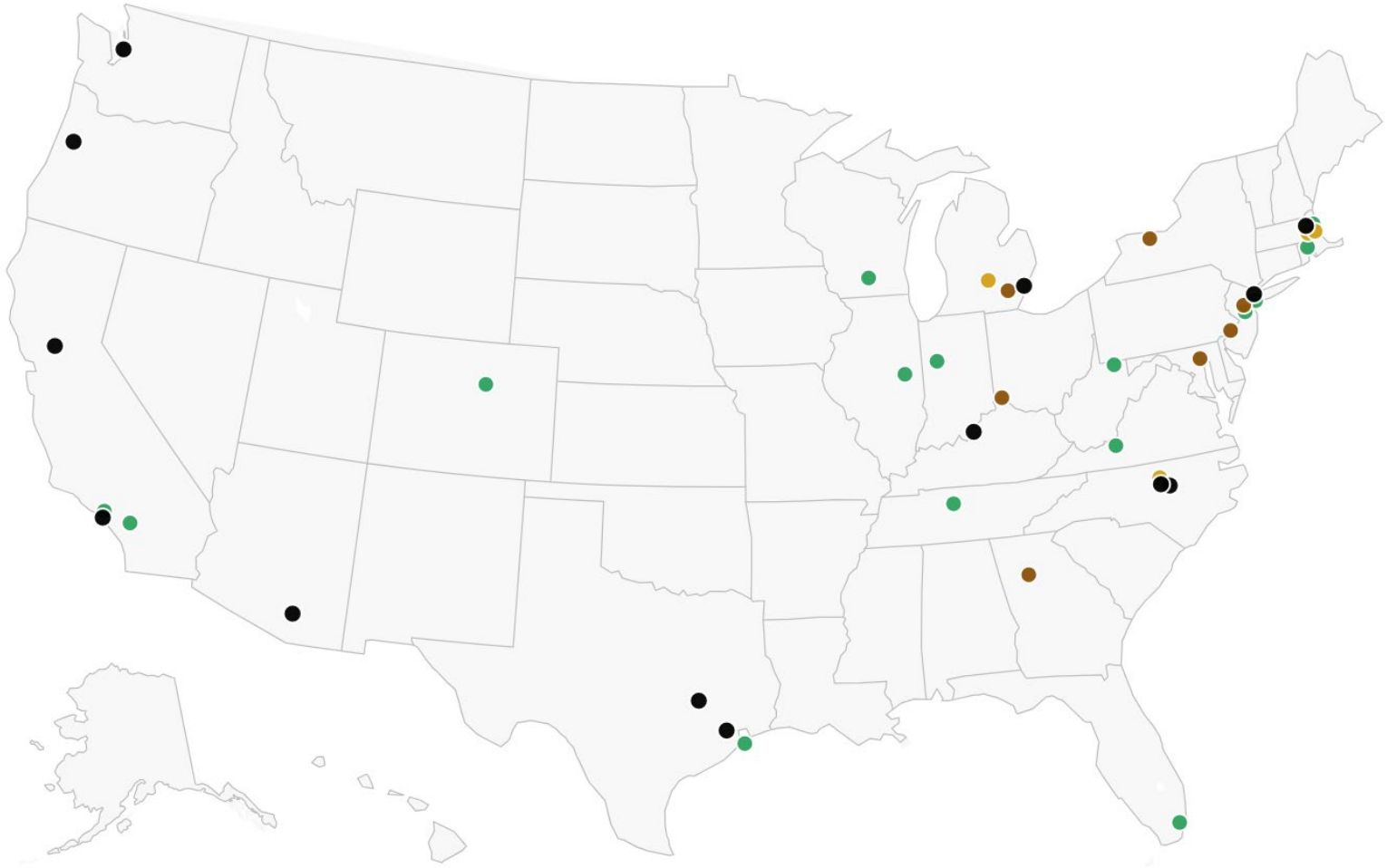
NIEHS T32 Training Program Portfolio, FY 1985-2025

By the Numbers…
Trained: **16,722** Trainees • **12,073** Predocs • **4,649** Postdocs
Supported: **110** Programs
Occurred in: **82** Institutions **35** States
Average program lifespan: **18.4** Years



Financial and institutional information was obtained from NIH RePORTER.
Trainee appointment numbers were estimated based on unofficial data obtained from eRA.

T32 Institutions by P30/P42 Overlap, FY 2021-2025



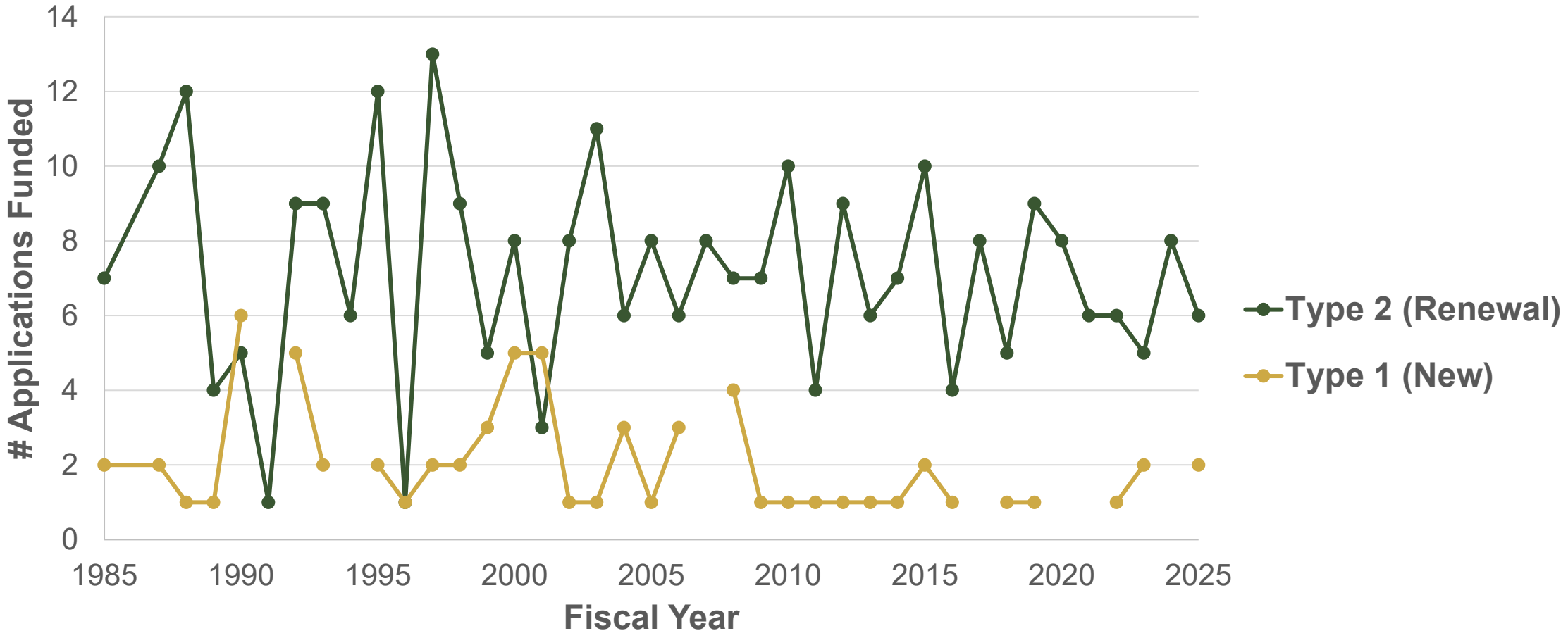
- T32 only (n=15)
- T32 + P42 (n=4)
- T32 + P30 (n=7)
- T32 + P42 + P30 (n=13)

61.5% of institutions with a T32 also had a P30, a P42, or both from NIEHS

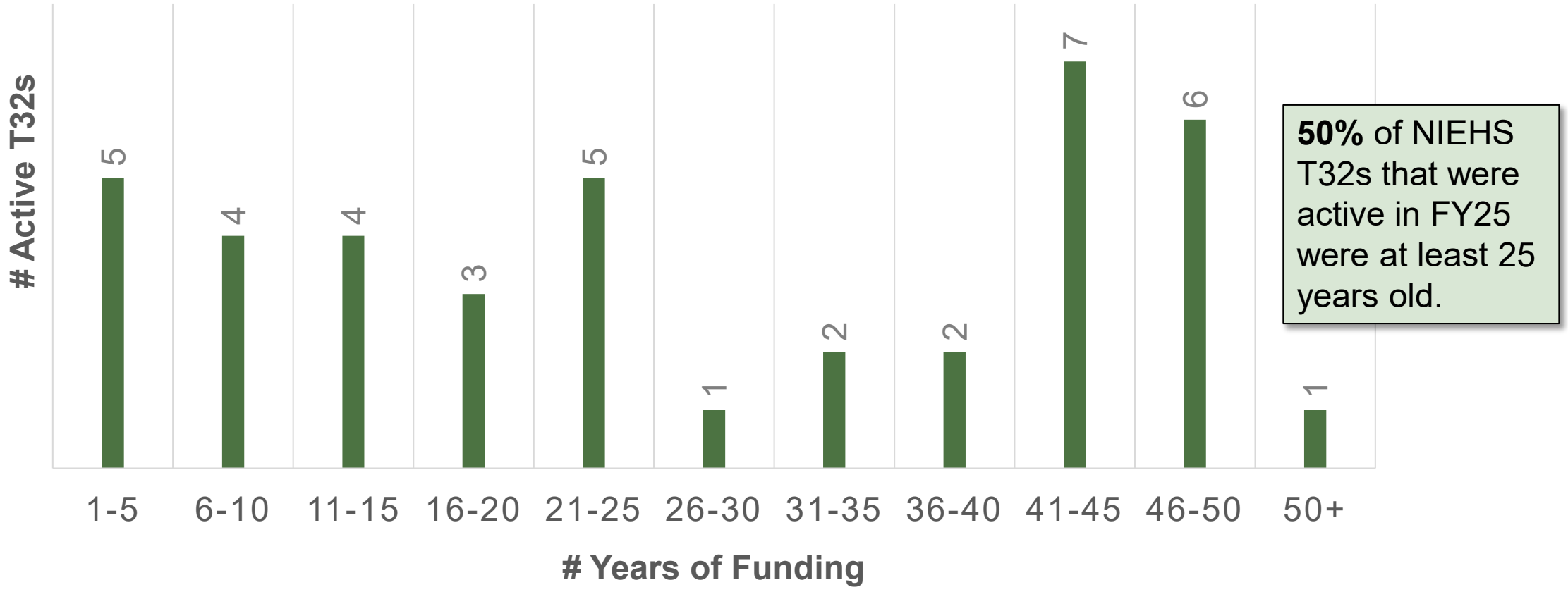
Includes all NIEHS-funded T32s and collocated P30s and/or P42s that were active (including no cost extensions) during fiscal years 2021-2025.
Dots are offset where locations are close together to improve visibility.

Rationale for a New Training Program

Funded Competing NIEHS T32 Applications by Type, FY 1985-2025



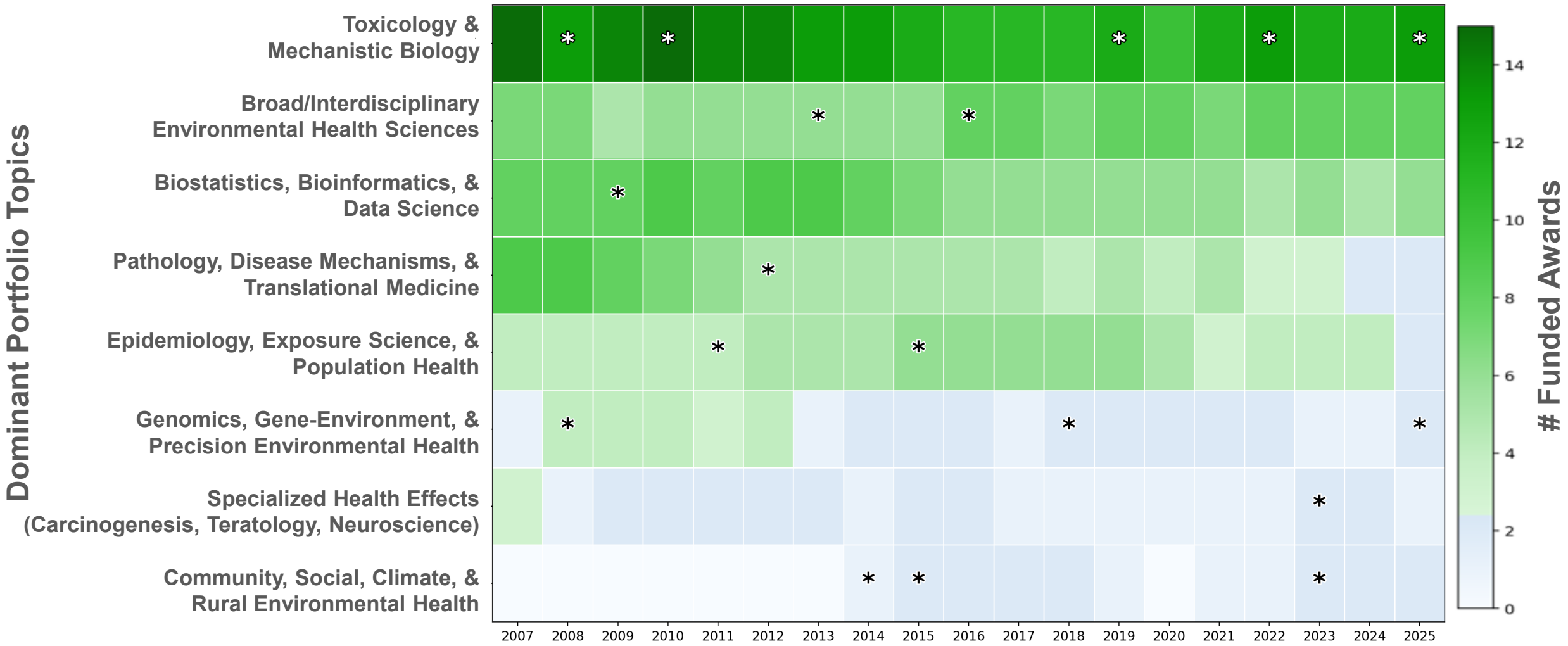
Distribution of Active* T32 Programs by Years of Funding, FY 2025



50% of NIEHS T32s that were active in FY25 were at least 25 years old.

*Includes all NIEHS-funded T32s that were active (including no cost extensions) in FY25

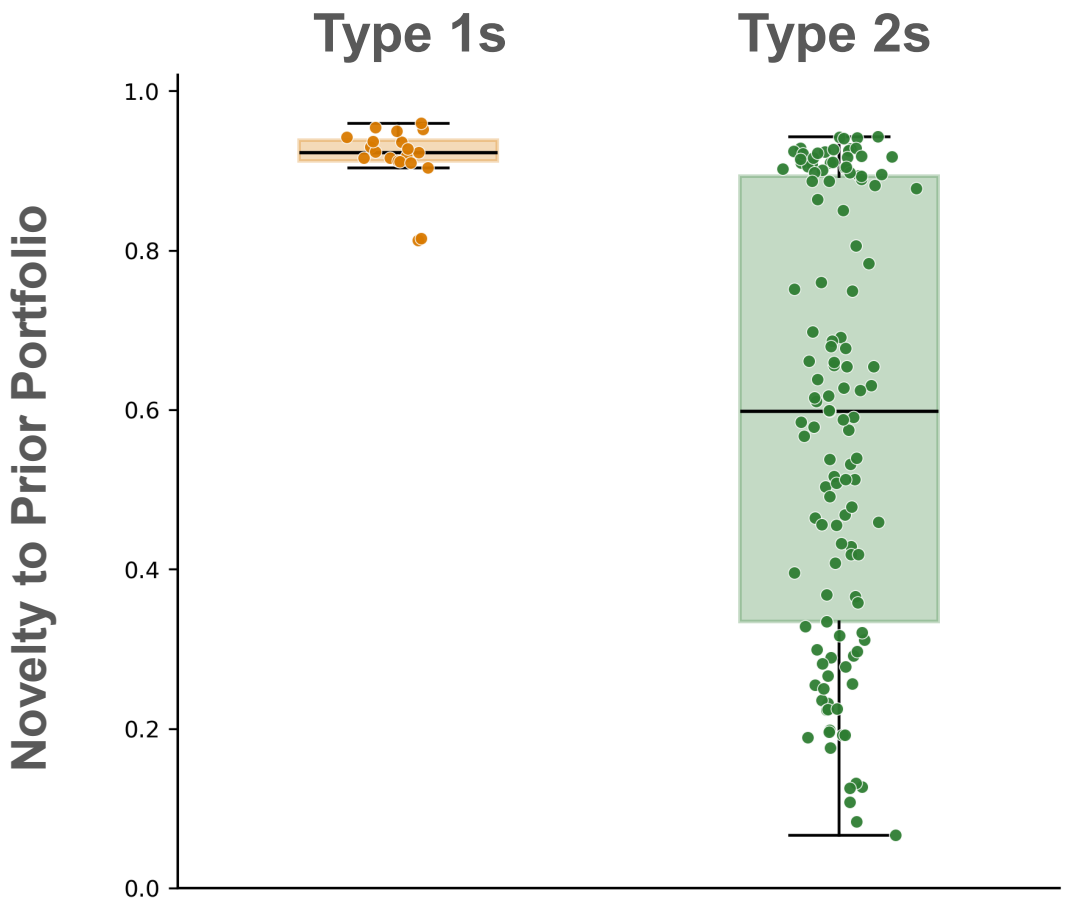
T32 Portfolio Composition by Topic Area & Fiscal Year, FY 2007-2025



Each NIEHS T32 project was assigned to one dominant topic only.

***at least one Type 1 within the topic year**

Novelty of Type 1 and Type 2 T32 Awards Relative to Prior Portfolio, FY 2007-2025



0.917
Type 1 Mean Novelty

0.587
Type 2 Mean Novelty

Topical continuity remains high across the portfolio, but Type 1 awards contribute most of the observed novelty relative to the prior award base.

Novelty is defined as text-based distinctiveness from earlier awards using TF-IDF profiles constructed from award titles, abstracts, and project terms. Fiscal year 2007 awards are excluded from plot because no earlier fiscal year comparator exists with available NIH RePORTER project terms.

Scope & Objectives of the Proposed Program

Program Scope

Limited to institutions who have not had a T32 from NIEHS during the last 5 years

Current NIEHS-funding support is required: PI/MPI at each participating institution must have at least 1 R01-equivalent award from NIEHS

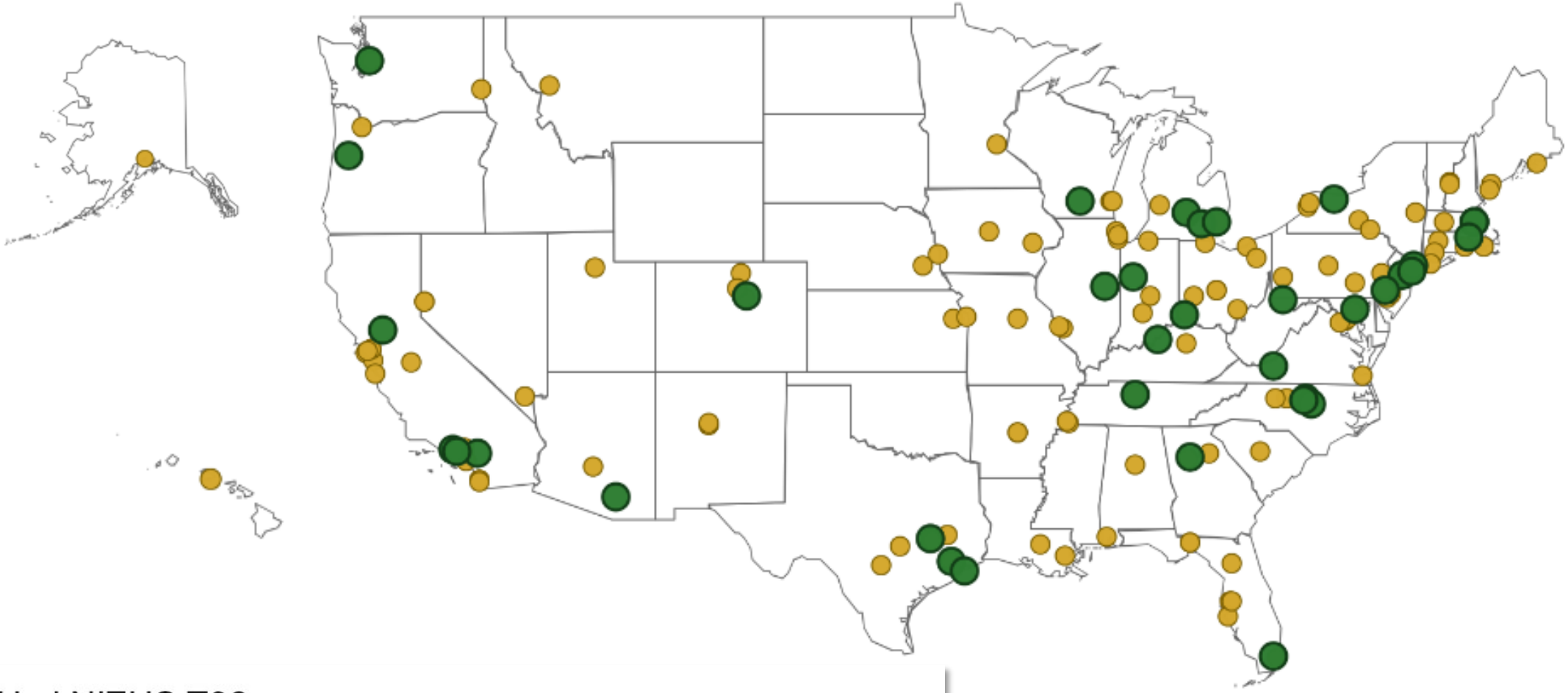
Limited to predoctoral training only, up to 6 slots at maturity

Additional funding for curriculum augmentation specific to proposed program

Awards in Two Phases

- **YEAR 1, Program Development:** One-year budget request. The associated costs are to support training and administrative staff, supplies, and other expenses needed for organizing the specialized educational content and the administrative systems needed for the training program.
  - Core course or experiences specifically in environmental health sciences
  - Formal mentor training
  - Grant writing expertise and training
  - Enhance professional development training opportunities
- **YEAR 2-6, Training:** Five-year T32 award focused on predoctoral training following the program development phase.

SPARK-EHS Candidates (based on NIEHS grant support received during FY 2021-2025)



- Had NIEHS T32
- Had at least one NIEHS R01-equivalent but no NIEHS T32

Program Objectives

Greater institutional/geographical representation

Innovative training approaches and research topics

Participation of faculty from multiple universities/schools around training area concept and/or cooperative programs with lower resourced universities

Growth of scientific areas currently underrepresented in the training portfolio, including those that are in specialized research niches

Council Discussion

Darryl B. Hood, The Ohio State University
Gokhan Mutlu, University of Chicago School of Medicine