



National Institute of Environmental Health Sciences  
*Your Environment. Your Health.*

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# **Report to the National Advisory Environmental Health Sciences Council**

**Rick Woychik, Ph.D.**  
**Director**

National Institute of Environmental Health Sciences and  
National Toxicology Program

**June 4, 2024**

## Final FY24 Minibuses Appropriations

- The week of March 4<sup>th</sup> - President signed into law 6 of the 12 Appropriations bills
  - **Our Superfund-related programs (SRP and WTP) are funded for FY24 at \$79,714,000.**
  - A cut of \$3,321,000 or about **4% below FY23 levels.**
- The week of March 18<sup>th</sup> - the President signed into law the second FY24 Minibus, and included the remaining 6 appropriations bills, including the Labor-HHS portion of our NIEHS budget.
  - NIEHS **Labor-HHS portion** of the minibus had us at a mark of **\$913,979,000**
  - **Flat from FY23 funding.**

## FY2025 President's Budget

- President Biden released his FY25 Budget on March 11, 2024.
- For the **Labor-HHS** portion of the NIEHS budget, the President's FY25 Budget proposes \$916,791,000.
  - **\$2,984,000 increase (or 0.3%)** over FY23 and FY24 levels.
- For the **Interior and Environment (NIEHS Superfund related programs)** portion of the NIEHS budget, the President's FY25 Budget proposes \$83,035,000,
  - \$3,321,000 or about a 4% increase over FY2024 levels signed into law on March 9, 2024.
  - **This FY25 budget proposal is flat from FY23 levels.**



## ACT for NIH

### Congressional Event – April 30<sup>th</sup>, 2024



- Hosted at the Library of Congress, numerous members of Congress expressed their support for the work at the NIH.
- Clearly illustrated strong support for the NIH from both sides of the aisle.
- Attendees:
  - Rep. Robert Aderholt (R-AL)
  - Rep. Rick Allen (R-GA)
  - **Senator Tammy Baldwin (D-WI)**
  - **Rep. Andy Barr (R-KY)**
  - Senator Michael Bennet (D-CO)
  - Rep. Ami Bera (D-CA)
  - Senator Shelley Moore Capito (R-WV)
  - Rep. Juan Ciscomani (R-AZ)
  - Rep. Katherine Clark (D-MA)
  - Senator Susan Collins (R-ME)
  - Rep. Diana DeGette (D-CO)
  - **Rep. Rosa DeLauro (D-CT)**
  - Rep. Debbie Dingell (D-MI)
  - Rep. Virginia Foxx (R-NC)
  - Senator Maggie Hassan (D-NH)
  - Rep. Jim Himes (D-CT)
  - Rep. Derek Kilmer (D-WA)
  - Rep. Jim McGovern (D-MA)
  - Senator Jeff Merkley (D-OR)
  - Senator Patty Murray (D-WA)
  - Rep. Scott Peters (D-CA)
  - Rep. Mark Pocan (D-WI)
  - Senator Jack Reed (D-RI)
  - Rep. Eric Swalwell (D-CA)
  - Rep. Steve Womack (R-AR)

## ACT for NIH

### Congressional Event – April 30<sup>th</sup>, 2024

**ACT for NIH**  
ADVANCING CURES TODAY



**Congresswoman Rosa DeLauro  
(D-CT-3)**

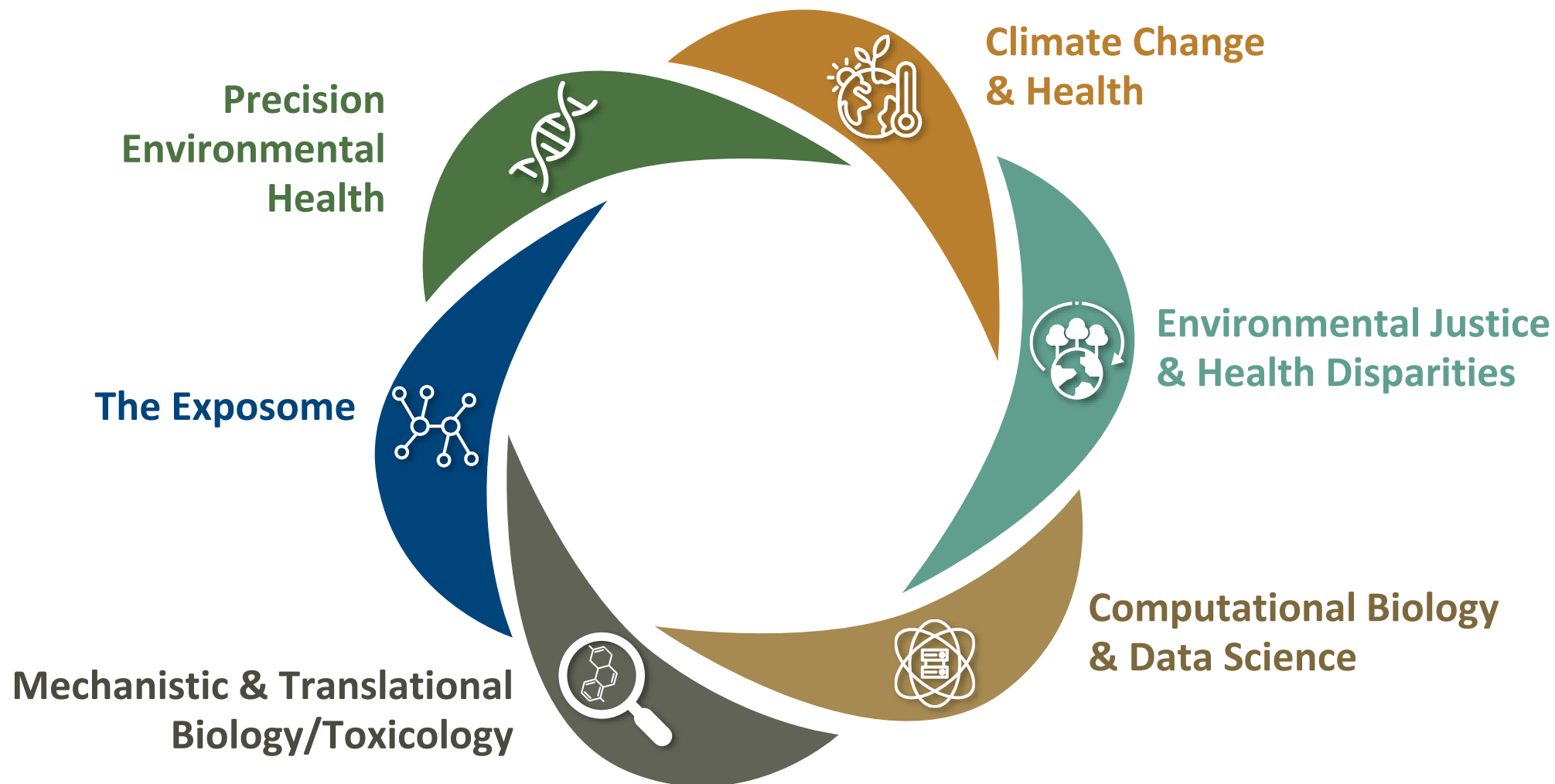


**April Bennett, NIEHS Legislative Liason  
& Congressman Andy Barr (R-KY-6)**



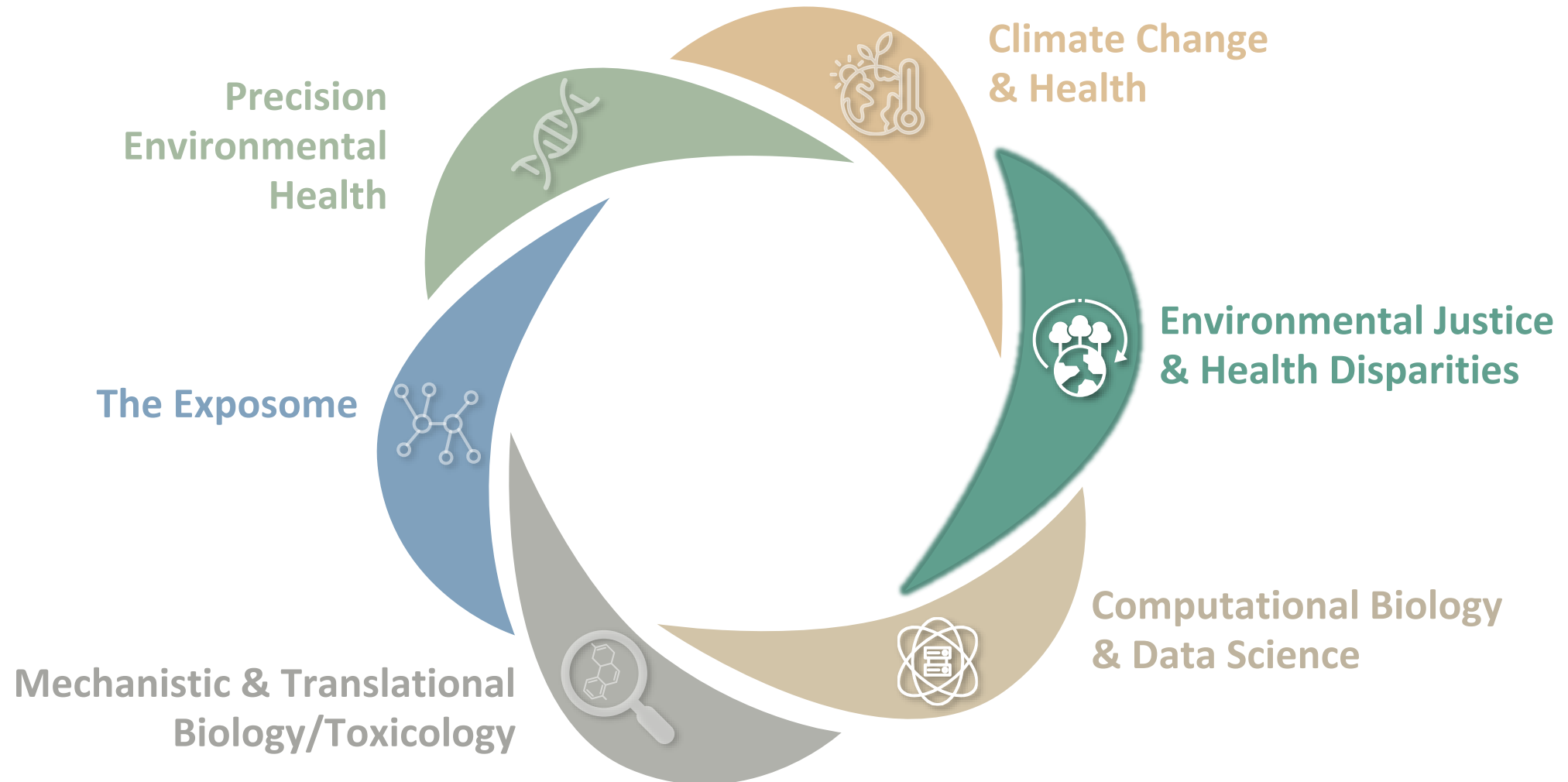
**Jed Manocherian,  
Chairman and Founder,  
ACT for NIH**

## NIEHS Emerging Scientific Priority Areas





## NIEHS Emerging Scientific Priority Areas





# Cross-NIH Environmental Justice Initiative Update



## Cross-NIH Environmental Justice Strategic Actions

- Secretary Becerra recently requested that all Operating Divisions within HHS:
  - Identify a senior leader point of contact for EJ activities
  - Identify **three strategic and transformative** EJ actions
- These EJ actions:
  - must be implemented **within the next 18 months**.
  - may include new staffing, funding, policies, regulations, guidance documents, initiatives, or other activities.
  - may include improving accountability and compliance with any statute the agency administers that affects the health and environment of communities with EJ concerns.



## Identify a Senior Leader Point of Contact

- Coordinate across NIH to assist OEJ in identifying specific resources to advance Environmental Justice
  - **Completed:** Dr. Trevor Archer, as requested by Drs. Tabak and Schwetz.
  - **Current tasks:** ICO funding commitments, initiate contract support
- Additional coordination efforts by:



**Dr. Trevor Archer**  
NIH Point of Contact



**Jessica Au**  
NIEHS



**Sharon Beard**  
NIEHS



**Deborah Linares**  
NIMHD



**Liam O'Fallon**  
NIEHS



**Cyrena Silvera**  
NIEHS



**Beverley Xaviera  
Watkins**  
NIH/OD

## Identify Three Strategic and Transformative Environmental Justice Actions

### 1) Environmental Health Disparities Centers

- Builds on the existing Centers of Excellence in Environmental Health Disparities involving NIEHS, NIMHD, and NICHD
- Multidisciplinary research capacity building and community engagement

### 2) Environmental Justice Scholars

- Following Climate and Health Scholars program model
- Bring scholars with diverse expertise in EJ to NIH, including community leaders, academics, healthcare and government workers

### 3) Environmental Justice Training

- For communities, workers, researchers, health care and public health professionals, and policy makers to build community capacity

## EJ Workgroup Activities: Environmental Health Disparities Centers

- **RFI Response**

- Analyzed relevant EJ RFI responses incorporated this into the RFA draft.

- **Renewal Approved**

- NACMHD (NIMHD Council) **approved the EHD Centers renewal in February 2024, with EJ focus.**

- **Notice of Intent to Publish**

- Released May 29, 2024: NOT-MD-24-018
- **Estimated publication: July 30, 2024**

EHD Centers
NIMHD
NIEHS
NIDCD
NCI
NICHD*

## EJ Workgroup Activities: Environmental Justice Scholars

- **Hosted Informational Webinar**

- Took place May 2024 for ICOs.

- **Logic Model**

- Developing a model to track the intended outcomes of the EJ Scholars program
- Participating ICO's to **develop an interest statement** and designate an **ICO liaison to participate in the interview and selection process**

- **Developing Promotional Materials**

- Informing potentially interested scholars on requirements; future webinar
- **Anticipated announcement: late July 2024 close in Sept 2024**

EJ Scholars
NIMH
NIA
NIEHS
NIAD
NIAMS
NIDDK
NINR
FIC
NCCIH
OD/OBSSR
OD/ODS

## EJ Workgroup Activities: Community Training Program Overview

- **Developed Pilot to promote an EJ community dialogue**
  - Identified National Environmental Justice Convening pilot site:  
**WE ACT EJ Leadership Forum in Memphis, Tennessee:  
September 10 - 14, 2024.**
- **Training Materials**
  - Developed drafts of **training workshops and learning objectives for community dialogue.**
- **Establishing Partnerships**
  - Forming EJ training partnership with the **Smithsonian’s Center for Environmental Justice at Anacostia Community Museum.**

EJ Training
NIA
NIEHS
NCCIH
ODP

## EJ Workgroup Activities: Researcher and Staff Training Program

- **Resources and Training**

- Focused on **community-based participatory research, implementation science, cultural competency, and environmental justice training.**
- Collaboratively develop customized EHD and EJ training modules to increase capacity of researchers and staff.

- **Identified Potential Partners**

- Community Engaged Alliance (CEAL)
- Alliance for Community Engagement – Climate and Health (ACE-CH)
- Community Partnerships to Advance Science for Society (ComPASS)

EJ Training
NIA
NIEHS
NCCIH
ODP





# NIEHS Director's Community Engagement

## 2024 Community Tours and Forums

### Environmental Justice and Health in the San Joaquin Valley, CA (UC Davis)

- A highly **diverse region** with vast stretches of farmland and a rich multicultural history.
- Played a pivotal role in the **birth of the environmental justice and farmworker rights movements**.
- One of the **poorest and most polluted regions** in the nation.
- Scientists and community groups associated with the **UC Davis Environmental Health Sciences Center** are playing key roles in producing actionable research to confront these inequities.

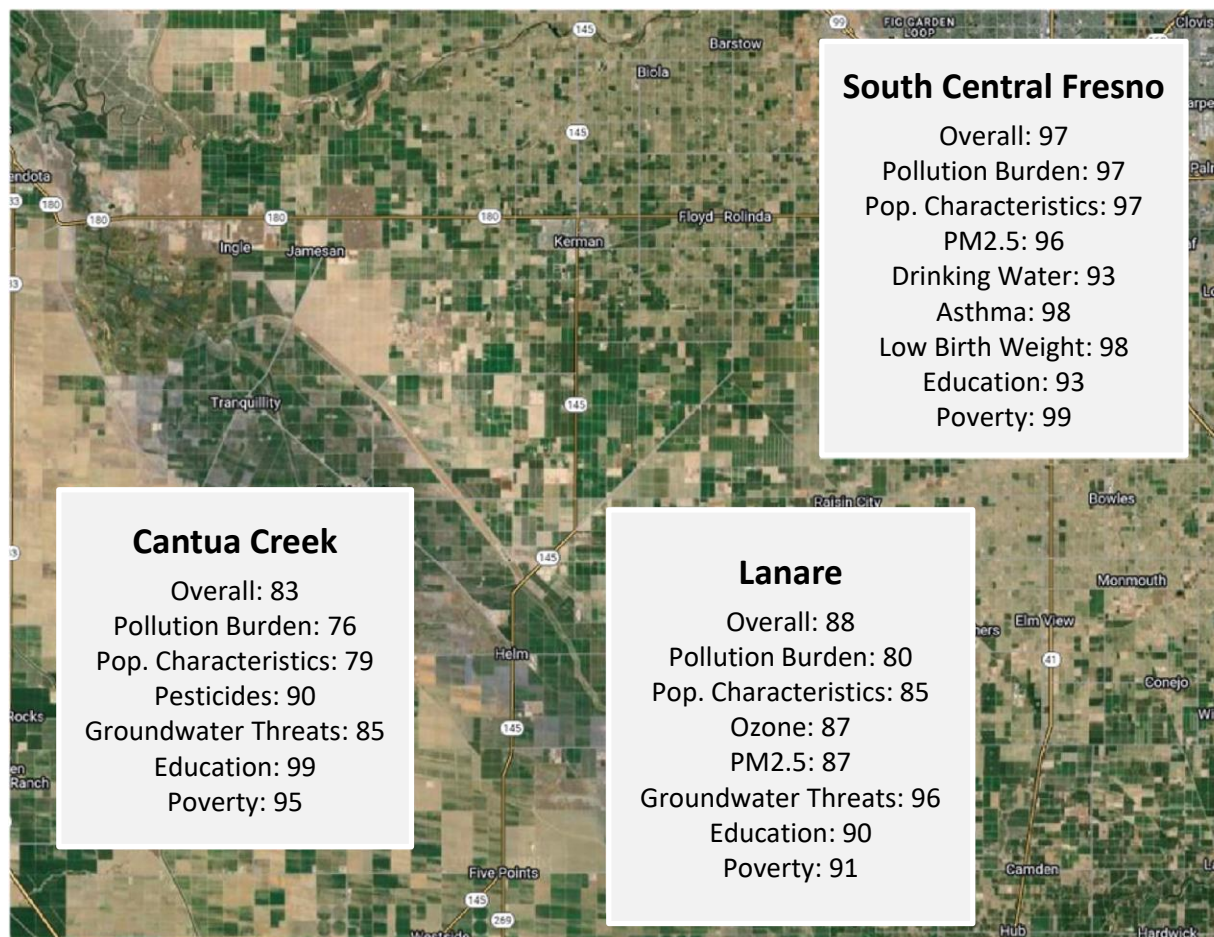


California's San Joaquin Valley

## 2024 Community Tours and Forums

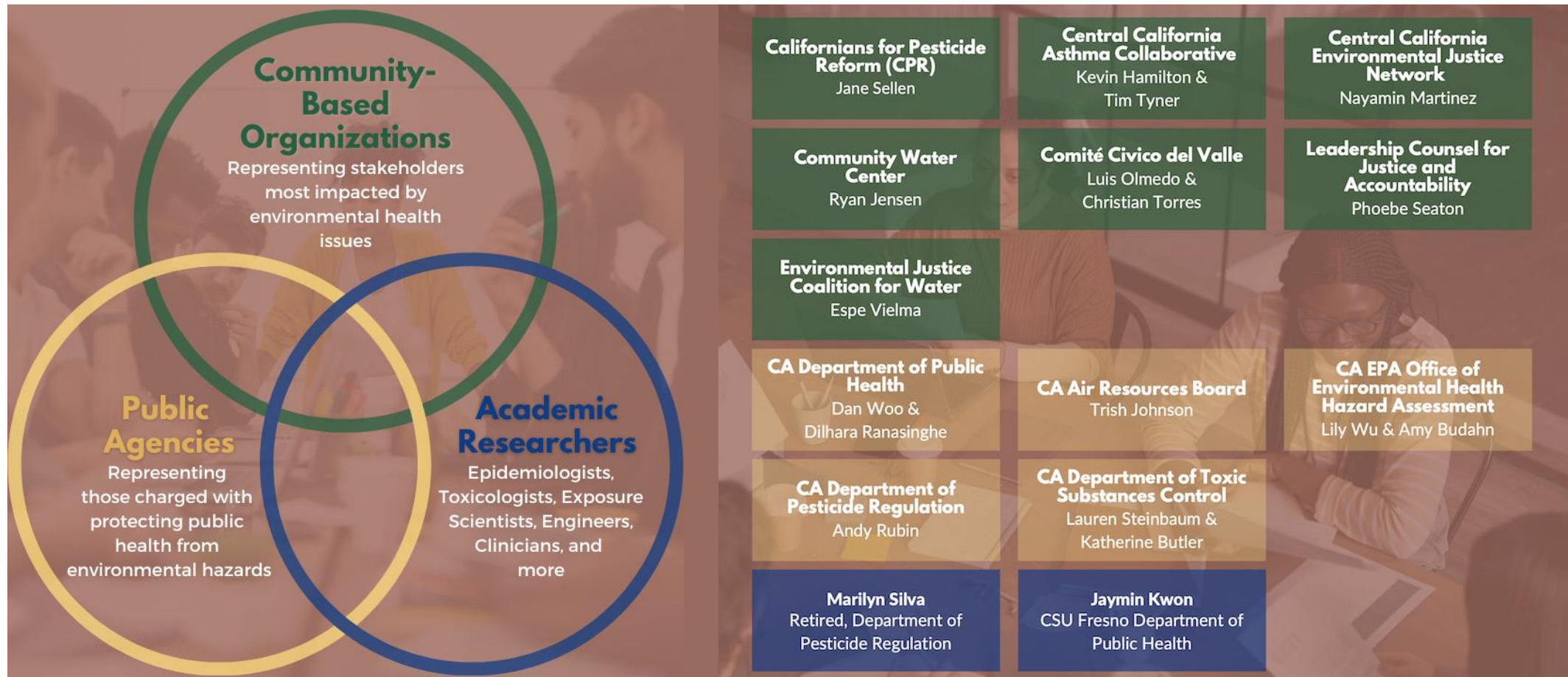
### Environmental Justice and Health in the San Joaquin Valley, CA (UC Davis)

#### CalEnviroScreen



## 2024 Community Tours and Forums

### UC Davis ESHC CSTAC – An ‘All of Government’ Approach





## 2024 Community Tours and Forums

### The Imperial Valley (USC & CCV)

- The **rural border region** of the Imperial Valley, CA is >80% Latinx/Hispanic, faces a 20% unemployment rate, and more than **1 in 3 children live in poverty**.
- These vulnerable communities contend with **poor air quality and excess particulate matter (PM) levels**.
  - Residents experience **staggering rates of asthma morbidity**, where 1 in 5 children are diagnosed with asthma.
- Starting with a 2017 NIEHS P30 Supplement, **USC Environmental Health Centers** and **Comité Civico del Valle (CCV)** have researched the health, quality of life, and other perceived impacts of poor air quality for local families.



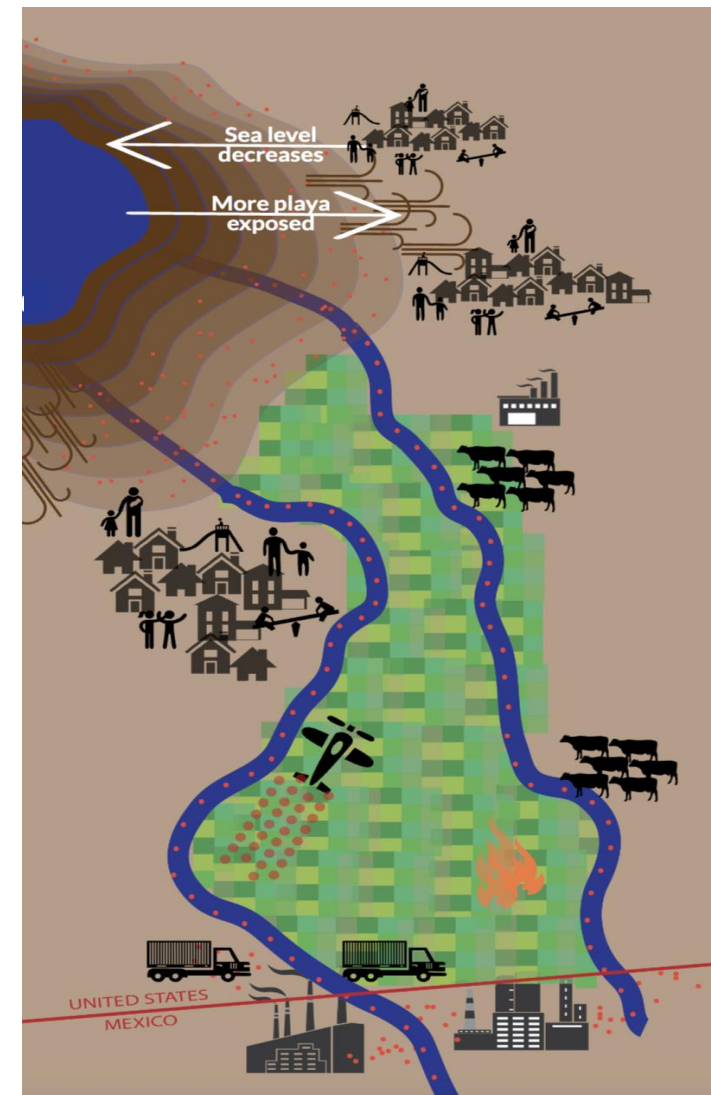
California's Imperial Valley

## 2024 Community Tours and Forums

### The Imperial Valley (USC & CCV)

- **The Drying Salton Sea**

- 1) Industrial and agricultural pollutants are released
- 2) Pollutants flow into the sea
- 3) As the sea shrinks, the playa is exposed and turns to dust
- 4) Wind blows the playa dust into the nearby communities



## 2024 Community Tours and Forums

### The Imperial Valley (USC & CCV)



**The Salton Sea – March 2024**



## 2024 Community Tours and Forums

### The Imperial Valley (USC & CCV): Geothermal Energy and Lithium Mining Complicates the Picture



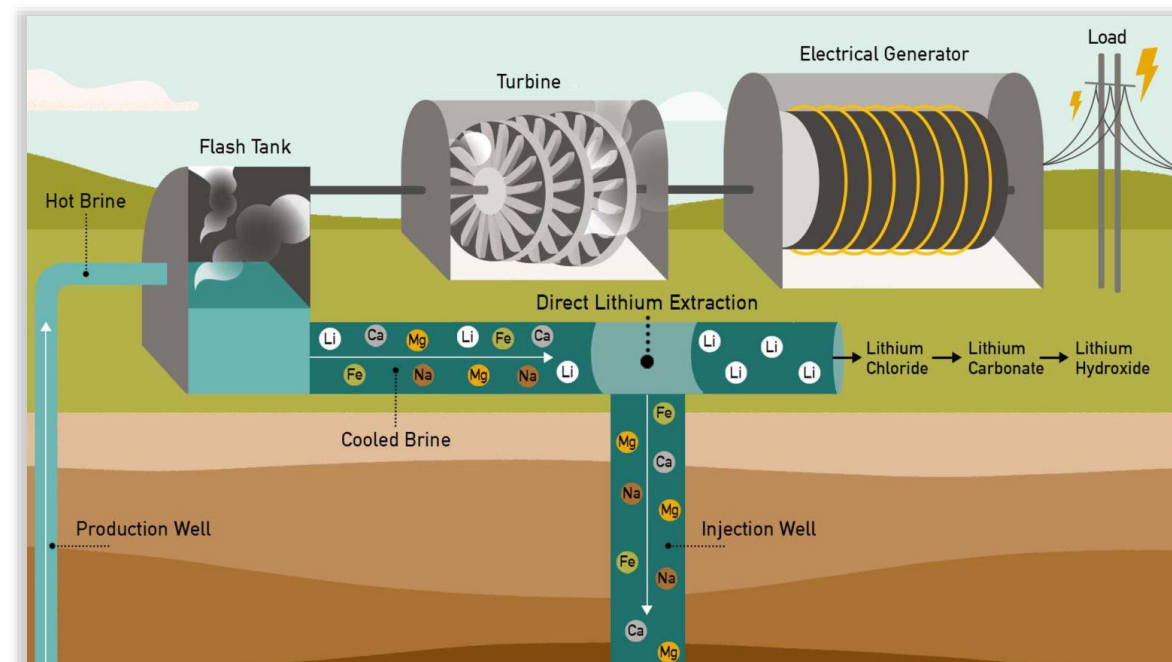
**Geothermal Energy in the Imperial Valley**

## 2024 Community Tours and Forums

### The Imperial Valley (USC & CCV)

- **Lithium Extraction**

- Investors have begun to test **new technologies to extract the lithium** from the underground brine and envision a transition for Imperial Valley into “Lithium Valley”.
- Extraction activities place large demands on water supplies, entail significant environmental disruption, and generate large amounts of waste.
- **Expected to massively disrupt the local communities near extraction**, while providing few local benefits, and unknown health impacts.





## 2024 Community Tours and Forums

### The Imperial Valley (USC & CCV): Impact on Student Education



Community Engagement in the Imperial Valley

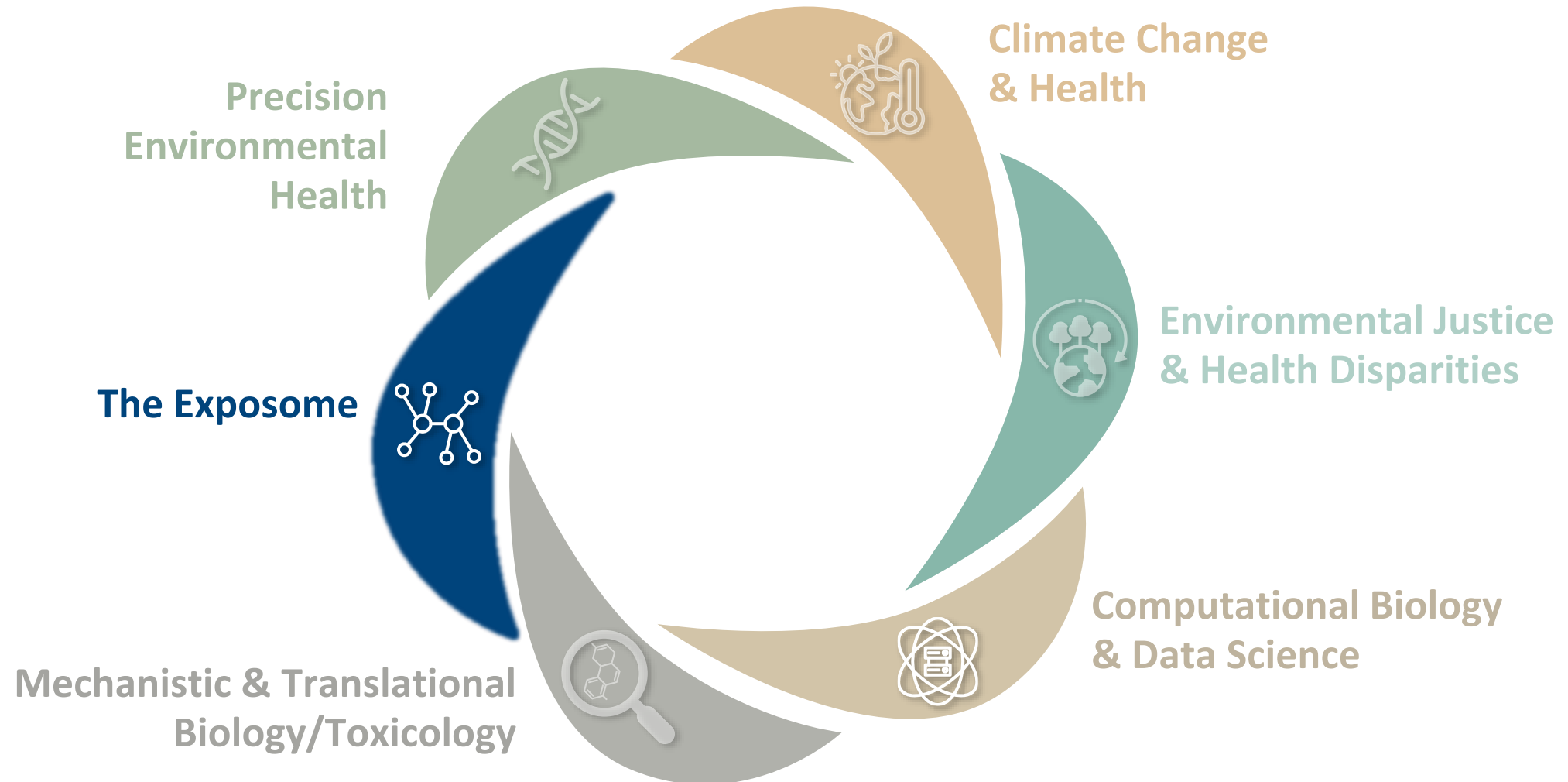
## 2024 Community Tours and Forums

### The Imperial Valley (USC & CCV): Listening to the Community



Imperial Valley Community Forum

## NIEHS Emerging Scientific Priority Areas





## International Human Exposome Network (IHEN) Project Kick-Off Meeting

### February 27-28th, 2024 - Brussels

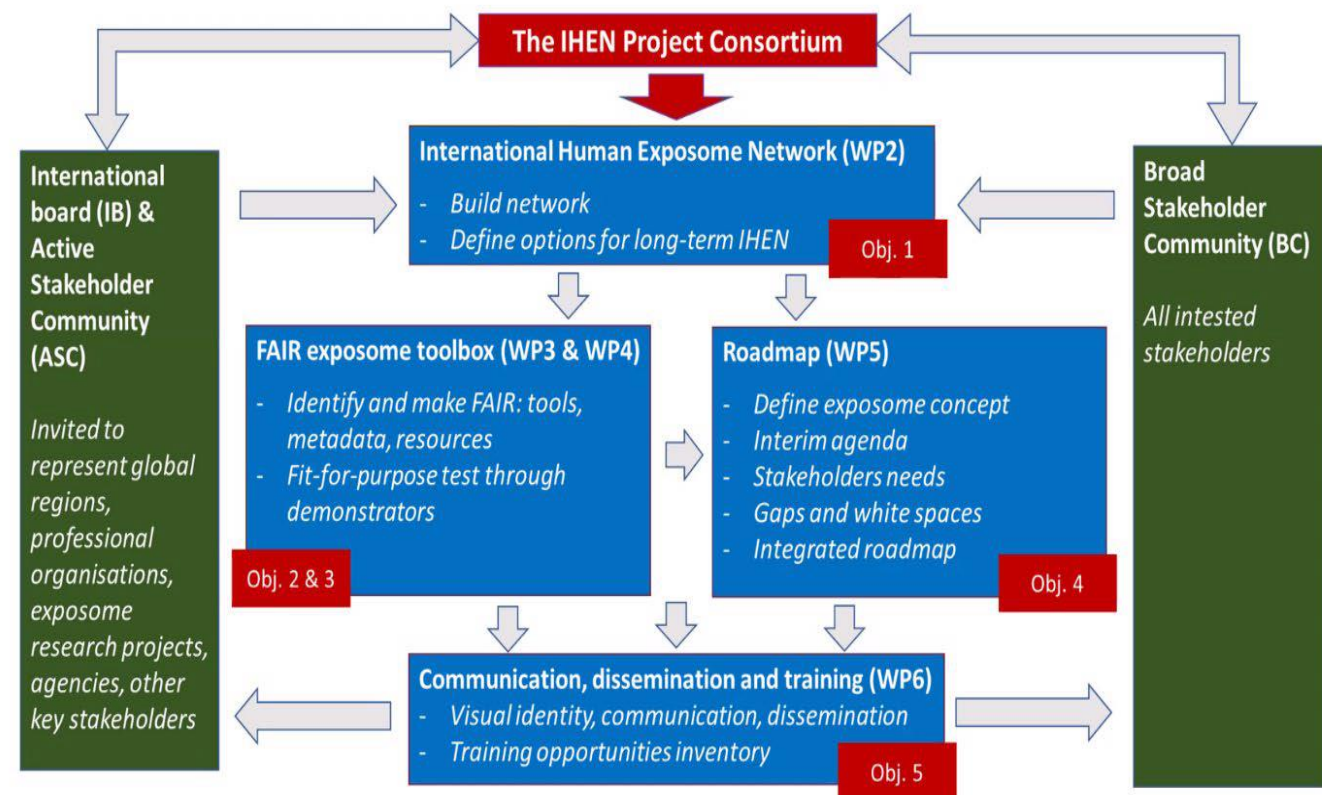
- Funded for 3 years (2024-2026) at 3M Euros
- **Aim:** establish an International Human Exposome Network (IHEN) with the overall purpose of improving global research and cooperation on the exposome.
- **Countries in attendance:** Belarus, Cyprus, Czechia, Finland, France, Greece, Italy, Japan, Lebanon, Netherlands, Nigeria, Spain, Sweden, **U.S.**, United Kingdom
- **Project challenges:**
  - How to build the global network (terms-of-reference, structure, members)?
  - How to identify and make available exposome metadata, tools, and resources?
  - What defines exposome studies?
  - How to develop the (interim) exposome research roadmap?

# International Human Exposome Network (IHEN) Project Kick-Off Meeting

## February 27-28th, 2024 - Brussels

Discussions around IHENs five objectives:

- 1) Design a Global Exposome Network
- 2) Identify and make available Exposome tools and resources at a global scale
- 3) Evaluate the proposed network and its toolbox via a series of case studies
- 4) Develop a roadmap for future Exposome research
- 5) Engage stakeholders in IHEN





# Sapporo, Japan: Exposome Symposium

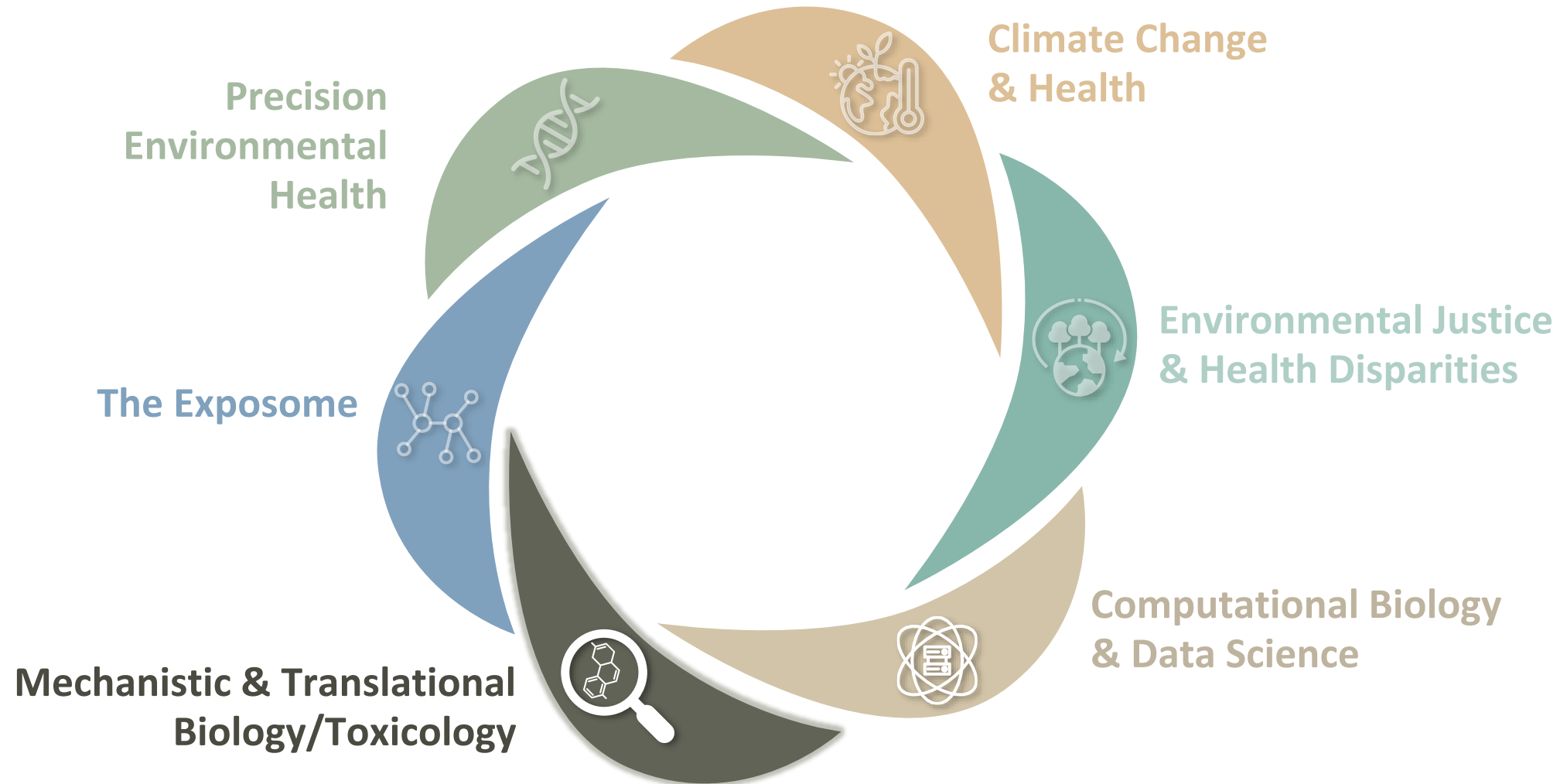
## Aging and the Exposome – May 27-29<sup>th</sup>, 2024



Center on Health  
and Environment  
Across the LifeSpan



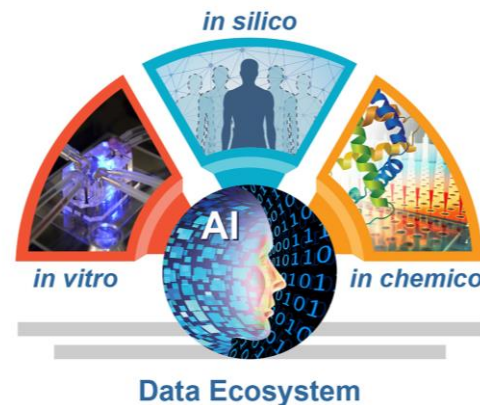
## NIEHS Emerging Scientific Priority Areas



## NIH Common Fund: Goals of Complement-ARIE

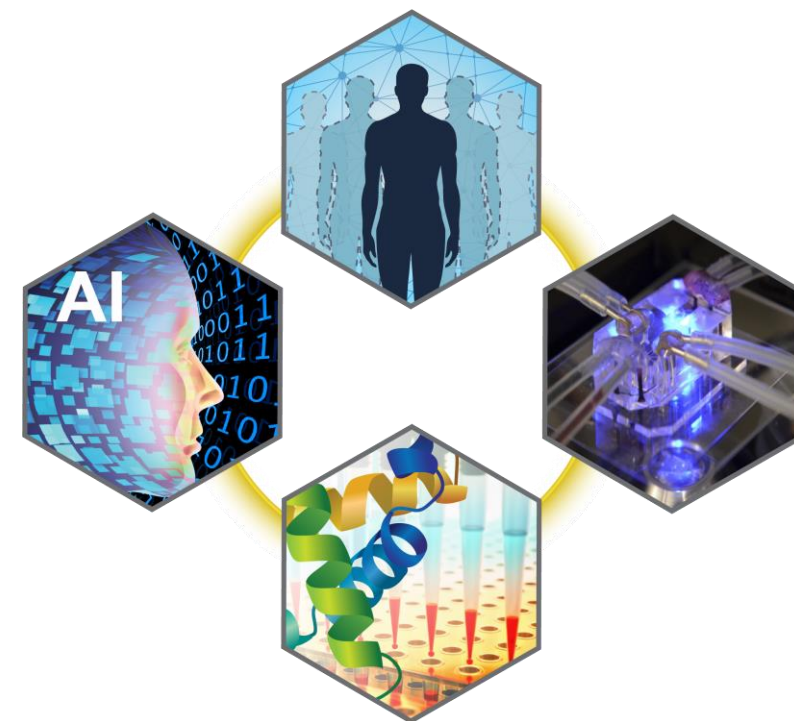
- **Goals:**

- Better model and **understand human health and disease** outcomes **across diverse populations.**
- Develop NAMs that **provide insight into specific biological processes** or disease states.
- Validate mature NAMs to **support regulatory use** and standardization.
- Complement traditional models and **make biomedical research more efficient and effective.**



## Complement-ARIE Concept Prize Competition

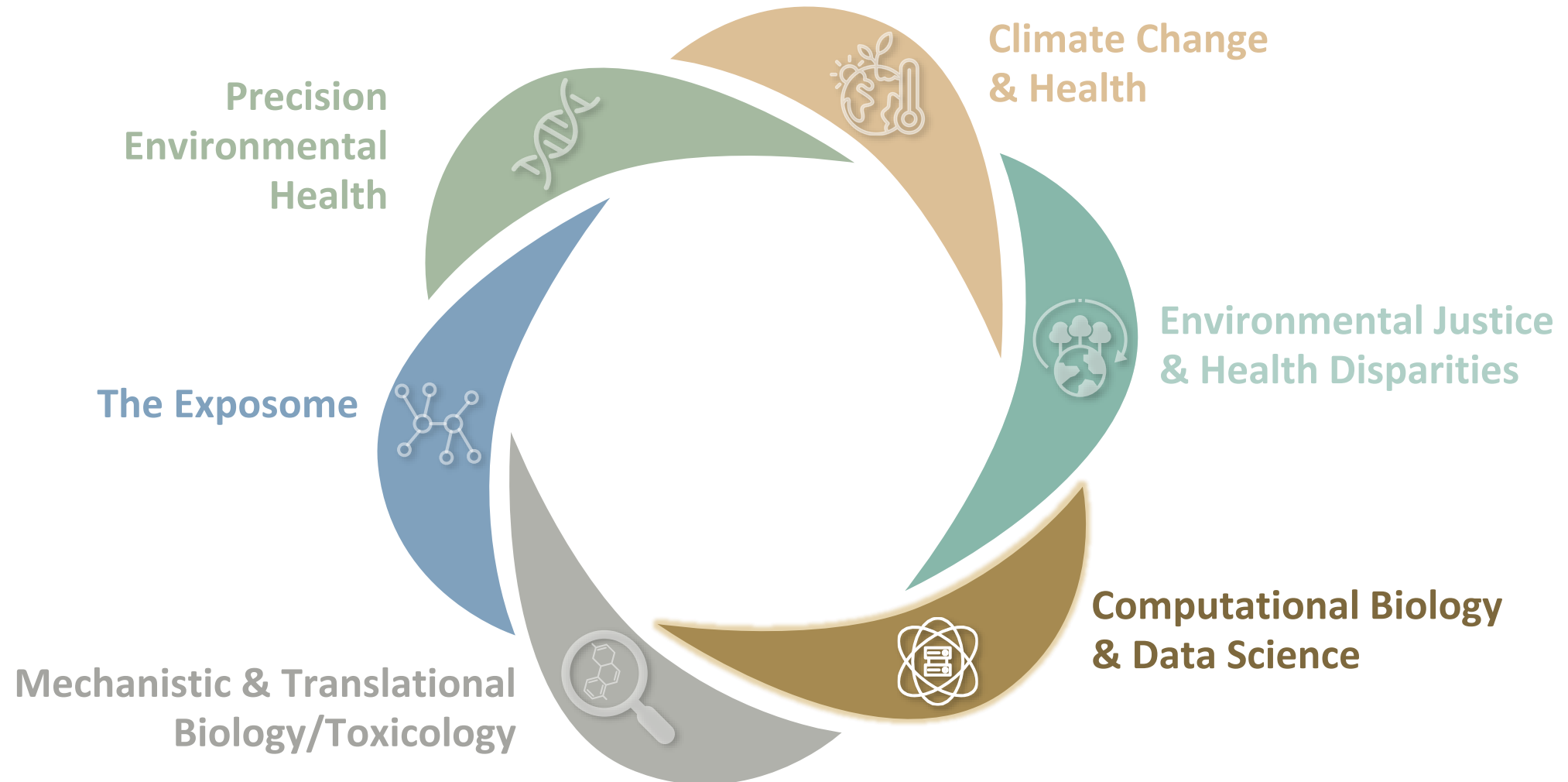
- The Common Fund issued the Complement-ARIE Challenge Prize Competition to **solicit entries for new methods and approaches in NAMs.**
- Winning solutions provided NIH with information about where innovation can be incorporated into NAMs and **what types of new NAMs may benefit from further investment.**
- **20 Complement-ARIE Challenge prize winners** will share the **total prize purse of \$1,000,000**, with **each winning team receiving \$50,000** for their innovative solutions.



**Prize winner summaries**



## NIEHS Emerging Scientific Priority Areas





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# NIH Cloud Lab

## NIH Cloud Lab | Experiment in the Cloud

Funded and sponsored by the NIH Office of Data Science Strategy and managed by the Center for Information Technology, Cloud Lab is a no-cost, 90-day program for NIH intra- and extramural researchers to try commercial cloud services in an NIH-approved environment. Cloud Lab provides training and guardrails to protect against financial and security risks.

### How It Works

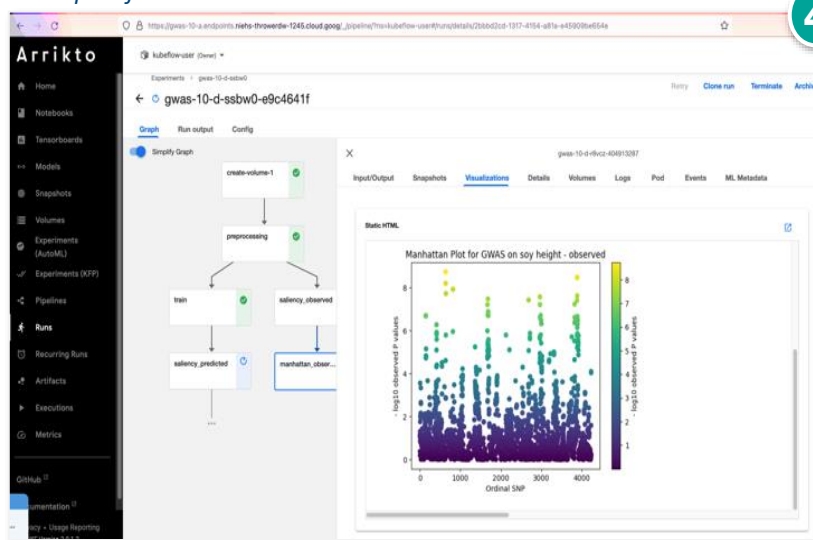
1. **Fill out** request form
2. **Get** account and \$500 of credits
3. **Access** tailored cloud trainings
4. **Practice and learn** for 90 days

NIH Cloud Lab Sign Up Page



1

Example of NIH Cloud Lab Use Case



## Why Use Cloud Lab?

### Try Before You Buy

Evaluate if cloud is a good fit for your project without making a long-term commitment

### Learn New Skills

Access tutorials that demonstrate how to run realistic bioinformatic, data science, and AI workflows

### Develop New Tools

Prototype new architectures and evaluate software and hardware combinations

### Explore Generative AI

Run GenAI tutorials to learn how to use this powerful new technology for your research

**Get \$500 of credits to use:**





## Interactive Learning Modules

Cloud Lab offers a suite of interactive tutorials designed to help participants perform viable research in the cloud, including twelve tutorials developed by IDeA State awardees



Data Science For Biology



Integrating Multi-Omics



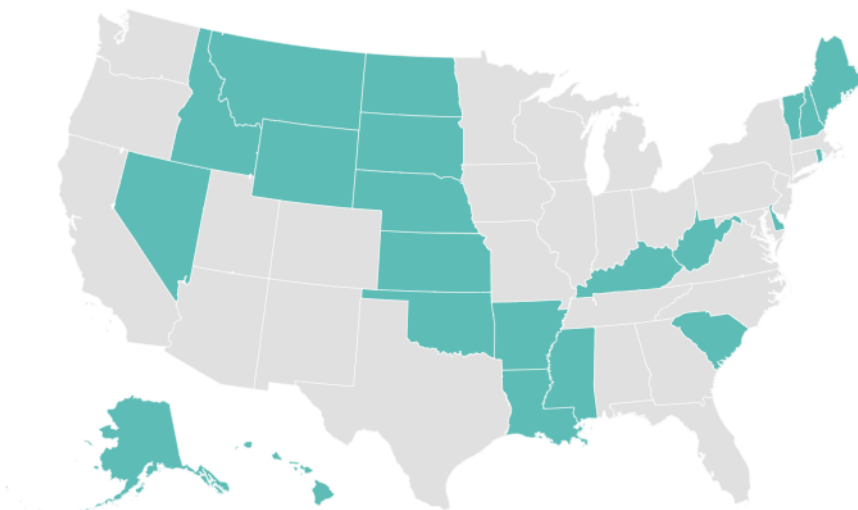
Metagenomics Analysis



Dartmouth  
Fundamentals of Bioinformatics in a  
Terminal Environment



Consensus Pathway  
Analysis



Maine's  
Public  
Universities  
UNIVERSITY OF MAINE SYSTEM  
RNA-Seq Analysis



Biomarker Discovery



Transcriptome Assembly,  
Refinement, and Analysis



DNA Methylation Sequencing  
Data Analysis



ATAC-seq and Single Cell  
ATAC-seq Analysis



Biomedical Imaging Analysis  
Using AI/ML



UNIVERSITY OF ARKANSAS  
FOR MEDICAL SCIENCES  
Proteomics Analysis



### RE CYCLING KNOWLEDGE

A total of twelve modules were developed in 2022 through an NIGMS Notice of Special Interest (NOSI) supplement and are now permanently available to Cloud Lab participants via [NIH GitHub](#).

This exponentially increases the value of NIH's investment.

# New NIH Director Programmatic Focus

## Dr. Bertagnoli Priority: Improving Health Outcomes and Research Equity through Integrating Research Opportunities in Primary Care Settings

Facilitate and accelerate research advances for adoption and implementation into everyday clinical care

Improve health outcomes and advance health equity for all Americans



## NIH Common Fund Program to Support Clinical Research in Primary Care Settings

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A **primary care-focused** clinical research infrastructure that is **disease-agnostic**, facilitating clinical research in **mission areas across all ICs**

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A focus on **integrating innovative research with routine clinical care** in real-world settings

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A foundation for sustained **engagement with communities underrepresented in clinical research** (e.g., minority groups, rural, elderly, children, challenging SDOH characteristics)

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## Approach

Expand **enrollment efforts of existing NIH studies and pilot new studies** as the infrastructure is established

**Partner with existing clinical research networks** and resources, expanding with new sites, capabilities, and collaborations as the network grows

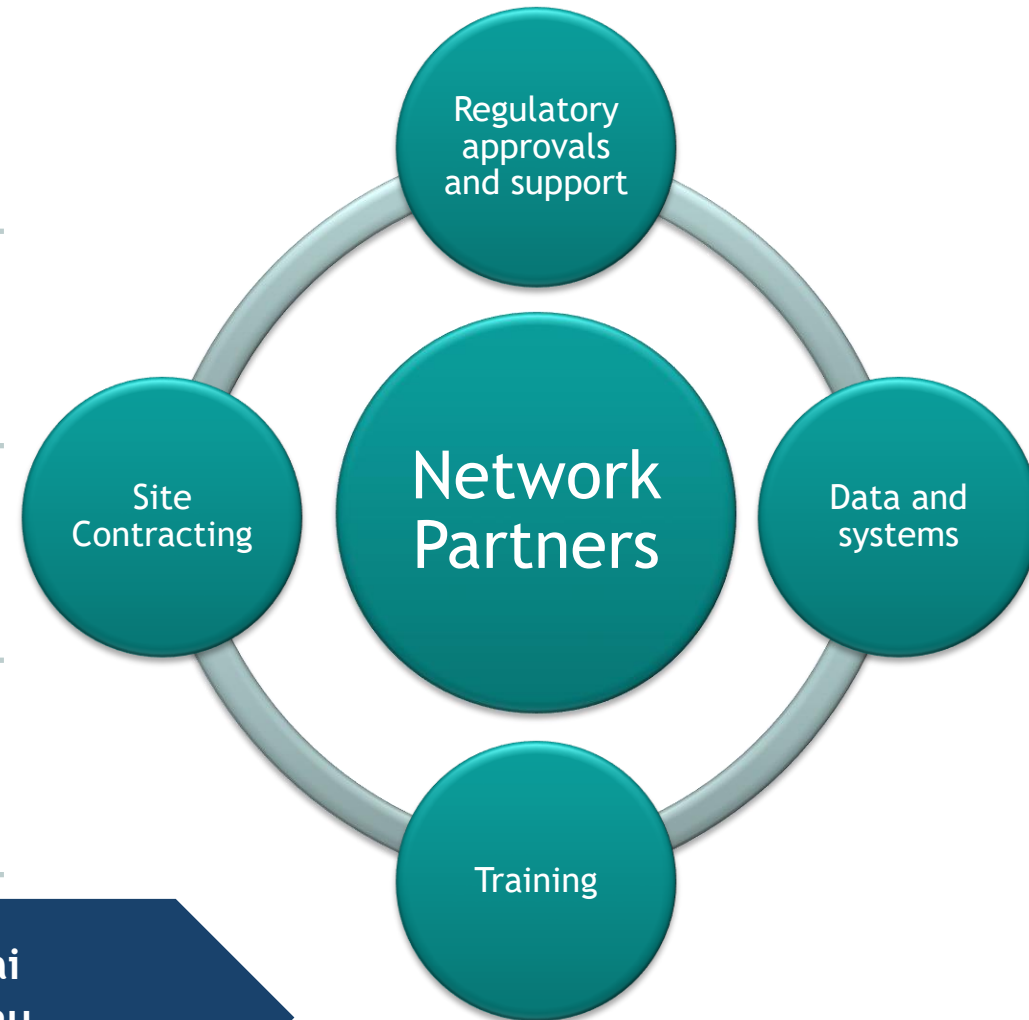
**Engage primary care sites and community network** partners on prioritizing and planning research

**Implement study designs across the landscape of clinical trial innovations** to minimize burden on patients and providers

Research  
prioritization  
and planning

Clinical study  
innovations

Sustain  
commu  
engagement



## Timeline & Budget



- **Spring 2024: Obtain perspectives from external partners** to inform planning for the network
  - Listening sessions and public workshop (est. June 2024)



- **Quick Launch in 2024: Expand existing studies to increase engagement with underrepresented populations and to enhance accrual and collaboration**
  - Anticipated Budget: OD funds \$5M in FY24



- **Expand in 2025 and Beyond: Launch new studies across the network** and further establish and solidify the network infrastructure
  - Anticipated Budget: OD funds \$25M in FY25; anticipate ramp up of ~\$50-100M/year after assessing feasibility and budget requirements

# NIEHS Staffing Updates



## New Staff

### Office of Scientific Coordination, Planning and Evaluation (SCOPE)

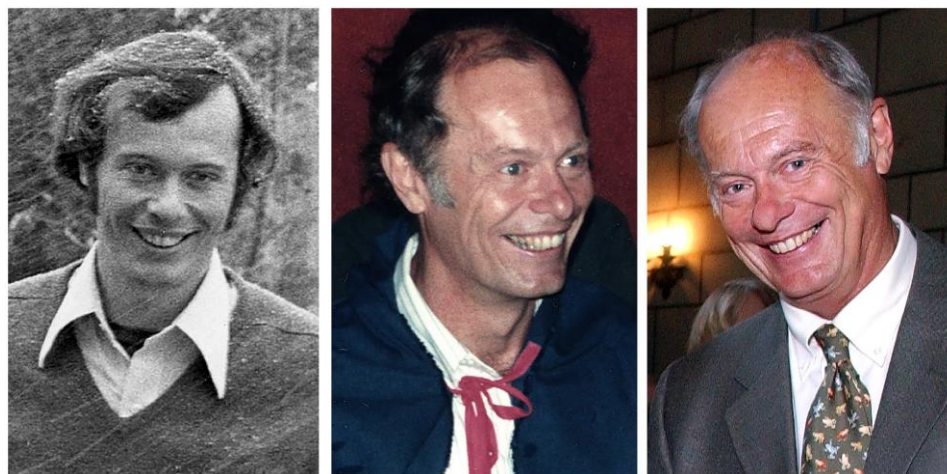
- **Nicole Garbarini, Ph.D.** will lead the SCOPE Policy, Planning, and Evaluation team.
- She comes to NIEHS from the NCATS Policy Branch.
- She also brings experience from the NIH Immediate Office of the Director as a Special Assistant to Larry Tabak, D.D.S., Ph.D., and from the Office of Extramural Research leading the Grants Information Branch.



**Nicole Garbarini, Ph.D.**  
**SCOPE Deputy Director**

## In Remembrance of George Lucier

- National Toxicology Program (NTP) sadly shared the news of the passing of **Dr. George Lucier** on February 8, 2024.
- He was a **trailblazer in environmental health research** and a true champion of public service.
- For 31 years, Dr. Lucier served the NIEHS **as Director of the Environmental Toxicology Program (ETP) in DIR and Associate Director of the National Toxicology Program from 1993 to 2000.**
  - For the last 28 of those years, he served as the **Co-Editor-in-Chief of Environmental Health Perspectives.**



## Thank you to our Retiring Council Members

- Thank you for your dedication in serving on the NAEHSC:
  - Trevor M. Penning, Ph.D., University of Pennsylvania
  - Irva Hertz-Picciotto, M.P.H., Ph.D., University of California - Davis
  - Karen Vasquez, Ph.D., University of Texas - Austin



National Institute of Environmental Health Sciences  
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*Thank you!*



National Institute of  
Environmental Health Sciences



National Toxicology Program  
U.S. Department of Health and Human Services

