

MSU Superfund Center Grant

Environmental, Microbial, and Mammalian
Biomolecular Responses to AhR Ligands

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Objectives



- Introduction to C I T
- Introduction to the N I H SRP
- Historical perspective concerning MSU involvement with the N I H SRP
- Overview of the current MSU SRP

Center for Integrative Toxicology (CIT)



- History – Center for Environmental Toxicology established in 1978 in response to contamination of cattle feed with PBBs.
- Rapid response for statewide environment toxicology issues as well as research, education and outreach.

Role of CI T Today



- Coordinating unit for toxicology at MSU
 - Research
 - Graduate Education

CIT Affiliated Faculty



- 62 faculty specializing in a broad range of sub disciplines in toxicology:

Analytical Chemistry

Carcinogenesis

Endocrine Disruption

Environmental Fate/
Bioremediation

Epidemiology

Hepatotoxicity

Immunotoxicology

Neurotoxicology

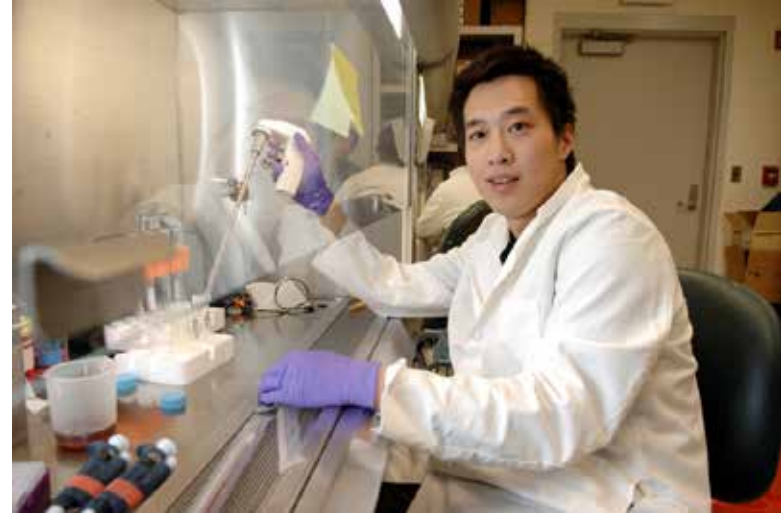
Wildlife/
Ecotoxicology

Respiratory

Environmental and Integrative Toxicological Sciences (EITS) Doctoral Training Program



CIT: Education (EITS Grad Program)



- Dual Major in partnership with 16 academic units
- Approximate 48 graduate students in the Environmental and Integrative Toxicological Sciences Graduate Program

Superfund Research Program

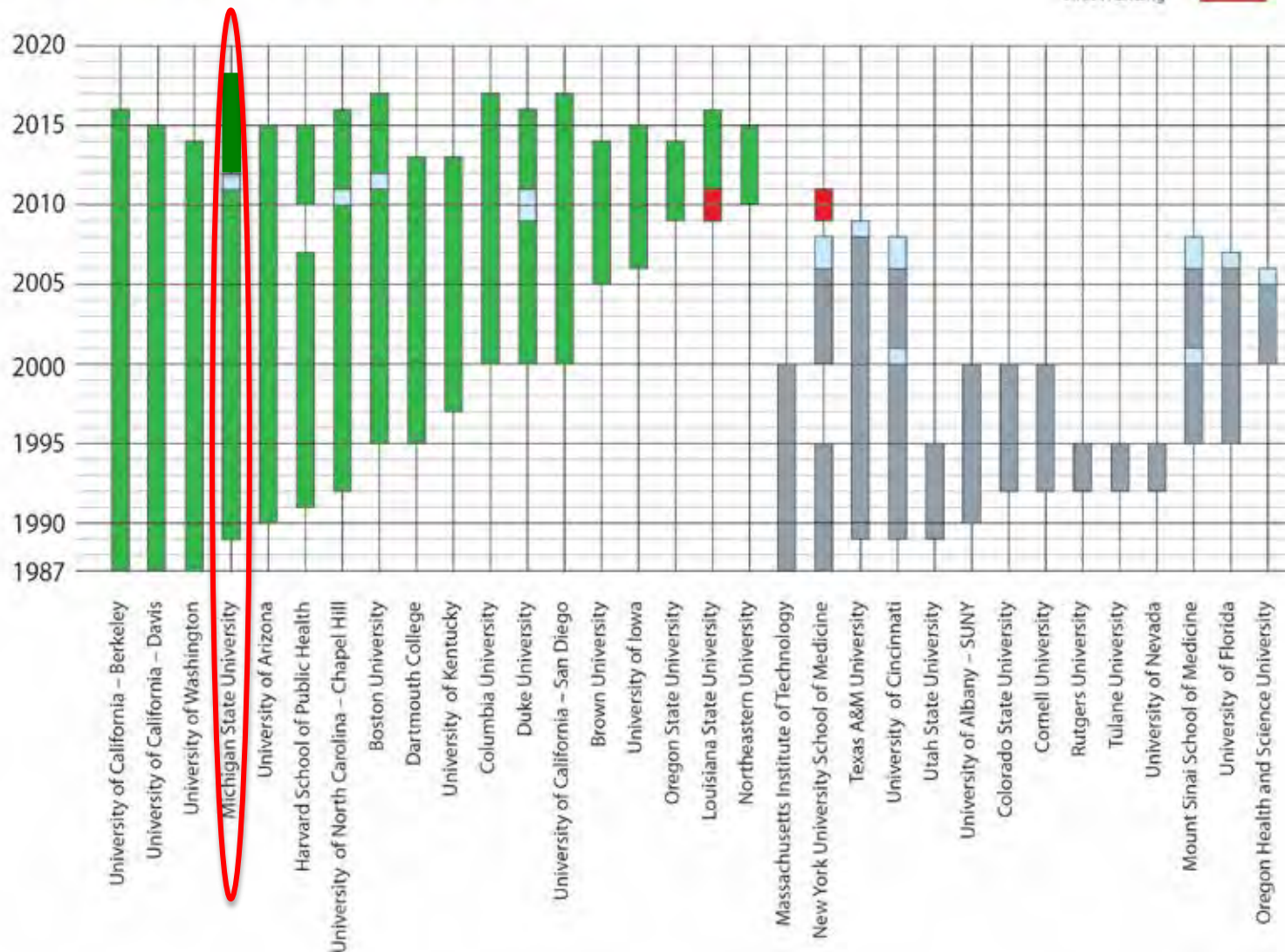


- Created within NIEHS in 1986 under the Superfund Amendments and Reauthorization Act (SARA)
- SRP has a broad mandate:
 1. The development of methods and resources to **detect** hazardous substances in the environment.
 2. The improvement of techniques of **assessing the effects** of hazardous substances on human health.
 3. The development of methods of **assessing the risks** hazardous substances pose to human health.
 4. The development of biological, chemical, and physical **methods of decreasing hazardous substances and their toxicity**

SRP Grantee Funding History Multi-project Grants (P42)

Key For Funding Phases:

- Currently Funded █
- Previously Funded █
- No Cost Extensions █
- ARRA Funding █

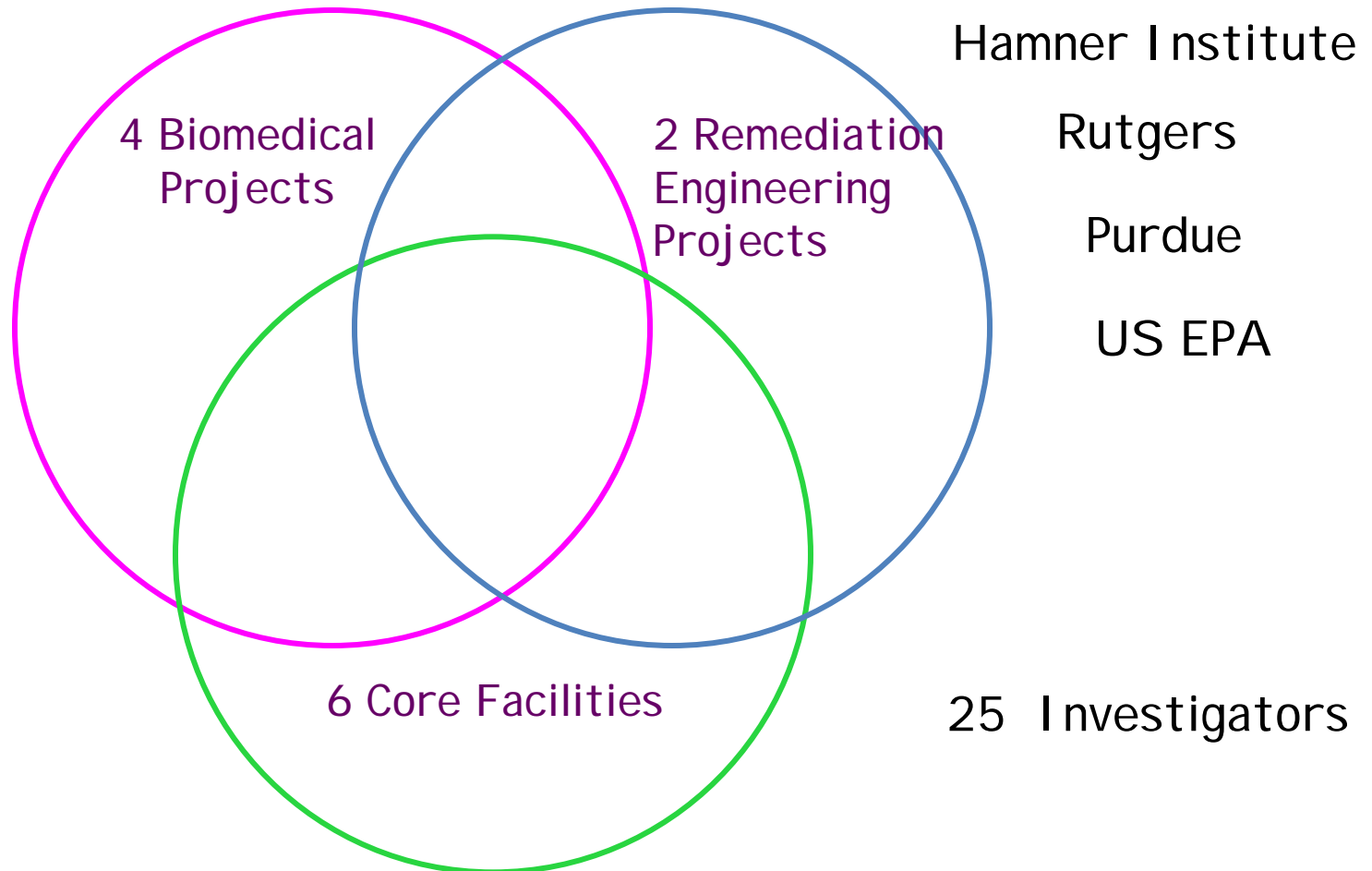


(Celebrating 25 Years of the SRP NIH/NIEHS 2012)



Environmental, Microbial, and Mammalian Biomolecular Responses to AHR Ligands

Administered and coordinated by MSU CIT



Continuum of Environmental Toxicology

Basic and Applied
Research



Risk Assessment



Decision on Whether and
What Type of Action is
Required

MSU SRP Projects



Biomedical Projects

Project 1: Immune System

Project 2: Reproduction/Immune System

Project 3: Liver

Project 4: Gut Microbiome

Environmental Engineering

Project 5: Environmental Microorganisms

Project 6: Natural Soils and Clays

MSU SRP Support Components



Administrative Core

Research Translation Core

Community Engagement Core

Training Core

Computational Biology - Research Core

Bio-Informatics - Research Core

Research Funding



National Institutes of Health/National
Institute for Environmental Health
Sciences

↳ Superfund Research Program

Questions?