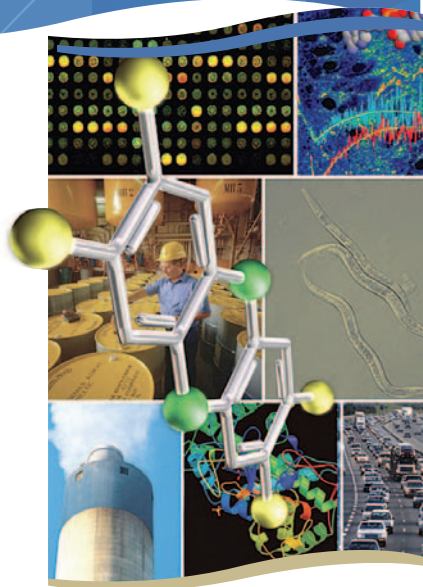


## NIEHS VISION

The **NIEHS vision** is to prevent disease and improve human health by using environmental sciences to understand human biology and human disease.



## THREE CRITICAL CHALLENGES

### 1. Programmatic Scope

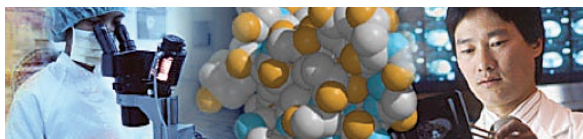
What diseases will be the focus of the NIEHS portfolio?

### 2. Integrative Science

Given the explosion in new science that has occurred in the last decade, how will we focus our research efforts on the most appropriate science for a given disease and the related environmental exposures?

### 3. Public Health Impact

How will we develop the scientific knowledge that empowers people to improve their environmental choices, allows society to make appropriate public health decisions, and results in us living healthier lives?



## THE STRATEGIC PLAN IN ACTION

### DISCOVER

*(Disease Investigation for Specialized Clinically Oriented Ventures in Environmental Research)*

A new funding program that brings together basic, clinical, and population-based scientists to conduct integrative research programs to:

- Understand etiology and pathogenesis of environmentally related disease.
- Use exposure to understand the interplay of genetic and environmental factors.
- Apply state-of-art technologies and methods to improve human health.

### ONES

*(The Outstanding New Environmental Scientist Award)*

A new funding program that provides:

- A first independent research grant for young scientists of uniquely distinguished talent.
- A strong career start in launching innovative research programs focusing on environmental exposures, human biology, human pathophysiology, and human disease.



## NIEHS 2006–2011 Strategic Plan

# New Frontiers in Environmental Sciences and Human Health



## THE SEVEN GOALS

### in environmental health sciences.

- Environmental clinical research that emphasizes the use of environmental exposures to understand and better characterize common, complex diseases.
- Develop improved research models for human disease using our knowledge of environmental sciences and human biology.
- Enhance the role of the clinical investigator in environmental health sciences.



### GOAL II: Use environmental toxicants to understand basic mechanisms in human biology.

- Support research that improves our understanding of signal transduction pathways and their influence on disease.
- Expand our understanding of environmental influences on genome maintenance/stability and its impact on human health.
- Lead a concerted effort to improve our understanding of epigenetic influences on health.



### GOAL III: Build integrated environmental health research programs to address the cross-cutting problems in human biology and human disease.

- Promote interdisciplinary, integrative research approaches.
- Identify and remove barriers to integrative research.
- Improve and expand access of researchers to advanced technology and scientific infrastructure.

### GOAL IV: Improve and expand community-linked research.

- Focus on populations that are exposed to high concentrations of environmental agents that are thought to cause human disease.
- Focus on diseases that are unevenly distributed and have a high impact on morbidity and mortality.
- Develop a program in global environmental health.
- Build a capacity to pursue research in global environmental health.

### GOAL V: Develop sensitive markers of environmental exposure, early (preclinical) biological response, and genetic susceptibility.

- Develop validated biomarkers of exposure, susceptibility, and effect.
- Develop new exposure technologies.
- Address institutional barriers to effective exposure assessment and toxicity assessment in humans.

### of environmental health scientists.

- Increase recruitment of talented students into environmental health sciences.
- Engage the broader biomedical community in environmental health research.

### GOAL VII: Foster the development of partnerships between the NIEHS and other NIH institutes, national and international research agencies, academia, industry, and community organizations to improve human health.

- Engage partners across disciplines in government, academia, and industry to expand the reach and relevance of environmental health sciences.
- Provide leadership in developing partnerships to facilitate critical studies.
- Work with agency, industry, and community partners to enhance communications and translation of research results into effective means to protect public health.



The staff of NIEHS is dedicated to achieving these goals.