



# Science to Achieve Results Program: Supporting High-Quality Research

**James H. Johnson, Jr., PhD, Director**  
National Center for Environmental Research



September 15, 2016



# NCER – Where we Fit

## Immediate Office of the Assistant Administrator

Office of the  
Science Advisor

### National Program Directors

- Air, Climate & Energy
- Chemical Safety for Sustainability
- Safe and Sustainable Water Resources
- Sustainable and Healthy Communities
- Human Health Risk Assessment
- Homeland Security

### Headquarters Offices

Administrative offices  
Office of Science Policy– RSL/STL

### National Research Laboratories and Centers

Health and  
Environmental  
Effects Lab

Exposure  
Research  
Lab

Risk  
Management  
Lab

Environmental  
Assessment  
Center

Computational  
Toxicology  
Center

Homeland  
Security  
Center

Environmental  
Research  
Center



## NCER – What We Do

### **EPA Mission:**

To protect human health and the environment.



### **ORD Mission:**

Provide science and technology to support EPA's mission of protecting human health and the environment.



### **NCER Mission:**

Support high-quality research by funding the nation's leading scientists and engineers to improve EPA's scientific basis for decisions on national environmental issues.

### **NCER Mantra:**

Researching a sustainable tomorrow today.



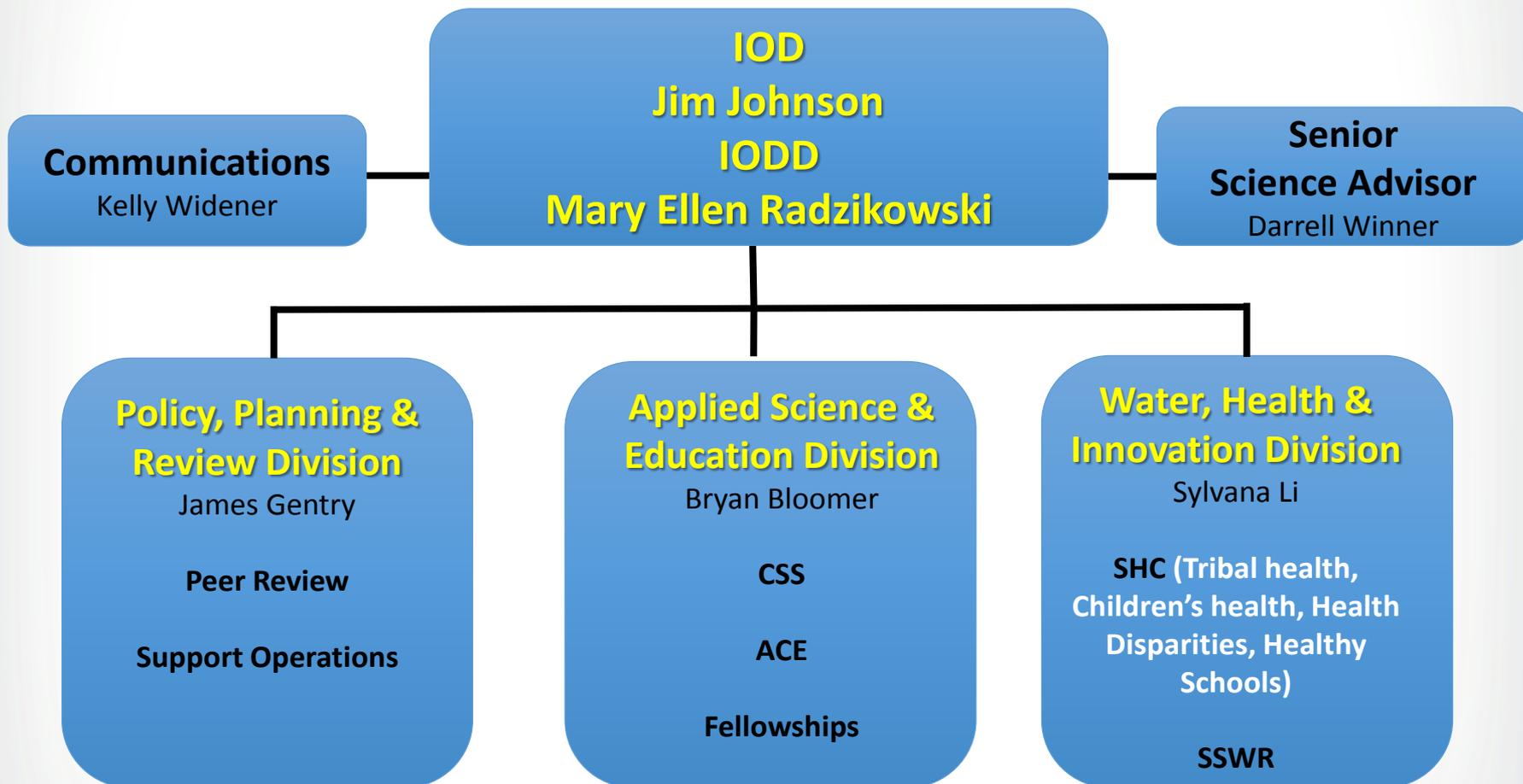


### **Fiscal Year 2014 Snapshot**

- 506 open/active STAR grants
- Totaling \$295 million in STAR funding
- NCER processed 835 grant, fellowship, and SBIR research applications
- Hosted and managed 333 scientists and engineer reviewers
- Held 24 expert review panels



# NCER – Organization Chart





## NCER – How We Do It

- [Science to Achieve Results \(STAR\) Grants](#)
- ORD Non-STAR Grant (Health Effects Institutes & National Priorities)

### Other Programs:

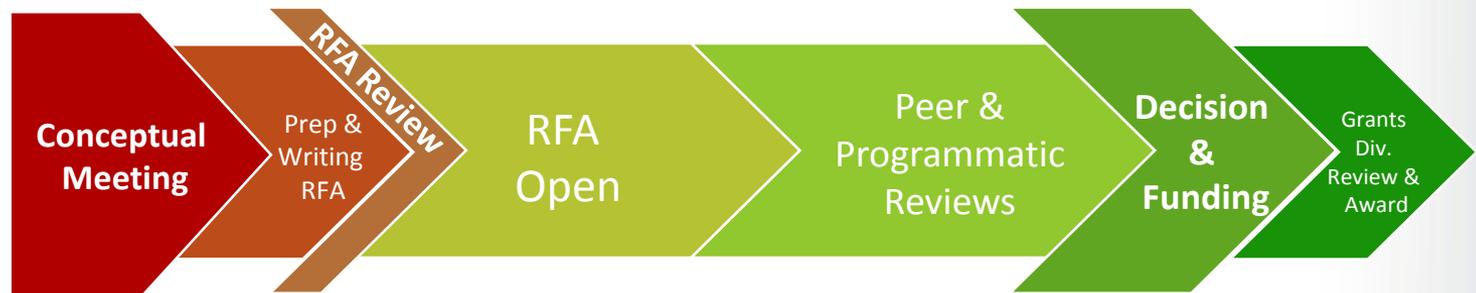
- [Small Business Innovation Research \(SBIR\)](#)
- [People, Prosperity and the Planet \(P3\)](#)
- [Fellowships](#) –  
Fellowships are not funded for FY16 – FY17
- [Professional Development Programs](#)
  - American Association for the Advancement of Science (AAAS)
  - Association of Schools and Programs of Public Health (ASPPH)
  - Marshall Scholarships



# STAR Grant Process



- The timeframe from **grant concept to award** is approximately 15 - 18 months.
- Each phase provides opportunity for **engagement and collaboration** from National Program Director (NPD) teams and subject matter experts with other applicable EPA offices.



3 – 5 Years





# ORD Research Programs Supported by STAR Grants

**Air, Climate & Energy**



**Chemical Safety for  
Sustainability**



**Sustainable & Healthy  
Communities**

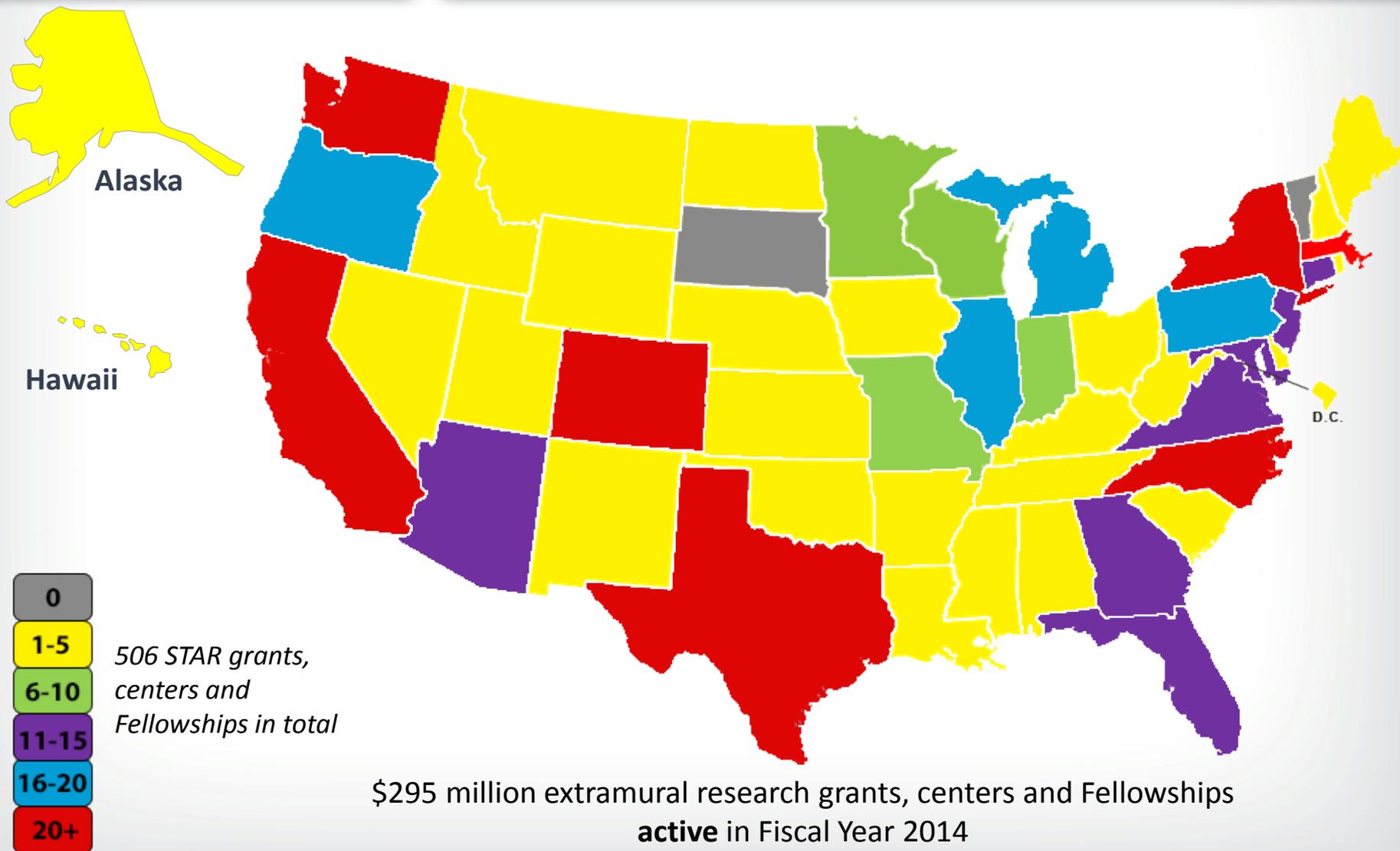


**Safe & Sustainable  
Water Resources**





# STAR Research Grants to Universities by State





# NCER ACE Research Portfolio

**Program Vision:** EPA's Air, Climate, and Energy research program provides cutting-edge scientific information and tools to support EPA's strategic goals of protecting and improving air quality and addressing climate change.



**Sustainable Energy Evaluation**

**Modeling and Decision Support Tools**

**Climate Impacts Mitigation and  
Adaptation**

**Emissions and Measurements**

**NAAQS and Multipollutant**

[www.epa.gov/research-grants/air-research-grants](http://www.epa.gov/research-grants/air-research-grants)



# NCER SSWR Research Portfolio

**Program Vision:** The Safe and Sustainable Water Resources research program uses an integrated, systems approach to support innovative scientific and technological solutions that ensure clean, adequate, and equitable supplies of water to protect human health and to protect and restore watersheds and aquatic ecosystems.



Watershed Sustainability

Nutrients

Green Infrastructure

Water Systems



## NCER CSS Research Portfolio

**Program Vision:** The CSS research program will lead development of innovative science to support safe, sustainable design and use of chemicals and materials required to promote human and environmental health, as well as to protect vulnerable species, lifestages, and populations. CSS research program outputs will enable EPA to address impacts of existing chemicals and materials across the life cycle and to anticipate impacts of new chemicals and emerging materials. The CSS research program will also provide the scientific basis for evaluating complex interactions of chemical and biological systems to support EPA decisions.



Chemical Evaluation

Translation

Complex Systems Science

Lifecycle Analytics



# NCER SHC Research Portfolio

**Program Vision:** SHC's vision is to develop the science to support EPA's approach to a sustainable environment and to expand community stakeholders' capabilities to consider impacts of decision alternatives.



**Decision Support & Innovation**

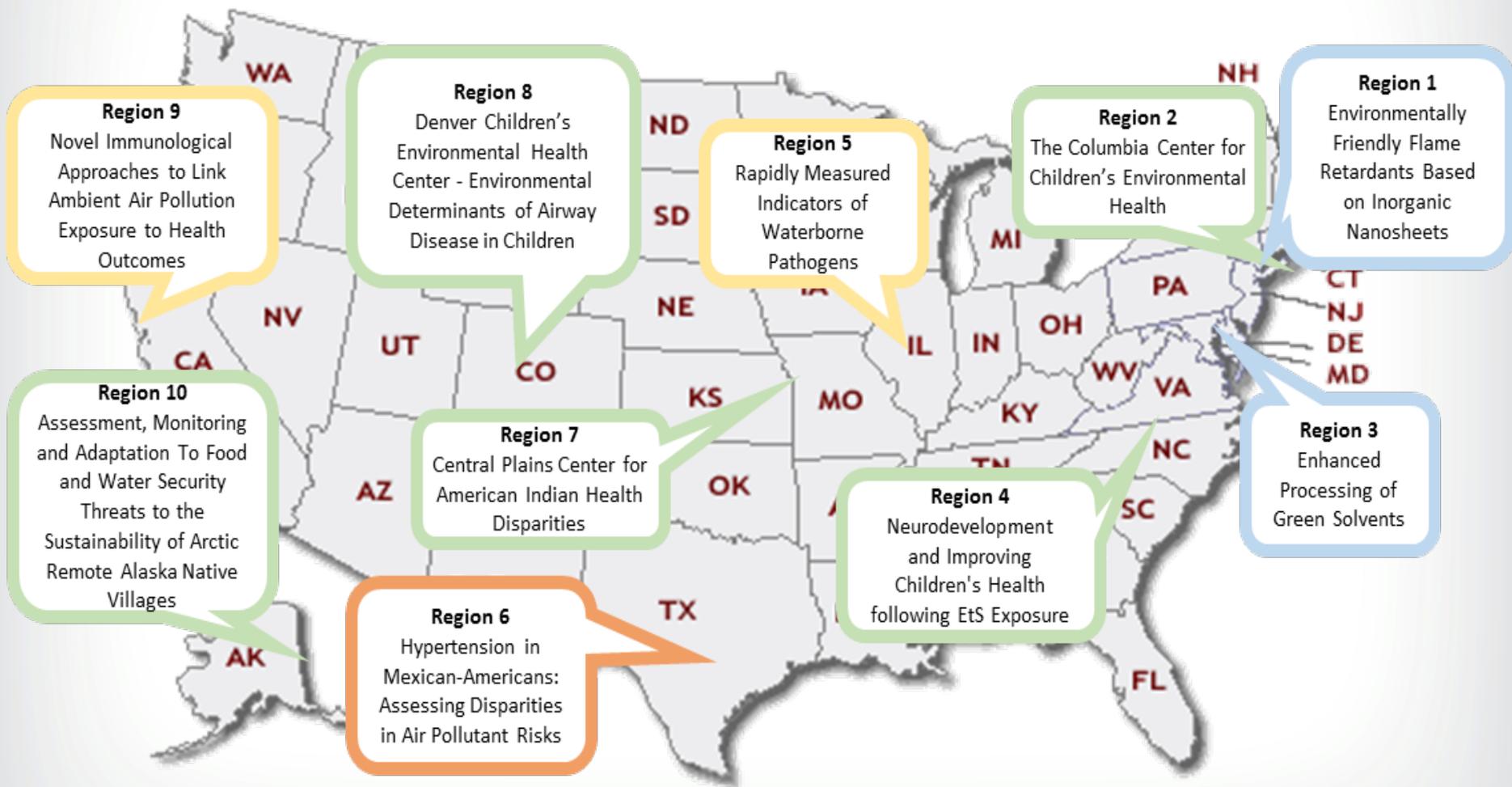
**Community Well-Being**

**Sustainable Approaches for  
Contaminated Sites and Materials  
Management**

**Integrated Solutions for Sustainable  
Communities**



# Regional Examples of SHC Active Research





## NCER's Tribal Research

- Addresses unique lifestyle practices, community activities, occupations and customs and/or environmental releases that significantly impact tribal health
- Initiated in 2000
- 16 grants have been awarded
- Research is carried out on tribal lands by/with researchers from tribal colleges and universities and tribal health organizations.

### Key research areas

- Environmental contaminants (heavy metals, pesticides, PCBs)
- Climate change
- Subsistence practices and natural resources (e.g fishing, crabbing, whaling, hunting)
- Water quality/pollution
- Indoor air pollution





## Leading Efforts On Protecting Tribal Health

- Tribal Environmental Justice: Partnerships for Communication
- Lifestyle and Cultural Practices of Tribal Populations and Risks from Toxic Substances in the Environment
- Issues in Tribal Environmental Research and Health Promotion: Novel Approaches for Assessing and Managing Cumulative Risks and Impacts of Global Climate Change
- **Science for Sustainable and Healthy Tribes**
- \$11M total funding



Community Well-Being



## Summary for SHC STAR Research Grants

### Tackling Important Environmental Issues:

- Tribal health and wellbeing
- Environmental Justice
- Health Disparities
- Vulnerable populations (i.e. childrens, elderly)
- Chemical and Non-Chemical Stressors

### Innovative Research and Outreach:

- Multidisciplinary
- Tribal engagement and collaborations
- Community-Based Participatory Research
- Interacting Natural, Built, and Social Environments

### Real Impacts for Protecting Public Health:

- Sustainable Environmental Policies Leading to Public Health Protection and Prevention



# Extramural Collaborations



## Guiding Principles

- Collaborations should be consistent with priorities of EPA, ORD, Labs/Centers/Offices and the partnering entity.
- All parties should benefit from the collaboration.
  - Benefits are not necessarily monetary. Other types of benefits include broader discipline participation in a research effort and leveraging of existing efforts.
- Collaborations should include an intramural component to the greatest extent possible.

Science  
To  
Achieve  
Results



