

# THINK POLICY IS ONLY FOR POLITICIANS?

## PERSPECTIVES FROM A SCIENCE POLICY FELLOWSHIP WITH THE NATIONAL ACADEMIES OF SCIENCE

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# OUTLINE

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- What is science policy?
- What are the National Academies?
- My fellowship experience
- Other opportunities in science policy

# WHAT IS SCIENCE POLICY?

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- × **Goal:** to consider how science and technology can best serve the public.

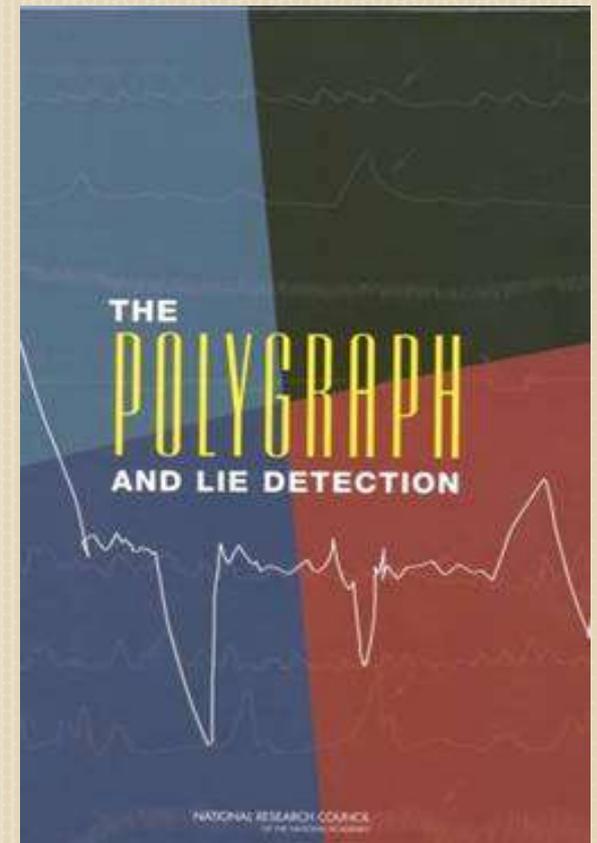
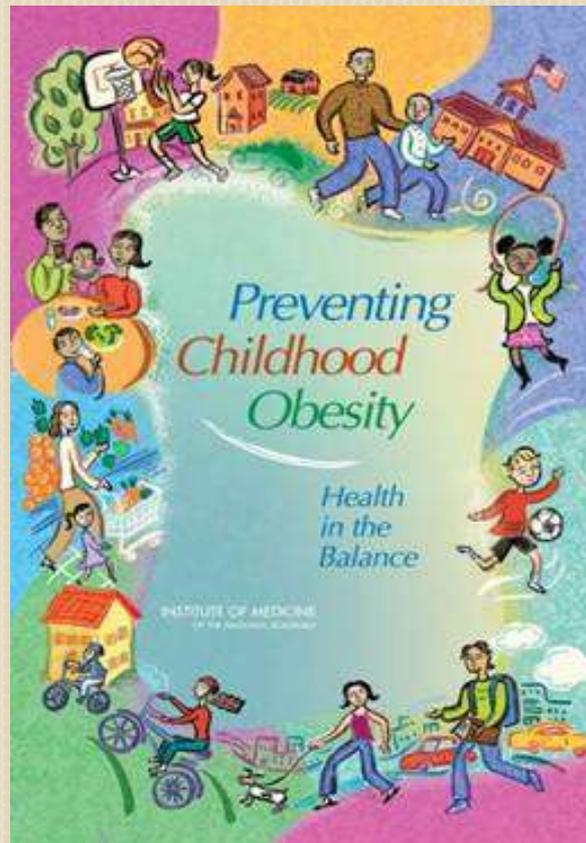
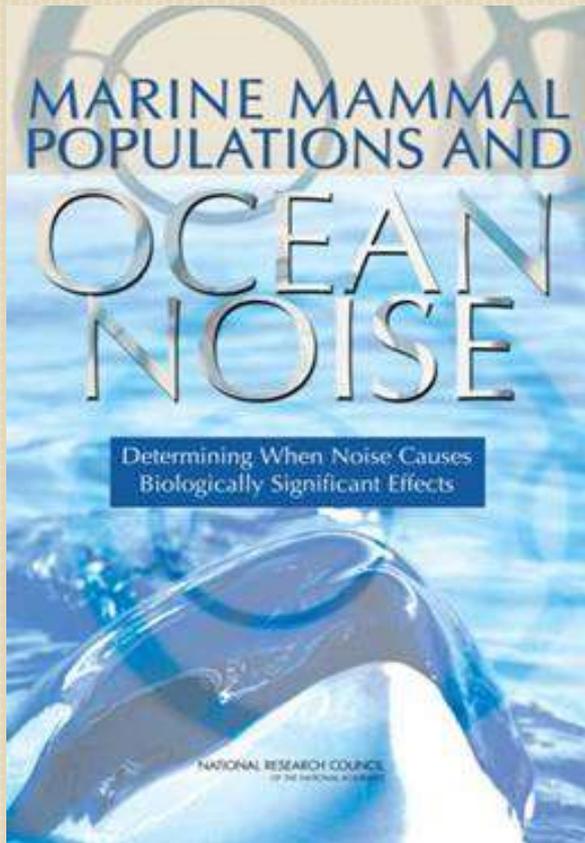
## 1. Science for Policy:

- Environment & Energy
- Health

## 2. Policy for Science:

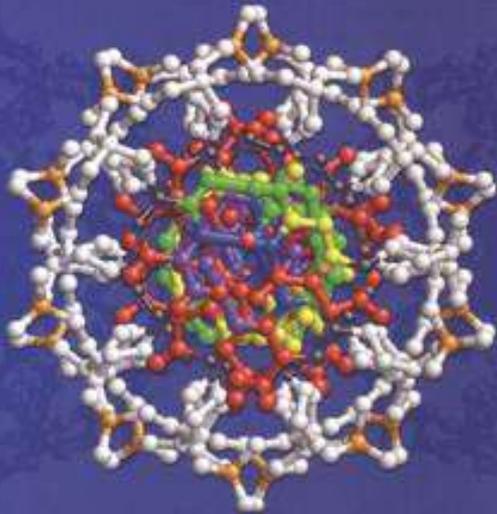
- R&D Funding
- Education

# SCIENCE FOR POLICY



# POLICY FOR SCIENCE

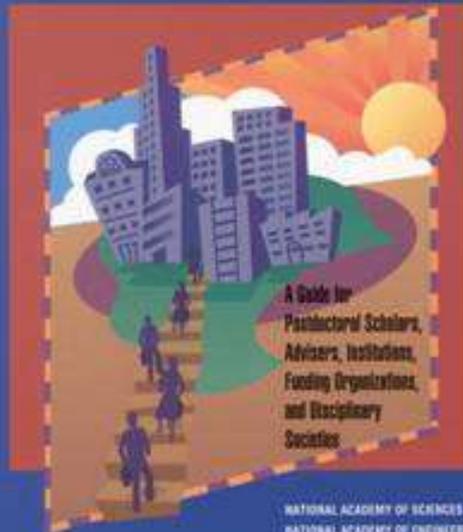
## LARGE-SCALE BIOMEDICAL SCIENCE



EXPLORING STRATEGIES FOR FUTURE RESEARCH

INSTITUTE OF MEDICINE  
NATIONAL RESEARCH COUNCIL  
OF THE NATIONAL ACADEMIES

## ENHANCING THE POSTDOCTORAL EXPERIENCE FOR SCIENTISTS AND ENGINEERS



A Guide for  
Postdoctoral Scholars,  
Advisers, Institutions,  
Funding Organizations,  
and Disciplinary  
Societies

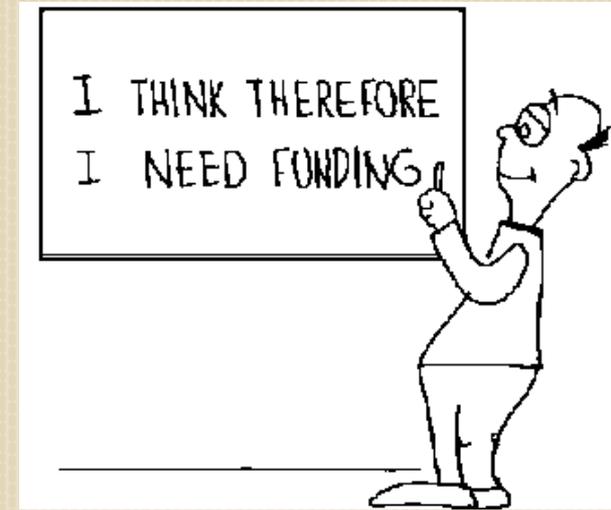
NATIONAL ACADEMY OF SCIENCES  
NATIONAL ACADEMY OF ENGINEERING  
INSTITUTE OF MEDICINE

## ETHICAL CONDUCT OF CLINICAL RESEARCH INVOLVING CHILDREN

INSTITUTE OF MEDICINE  
OF THE NATIONAL ACADEMIES

# SCIENCE POLICY – WHY?

- How are your nation's research dollars allocated?
- Who steers the debates on bioterrorism and stem cell research?
- What should the nation do to protect the environment?



**Scientists need to be involved in answering these important questions and in making the right decisions!!!**

## Delaware: Medical Marijuana Nears Legalization

By THE ASSOCIATED PRESS

All that is left to make medical marijuana legal in Delaware is the signature of the governor, who has said he will make it law.

## Critics Fear G.O.P.'s Proposed Medicaid Changes Could Cut Coverage for the Aged

By JENNIFER STEINHAUER

As Republicans inch away from their plan to reshape Medicare, their equally transformative ideas for Medicaid, now largely in the shadows of the budget debate, are moving front and center.

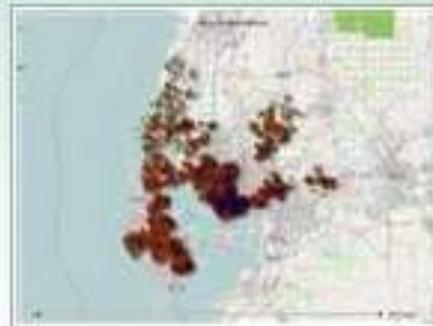
## Drug That Stops Bleeding Shows Off-Label Dangers

By GINA KOLATA

A \$10,000-per-dose drug is being used in cases in which it was not rigorously tested 97 percent of the time, new studies show.

## Your iPhone is secretly tracking you

Your iPhone has a hidden feature: It tracks and records your location constantly whether you want it to or not. What? You wish it wouldn't do that without your knowledge or consent? Too bad, because there's not much you can do about the tracking feature right now.



## The Radiation Boom

By WALT BOGDANICH

Articles in this series examine issues arising from the increasing use of medical radiation and the new technologies that deliver it.



# THE NATIONAL ACADEMIES

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- × Three honorific organizations:
  - + National Academy of Science (1863)
  - + National Academy of Engineering (1964)
  - + Institute of Medicine (1970)
- × National Research Council
- × Purpose:
  - + to advance science and technology
  - + to advise government

# THE NATIONAL ACADEMIES STUDIES

- Initiated by
  - Congress
  - National Academies
  - Third parties
- Study Committee
  - 10-20 science and policy leaders
  - experts, at the top of their field
  - balanced viewpoints



**Peer reviewed consensus report of policy recommendations  
INDEPENDENT EXPERT ADVICE**

# WHY DOES IT WORK?

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- The government prides itself on “basing decisions on the best science.”
- The Academies avoid non-scientific statements, as required to be seen as a neutral adviser.
- The US press pays attention to what the Academies say, which puts pressure on government to respond.

Weather  
Today: Sunny, 65-85  
High 85, Low 62  
Wednesday: Sunny  
High 80, Low 60  
Details, Page 88

# The Washington Post

HOME EDITION  
Today's Contents on Page 1

25¢

Printed in the USA

TUESDAY, SEPTEMBER 11, 2001

## Broader Stem Cell Research Backed

### Key Science Group Differs With Bush

By Ross Wetzan  
Washington Post Staff Writer

Research on human embryonic stem cells deserves generous funding by the federal government and will not live up to its therapeutic potential if the work is restricted to a small number of cells from a limited number of embryos, according to a report to be released today by the National Academy of Sciences.

Microscopic scientists should be allowed to pursue research that involves the cloning of human embryos because cells derived from such embryos may prove to be especially useful for the treatment of many degenerative conditions, the report concludes.

The report by the academy, an independent organization chartered by Congress to advise the government on science issues, comes one month after President Bush announced his policy regarding federal funding of human embryo cell re-

## THE DISTRICT'S LOST CHILDREN | *Babies at Risk*



**A twin who died:** A photo of Tyrika Perry, who died at 5 months in 1998, is held by her sister.

## EPA to Urge Tighter Rules For Arsenic

### Report Raises Agency Concern About Drinking Water Limits

By Eric Pianka  
Washington Post Staff Writer

The Environmental Protection Agency has concluded that it must adopt a new standard for the amount of naturally occurring arsenic allowed in the nation's drinking water that is at least as tough as the one proposed by the Clinton administration, officials said yesterday.

EPA Administrator Christine Todd Whitman decided to recommend a stringent new limit after receiving a report from the National Academy of Sciences that found that health risks posed by arsenic are much greater than previously assumed by the EPA, according to agency officials.

"This increases our concern about arsenic and what the level should be," an EPA official said last night.

The decision addresses one of the most controversial environmental decisions the Bush administration has made since coming into office. In March, the administration set aside a Clinton administration regulation tightening the 50-year federal standard for arsenic levels in drinking water from 50 parts per billion to 10 parts per billion. The move touched off criticism from Democrats, environmentalists and moderate Republicans and prompted a House vote seeking to reverse the action.

Whitman charged at the time that the Clinton rule had been hastily drafted without adequate scientific study or consideration of the costs for small communities that would have to change their filtration systems. She ordered further examination, by the academy and other bodies,

# CHRISTINE MIRZAYAN S & T POLICY GRADUATE FELLOWSHIP PROGRAM

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- × 12-week program, can be extended
- × Stipend (\$8,240)
- × Graduate students, postdocs, and those  $\leq 5$  years from training are eligible to apply
- × Open to foreign nationals on F-1 or J-1 visas
- × Accepts applications for two sessions/year
  - + Applications open in early June for winter/spring (Jan-Apr) 2012

[www.national-academies.org/policyfellows](http://www.national-academies.org/policyfellows)

# FELLOWSHIP PROGRAM – WHAT HAPPENS?

1. Fellows assist a board to complete their study:

## “Board on Higher Education and Workforce”

× Current studies:

- + Assessment of Research Doctorates
- + Biomedical Research Workforce Needs (NRSA)
- + Health and Competitiveness of U.S. Research Universities

× Tasks/Deliverables:

- + Review current literature
- + Identify/vet potential committee members
- + Create topical literature for study (marketing)
- + Identify key questions and indicators
- + Draft a white paper on graduate education & postdoc training

# FELLOWSHIP PROGRAM – WHAT HAPPENS?

2. Fellows organize a seminar/workshop on a controversial S & T policy issue

## **“Medicated Child”**

- × Policy recommendations regarding the off-label use of psychiatric medications in children:
  - + Incentivize pediatric clinical trials
  - + Post-market surveillance
  - + Global perspective
  - + Behavioral therapy alternatives
  
- × Other topics: “Infrastructure in the U.S.” and “Climate change”

# ...AND MUCH MORE

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## 3. Meetings, seminars, workshops:

- + Within the National Academies
- + At federal agencies (NSF, NIH, FDA, NASA, USDA...)
- + On “the Hill” – Congressional hearings
- + Think tanks and professional societies
- + NAS fellowship alumni events
- + Recruiting events

I spend all day in meetings so I never get to do any work!

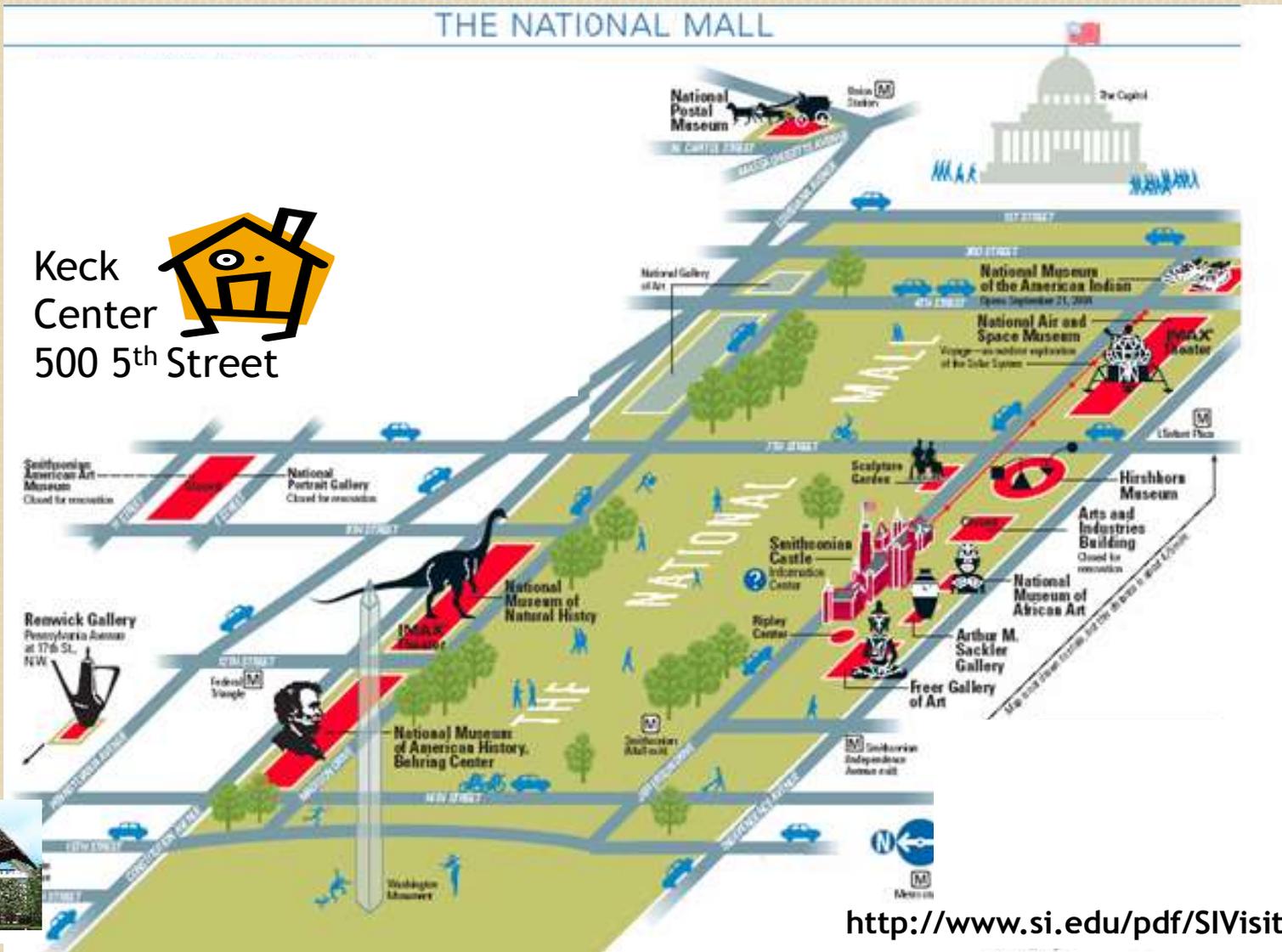


Let's schedule a meeting so we can discuss this.



# ...AND EVEN MORE

Keck  
Center  
500 5<sup>th</sup> Street



# WINTER/SPRING 2010 FELLOWS



# APPLICATION PROCESS

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- × <http://sites.nationalacademies.org/PGA/policyfellows>
- × next application opens in June
- × application form:
  - + select 5 units, describe why you want to work with them
  - + volunteer experience
  - + career goals → why do you want to be a fellow, what will you contribute, anything else?
  - + one or more references
- × phone interview with program administrator and mentor

# OTHER POLICY FELLOWSHIPS

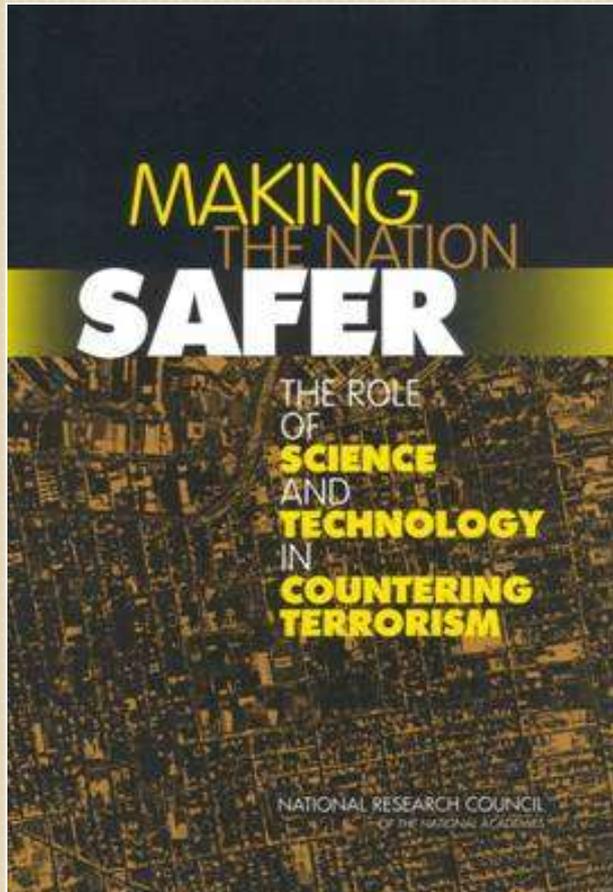
	AAAS Science & Technology Policy Fellowship	Presidential Management Fellows	California Science & Technology Policy Fellowship	ASBMB Science Policy Fellowship	ASHG Genetics & Public Policy Fellowship
Length	1 or 2 years	2 years	1 year	15-18 months	16 months
Location	DC area (+)	DC area (rotates)	Sacramento, CA	DC area	DC area
Degree	PhD	Master's	PhD (or MS in engineering)	PhD	?
Salary	GS-12+ (\$73K/yr)	GS-9+ (\$42K/yr)	\$45K+	?	\$60K/yr
Application due:	Early Dec	Early Oct	Late March	Mid March	Mid April
Citizenship	US citizens only	Open to non- citizens, but difficult	US citizen or visa holder	?	?

# QUESTIONS?

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# THE NATIONAL ACADEMIES STUDIES

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- 8 sub-panels, a total of more than 110 experts
- anonymously reviewed by another 46 scientists

Released in June 2002

# WHAT'S IN IT FOR YOU?

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- × Learn about the interaction between science, technology, and government
- × Be exposed to inner workings of the committee process
- × Experience science (and life!) outside the lab
- × Network
- × Explore career development opportunities
- × Enjoy lots of fun events and free food

# THE NATIONAL ACADEMIES

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- × Chartered by Congress in 1863 provide unbiased, independent authoritative advice to the nation on science, technology, and medical issues.
- × Has an elected honorary society.
- × Is a private non-profit, although often thought of as “quasi-governmental” entity.