How Federal Agencies Are Working with the ISE Community

Dr. Barbara M. Alving
Director
National Center for Research Resources
National Center for Research Resources

Informal Science Education Summit 2010
"Surrounded by Science"
Washington, D.C. • March 3-5, 2010
NCRR’s role in a diverse pipeline

Encourages and supports partnerships between scientists and clinicians with educators, community organizations and science centers:

- **FORMAL**: Increase the participation of a diverse population young people in clinical and basic research careers
- **INFORMAL**: Improve K-12 and public understanding of, and support for, NIH funded medical research; understanding the relationship between lifestyle choices and health

www.ncrrsepa.org
NCRR SEPA models

Formal (K-12 STEM#)

- 50 project sites
- K-12 students, teachers, parents
- Small numbers, high contact mode
- Teacher Professional Development
- Community outreach

Informal Science Education (ISE)

- 27 project sites
- Science Centers and Museums
- Huge numbers, moderate contact mode
- Public outreach & health education

# Science, Technology, Engineering, Mathematics
SEPA K-12 and ISE Projects

http://www.ncrrsepa.org/map/proj_state_list.jsp
FORMAL – NCRR’S role in a diverse pipeline

Elementary School Students, Hawaii

Middle School Students, Seattle

Sisseton-Wahpeton Tribe
Tiospa Zina Elementary School, Sisseton, SD

High School Students, Pittsburgh

Future
NIH
IC Director
Urbana, MD
K-12 STEM & ISE - NIH 2009 Appropriations

<table>
<thead>
<tr>
<th>Agency</th>
<th>Appropriations</th>
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<tr>
<td>NCRR</td>
<td>18,008,000</td>
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<td>NIMH</td>
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<td>OSE</td>
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ISE - NIH 2009 Appropriations

$6.5M (ISE)

$12.6M (K-12 STEM)
SEPA ISE project diversity  n =27

Systems: Aging, Hearing, Brain, Lung, Bone (8)
Microbiology, Virology & Disease Vectors (9)
Nutrition, Obesity, Diabetes & Cardiovascular (10)
Clinical Trials Process (11)

Stem Cells & Regenerative Medicine (4)
Molecular Biology (6)
Evolution (4)

Nanotech & Microscopy (1)
Veterinary Medicine (1)

Basic & Clinical Research Methods (32)
Infectious Disease, Immunology & Epidemiology (22)
Mentoring, Workforce Development & Teacher Professional Development (19)
Public Health, Lifestyle & Health (15)
Human Genetics & Genomics (13)

NCRR
How is NIH is Working with the ISE Community?

“The broad goal of the ISE Summit is to mobilize, energize, and empower the informal science education community—including:

• film and broadcast media
• science centers and museums
• zoos and aquariums, botanical gardens and nature centers
• digital media and gaming
• science journalism
• youth, community, and after-school programs.
Diseases and Decisions: Current Science on Emerging Threats

SEPA PI, Dr. Erika Shugart
Marian Koshland Museum, Washington, DC
Science Café
Pandemics in Retrospective

How was the H1N1 pandemic handled?

Dr. Nicole Lurie, U.S. Department of Health and Human Services
Dr. Kathryn Edwards, Vanderbilt University

Discussion:
Medical community's response to the H1N1 outbreak to those of past influenza pandemics
How the media influenced public perceptions?

Thursday, March 11, 2010
Koshland Science Museum
6:30 PM to 8:30 PM

PHOTO PROVIDED BY CDC
SciCafe brings together inquisitive minds for an informal evening emceed by experts on cutting-edge science topics.

Come with friends or meet new people, talk science, and more

Happening on the first Wednesday of every month, SciCafes are presented at the American Museum of Natural History in the Gottesman Hall of Planet Earth.
Tissue engineering and the field of regenerative medicine offer alternative methods that enhance the body’s own process of healing.

Diabetes, immune system and metabolism, the role of the pancreas and digestion.
If a Starfish Can Grow a New Arm, Why Can't I?

SEPA PI, Joan Schanck
Carnegie Science Center & Pittsburgh Tissue Engineering Initiative, Pittsburgh, PA

Carnegie Science Center exhibit
Explores tissue regeneration

TRIBUNE-REVIEW
Thursday, October 15, 2009

Teacher Professional Development
Curricula Modeled on Biodiversity & Vector-Borne Disease

SEPA PI, Dr. Leonard Munstermann
Yale Peabody Museum, New Haven, CT

http://www.peabody.yale.edu/education/fellows/index.html

NEW TEACHER OFFERING!

Yale Peabody Museum of Natural History
Peabody Fellows Event-Based Collaborative
(Life & Earth Sciences, Grades 6 – 10)
Documentary

Serial Passage: Aids, Race, and Culture

SEPA PI, Claudia Pryor
Diversity Films, INC, Stamford, CT

EDUCATING THE GENERAL PUBLIC

http://www.diversityfilms.org
Radio Programs & Health Education Story Books

World of Viruses

SEPA PI, Dr. Judy Diamond
University of Nebraska State Museum, Lincoln, NE

http://www.worldofviruses.unl.edu/
Family Networks of Obesity and Type 2 Diabetes in Rural Appalachia

Petr Pancoska, Ph.D.,1 Shama Buch, Ph.D.,1 Alfred Cecchetti, Ph.D.,1 Bambang Parmanto, Ph.D.,1 Marcella Vecchio1, Stephen Groark1, Stephanie Paulsen2, Genevieve Bardwell2, Cathy Morton2, Ann Chester, Ph.D.,2 and Robert Branch, M.D., F.R.C.P.2

210 HS students
25 HSTA Clubs
IRB Questionnaires (1760)
989 responses (56%)
data analysis @ Pitt CTSA
**LINKS TO NCRR PROGRAMS AND SEPA PROJECTS**

National Center for Research Resources (NCRR)
Clinical & Translational Science Awards
[http://ctsaweb.org/](http://ctsaweb.org/)

Science Education Partnership Awards (SEPA)
[http://www.ncrrsepa.org](http://www.ncrrsepa.org)

Marian Koshland Museum
*Diseases and Decisions: Current Science on Emerging Threats*
[http://www.koshlandscience.org](http://www.koshlandscience.org)

American Museum of Natural History
*Human Health and Human Bulletins: Scientists and Teens Explore Health Sciences*
[http://www.ncrrsepa.org/proj_grant.jsp?grant_id=221](http://www.ncrrsepa.org/proj_grant.jsp?grant_id=221)

Duquesne University and Carnegie Science Center
*Regenerative Medicine Partnership in Education*
[http://sepa.duq.edu/forms/index.php5](http://sepa.duq.edu/forms/index.php5)

Pittsburgh Tissue Engineering Initiative and Carnegie Science Center
*If a Starfish Can Grow a New Arm, Why Can't I?*

Yale University Peabody Museum of Natural History
*Curricula Modeled on Biodiversity & Vector-Borne Disease*
[http://www.peabody.yale.edu/education/fellows/index.html](http://www.peabody.yale.edu/education/fellows/index.html)

Diversity Films, INC
*Serial Passage: Aids, Race, and Culture*
[http://www.diversityfilms.org](http://www.diversityfilms.org)

University of Nebraska State Museum
*World of Viruses*
[http://www.worldofviruses.unl.edu/](http://www.worldofviruses.unl.edu/)

West Virginia University and University of Pittsburgh Clinical & Translational Awards (CTSA)
*West Virginia Health Sciences and Technology Academy (HSTA) Student Design Public Health Clinical Trials*
[http://www.wv-hsta.org](http://www.wv-hsta.org)

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