



National Center for  
Research Resources

NATIONAL INSTITUTES OF HEALTH

*Translating research from basic discovery to improved patient care*

# 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**

Clinical  
Research



Biomedical  
Technology



Research  
Infrastructure



Comparative  
Medicine



Science Education  
Partnership Award  
(SEPA)



# NCCR's role in a diverse pipeline



Established 1991

**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](http://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

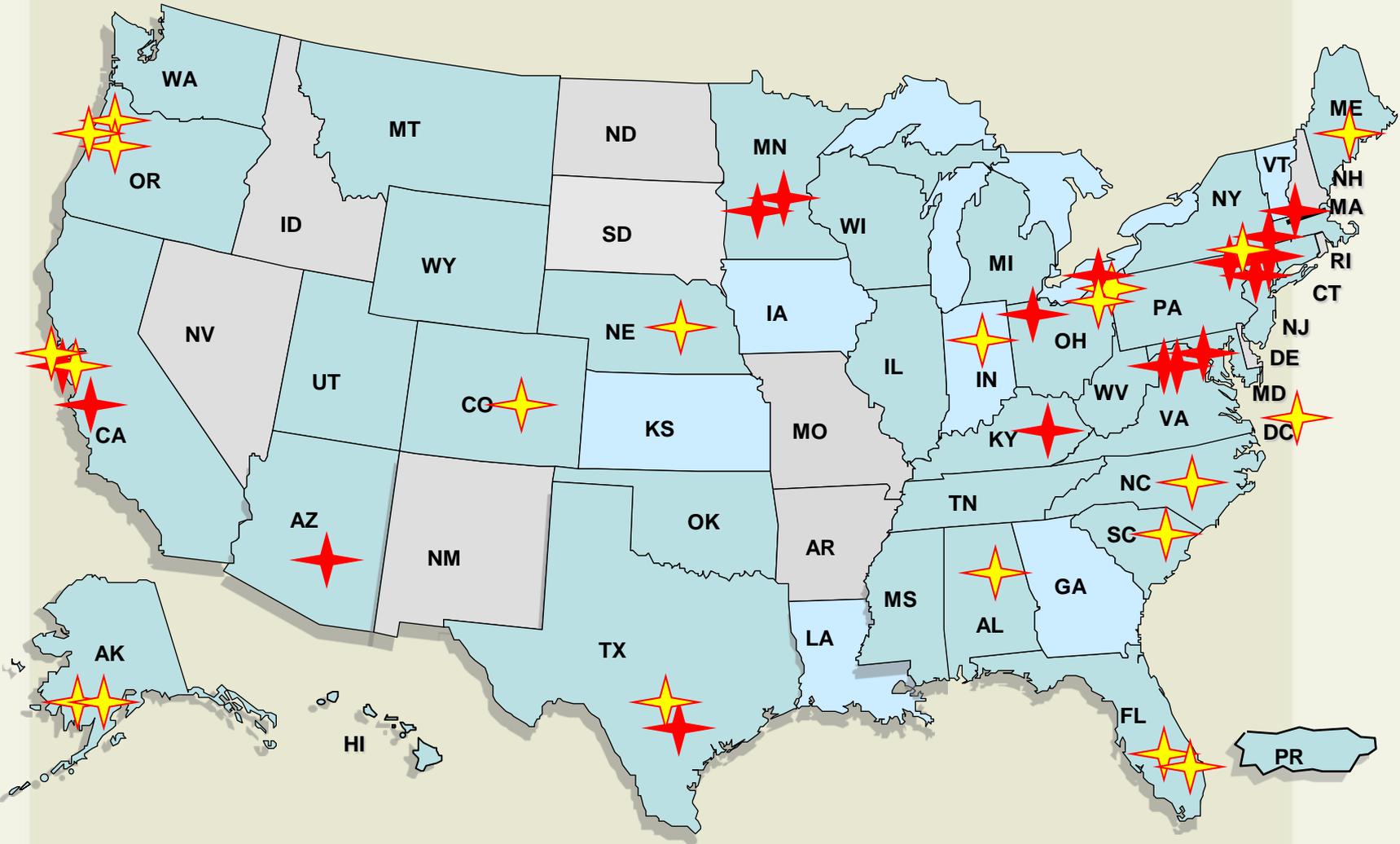
## Informal Science Education (ISE)

- 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

 = SEPA state  
 = ISE  
 = ISE & K-12



[http://www.ncrrsepa.org/map/proj\\_state\\_list.jsp](http://www.ncrrsepa.org/map/proj_state_list.jsp)

# FORMAL – NCRR'S role in a diverse pipeline



Elementary School Students, Hawaii



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



Middle School Students, Seattle

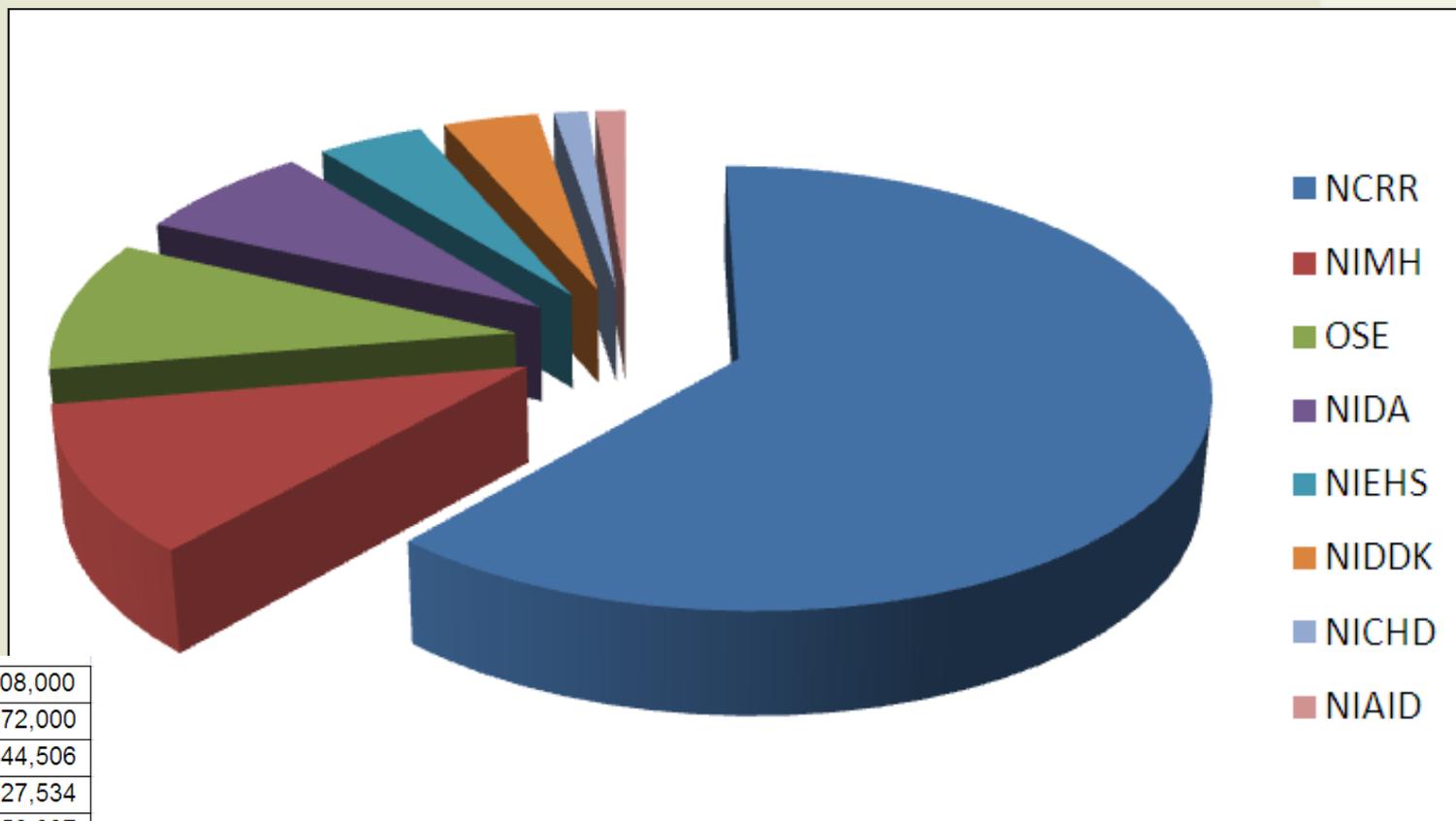


High School Students, Pittsburgh

Future  
NIH  
IC Director  
Urbana, MD

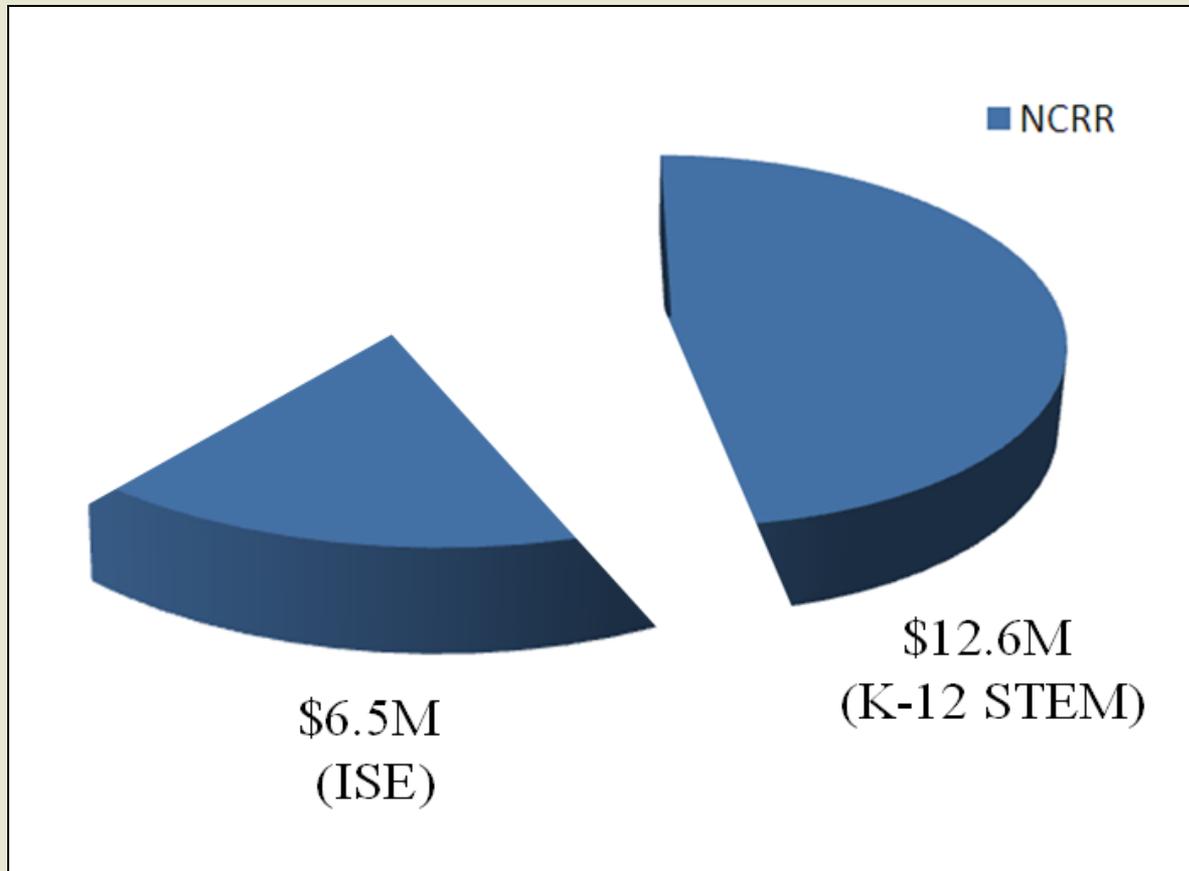


# K-12 STEM & ISE - NIH 2009 Appropriations



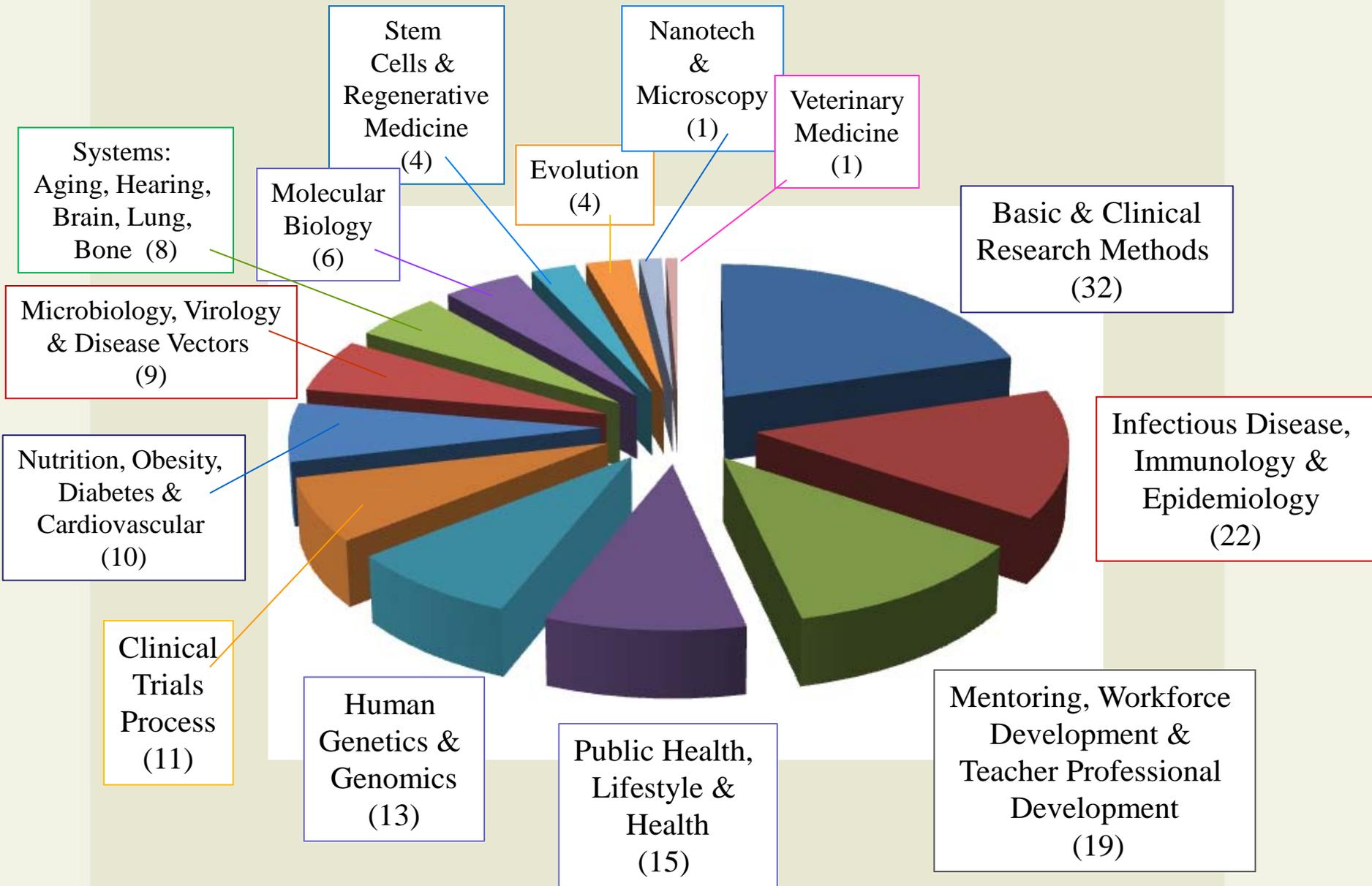
NCRR	18,008,000
NIMH	3,172,000
OSE	2,844,506
NIDA	2,127,534
NIEHS	1,258,397
NIDDK	1,126,677
NICHD	400,000
NIAID	352,562

# ISE - NIH 2009 Appropriations



# SEPA ISE project diversity

n = 27



# How is NIH 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



<http://www.koshlandscience.org>

A screenshot of the Science Museum website's "Infectious Disease" section. The page has a dark background with a large, glowing blue-green image of a virus or bacterium. At the top, there is a navigation bar with "HOME", "PLAN YOUR VISIT", "EXHIBITS", "TEACH &amp; LEARN", "EVENTS", "NEWS", "ABOUT", and "JOIN". A search bar and "GO" button are also present. The main heading reads "Infectious Disease: evolving challenges to human health". On the left, there are six vertical links with small images: "Global Distribution of Disease", "Tracing Emerging Diseases", "Vaccines &amp; Human Immunity", "Antibiotics &amp; Emerging Drug Resistance", "Antiretrovirals &amp; The HIV Pandemic", and "Vector Control &amp; Malaria". On the right, under the heading "Background", there are three circular icons with text: "Rapid Evolution", "Where Are They?", and "Public Health". Below these are three bullet points: "For Educators", "More Resources", and "Funding &amp; Credits". At the bottom, a small text block states: "This project was supported by a Science Education Partnership Award (SEPA) from the National Center for Research Resources, National Institutes of Health."

EDUCATING THE GENERAL PUBLIC



## 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

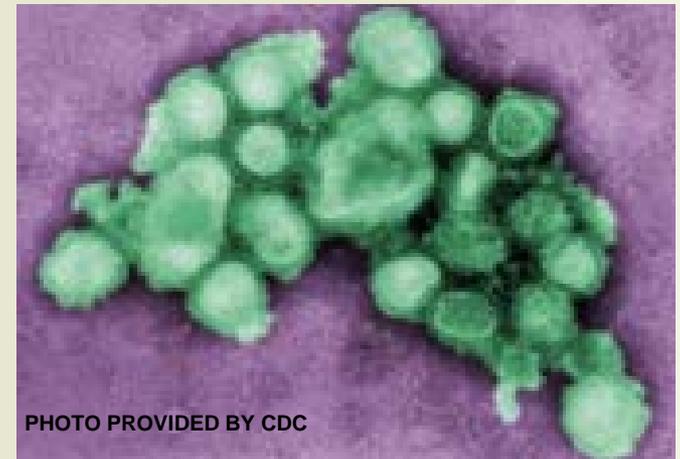
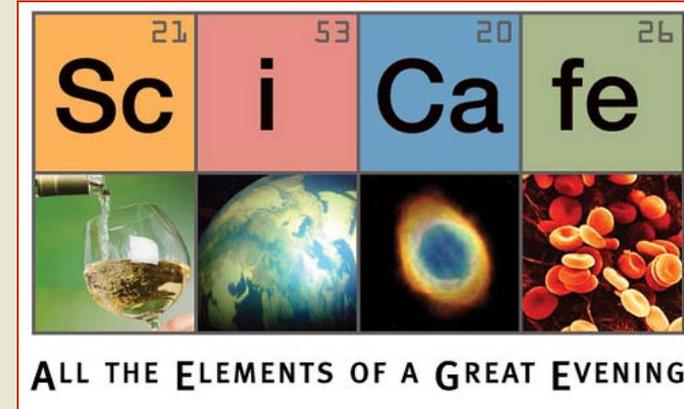


PHOTO PROVIDED BY CDC

## Science Café

# *Human Health and Human Bulletins: Scientists and Teens Explore Health Sciences*

SEPA PI, Dr. Monique Scott  
American Museum of Natural History, NYC



[http://www.ncrrsepa.org/proj\\_grant.jsp?grant\\_id=221](http://www.ncrrsepa.org/proj_grant.jsp?grant_id=221)

*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*

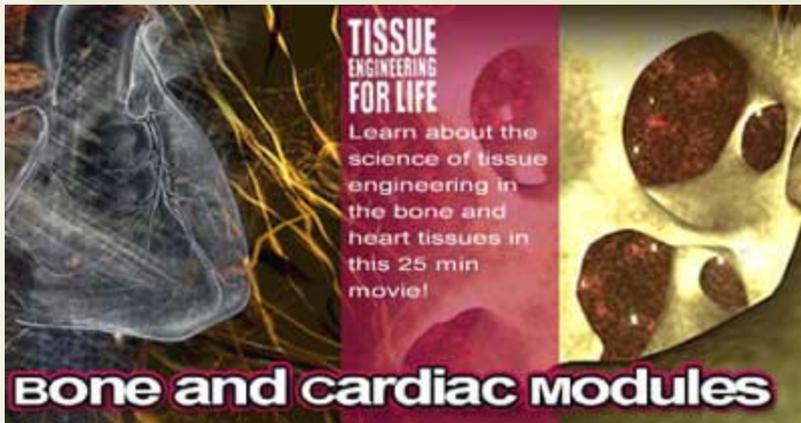
*Happening on the first Wednesday of every month, SciCafes are presented at the American Museum of Natural History in the Gottesman Hall of Planet Earth.*

# Planetarium Shows & K-12 *Regenerative Medicine Partnership in Education*

SEPA PI, Dr. John Pollock  
Carnegie Science Center &  
Duquesne University, Pittsburgh, PA



<http://sepa.duq.edu/forms/index.php5>



Tissue engineering and the field of regenerative medicine offer alternative methods that enhance the body's own process of healing.

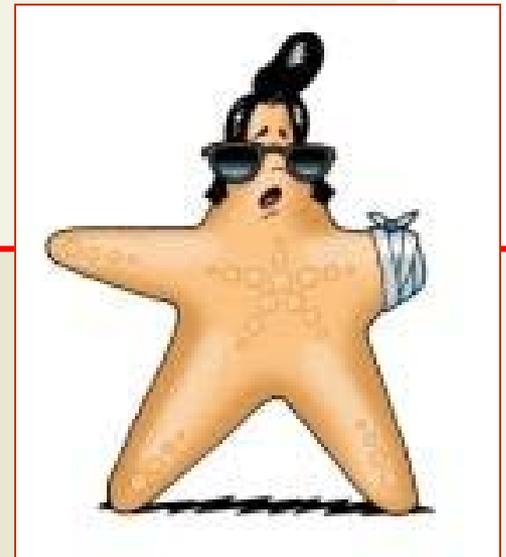


Diabetes, immune system and metabolism, the role of the pancreas and digestion.

Museum Exhibit & K-12

## *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



<http://www.ptei.org/interior.php?pageID=186>

## **Carnegie Science Center exhibit Explores tissue regeneration**

TRIBUNE-REVIEW

Thursday, October 15, 2009



*EDUCATING THE GENERAL PUBLIC*

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

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



Peabody Fellows Program  
PEABODY MUSEUM OF NATURAL HISTORY • YALE UNIVERSITY

<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)**



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# Documentary

## *Serial Passage: Aids, Race, and Culture*

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

**D6** WEDNESDAY, SEPTEMBER 9, 2009

**MOVIE REVIEW**

### A candid look at HIV among blacks

**GARY GOLDSTEIN**

By turns frightening and fascinating — compassionate and compelling, the tough-titled documentary "Why Us? Left Behind and Dying" is an all-too-essential look at the disproportionately high rate of HIV/AIDS in black America and sub-Saharan Africa. Claudia Pryor Malis' candid, compactly informative film, showing for one week to qualify for much-deserved Oscar consideration, examines an extremely complex issue in a laudably accessible yet hard-hitting way.

Part feature film, part research project, "Why Us?" follows 30 curious, courageous inner-city teens from Pittsburgh's academically challenged Westinghouse High School as they explore the history and profusion of HIV/AIDS throughout their community and culture. These kids pose probing questions about the disease to a series of school visitors, including straights, gays, intravenous drug users, HIV-positive locals (several of whom are separately profiled as well) and doctors and scientists from America and Africa. The students also take pains to open up directly to director Malis about their own safe — or unsafe — sex practices and fears about HIV/AIDS. West-

inghouse alumna Tamira Noble, 20, nicely serves as the film's narrator.

The intertwining explanations for the HIV/AIDS explosion among blacks — low self-esteem, distrust of science and the healthcare system, poverty, gender inequality, trouble squaring racial and sexual identities, a history of secrecy and shame, and even a possible genetic variation — are vividly presented here. But it's a hard look at the black church's ingrained homophobia and long-time reluctance to deal with HIV/AIDS that perhaps prove the most disturbing. As a more enlightened Baptist pastor chillingly says here of the epidemic, "This is real whether you accept it or not. You don't lead a dead man to God." Amen to that.

calendar@latimes.com

**'Why Us? Left Behind and Dying'**

**MPAA rating:** Unrated  
**Running time:** 1 hour, 25 minutes  
**Playing:** At Laemmle's Grande 4-Plex, downtown Los Angeles

**LEARNING WAS NEVER LIKE THIS**

"BLACK PEOPLE KNOW HOW TO KEEP SECRETS"  
CHARLES LYLES

"IT'S KILLING OUR RACE"  
CLARISSE JORDAN

COMPOSITION  
Reality 101:  
"Why Us?"

DIVERSITY FILMS PRESENTS A FILM BY CLAUDIA PRYOR MALIS

# WHY US?

## LEFT BEHIND AND DYING

PRODUCING VIVIAN SIU DAVID GUILBAULT NENE OJAIATEYKODJODE CINEMATOGRAPHER ROBERT SHEPARD CHRIS IVEY  
EDITOR HOWARD MALIS SOUND JEFF EDRICH JUAN RODRIGUEZ MUSIC PAUL RUCKER RAP LYRICS & VOCALS MYCHAM "MASSIAH" BA  
DIRECTOR/EXECUTIVE PRODUCER CLAUDIA PRYOR MALIS

WEBSITE: WWW.DIVERSITYFILMS.ORG CONTACT US: WHYUSMOVIE@AOL.COM

<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/>



SEPA PI, Dr. Ann Chester

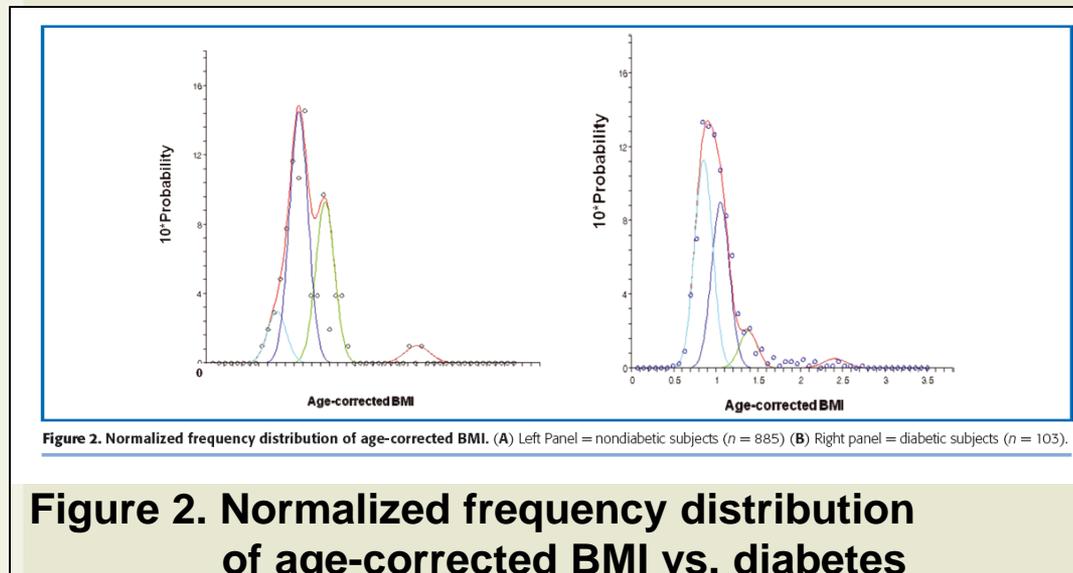
West Virginia University, Morgantown, WV

<http://www.wv-hsta.org>

## Family Networks of Obesity and Type 2 Diabetes in Rural Appalachia

Petr Pancoska, Ph.D.<sup>1</sup>, Shama Buch, Ph.D.<sup>1</sup>, Alfred Cecchetti, Ph.D.<sup>1</sup>, Bambang Parmanto, Ph.D.<sup>1</sup>, Marcella Vecchio<sup>1</sup>, Stephen Groark<sup>1</sup>, Stephanie Paulsen<sup>2</sup>, Genevieve Bardwell<sup>2</sup>, Cathy Morton<sup>2</sup>, Ann Chester, Ph.D.<sup>2</sup>, and Robert Branch, M.D., F.R.C.P.<sup>1</sup>

[www.ctsjournal.com](http://www.ctsjournal.com), Vol 2, Issue 6



- 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)

<http://www.ncrr.nih.gov/>

Clinical & Translational Science Awards

<http://ctsaweb.org/>

Science Education Partnership Awards (SEPA)

<http://www.ncrrsepa.org>

Marian Koshland Museum

*Diseases and Decisions: Current Science on Emerging Threats*

<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>

Pittsburgh Tissue Engineering Initiative and

Carnegie Science Center

*If a Starfish Can Grow a New Arm, Why Can't I?*

<http://www.ptei.org/interior.php?pageID=186>

Yale University Peabody Museum of Natural History

*Curricula Modeled on Biodiversity & Vector-Borne Disease*

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

Diversity Films, INC

*Serial Passage: Aids, Race, and Culture*

<http://www.diversityfilms.org>

University of Nebraska State Museum

*World of Viruses*

<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>

SEPA Program Contact

L. Tony Beck, PHD

Division for Clinical Research Resources

National Center for Research Resources

National Institutes of Health

6701 Democracy Blvd., Room 916

Bethesda, MD 20892 (20817 for courier delivery)

301.435.0805; 301.448.3661 FAX

[beckl@mail.nih.gov](mailto:beckl@mail.nih.gov)