

Council of Councils

February 1, 2012

Louise E. Ramm, Ph.D.

Director, Office of Research Infrastructure Programs

Office of Research Infrastructure Programs

Components

- Division of Comparative Medicine
- Division of Instruments, Infrastructure Resources, and Construction
- Science Education Partnership Awards (SEPA)
- Office of Science Education



Science Education Partnership Award



Established 1991

Partnerships:

- Scientists and clinicians with educators, community organizations and science centers

Goals:

- Increase the participation of a diverse population of young people in clinical and basic research careers
- Educate the public about NIH-funded research and the link between lifestyle and health

Science Education Partnership Award (SEPA)

SEPA professional staff:

**Tony Beck, Ph.D.
John Heckler**

SEPA - Areas of Focus

Formal:

- Increase the participation of a diverse population of young people in clinical and basic research careers (48 projects)

Informal:

- Improve K-12 and public understanding of, and support for, NIH funded medical research (11 projects)

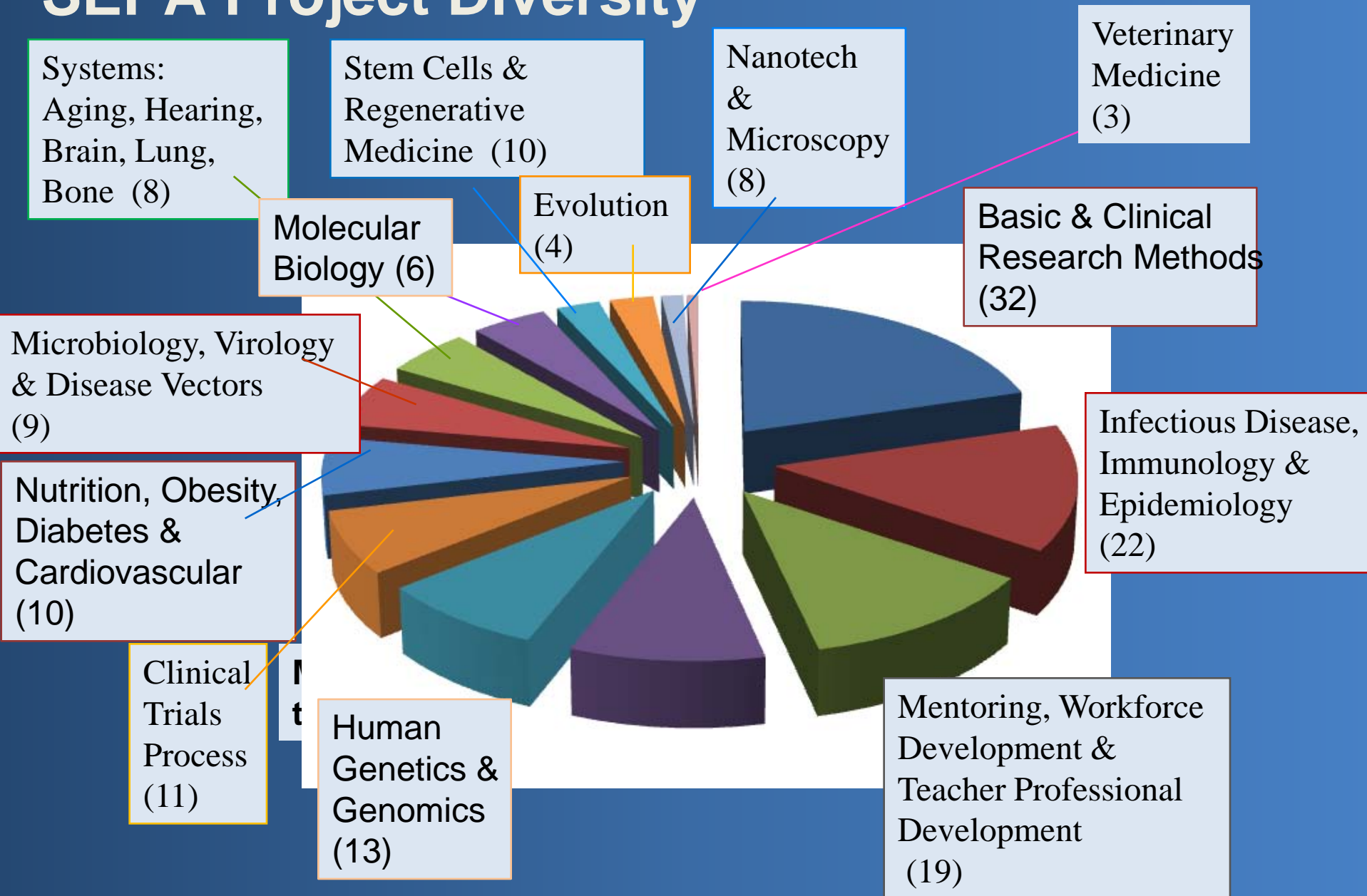
FY 2010:

- Students = 82,576
- Teachers = 5,749
- Schools = 2,048

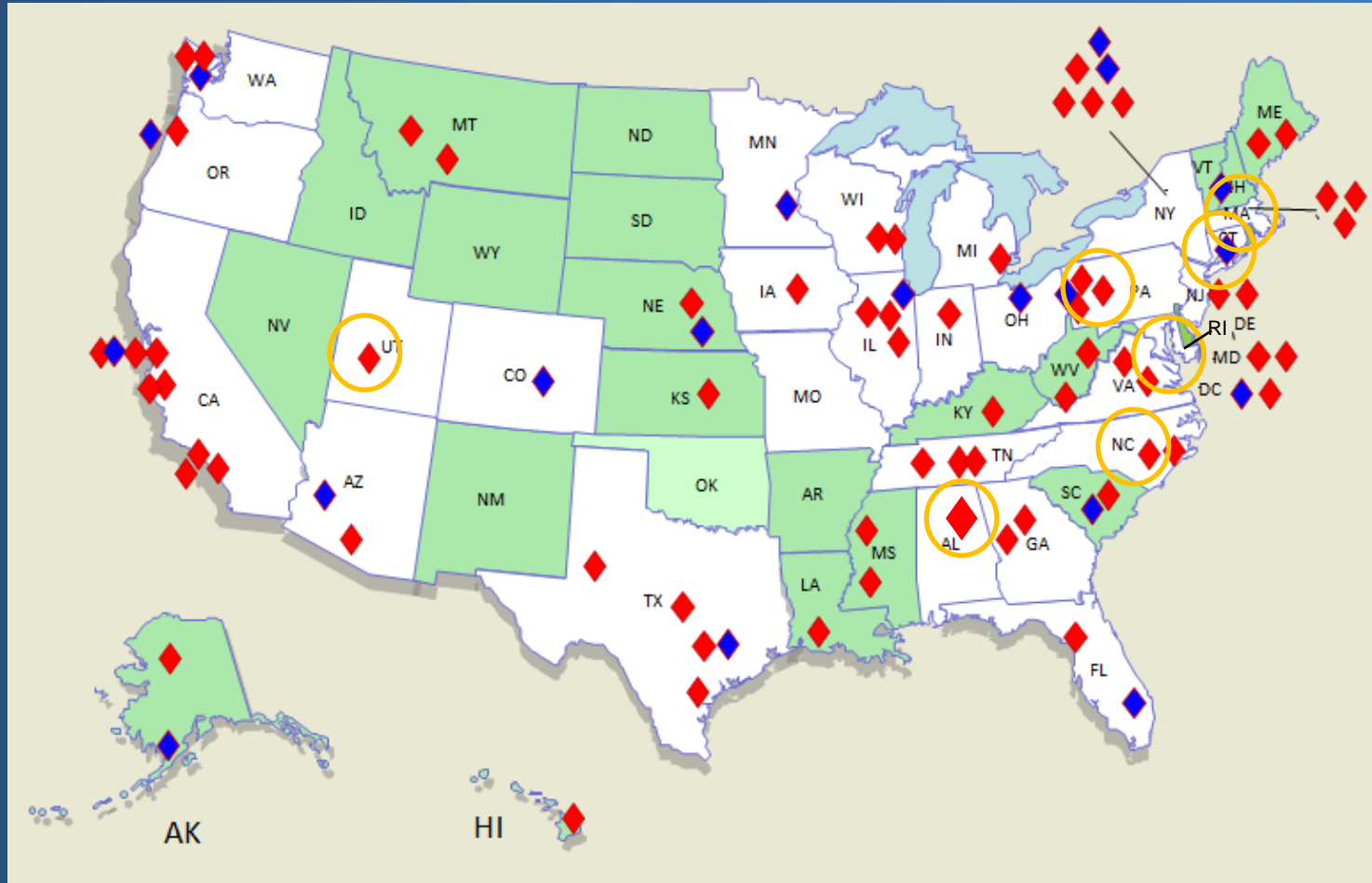
SEPA FOA - Details

- PAR-10-206
- NIH R25 Research Education mechanism
- 5 years @ ~ \$1.3M
- Eligible Institutions – all
- Collaborations strongly encouraged
- Innovative pedagogy
- Align with State and National standards
- Rigorous evaluation: RCT or well-matched case studies
- Scope of Activity = Any NIH-funded research area


SEPA Project Diversity



SEPA – Geographic Distribution



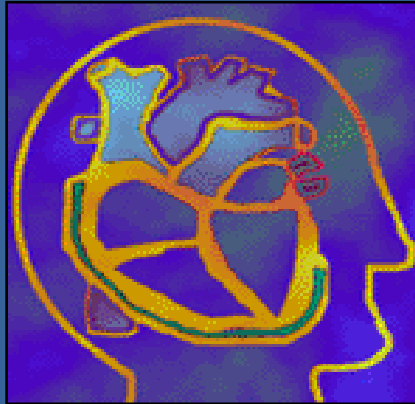
K-12 STEM 

Science Museum 

IdEA State

Featured Project 

SEPA – A Few Highlighted Projects



University of Alabama, Birmingham (UAB)

GENEius is a collaborative effort between:

- UAB SEPA
- UAB's Center for Community Outreach Development (CORD)
- Birmingham City Schools
- McWane Science Center.. Alabama Birmingham SEPA



Deliverables:

- Teacher Professional Development
- High school students work with UAB graduate students and staff
- CORD's GENEius and LabWorks classrooms at the McWane Science Center

University of Utah Genetics Science Learning Center

Award winning website (Science magazine)

- Genetics 101 for the masses
- Genetics, epigenetics, stem cells, heredity & traits, evolution, genetics of addiction

Teacher Professional Development

- Web-based classroom lesson plans

Community Outreach

- Community Faces of Utah – A Genetics and Health Forum
 - SEPA and U Utah CTSA collaboration
 - NHGRI partner - IC director and intramural scientists
 - 7 community groups, >200 participants

Wake Forest University School of Medicine

Center for Excellence in Research, Teaching and Learning (CERTL) ,
Wake Forest University, Ann Lambros, PI

Problem-based learning – student and teacher benefits:

- Reinforces existing knowledge and creates a starting point for acquiring new content.
- Enhances the integration of new information.

CERTL Results:

- 171 high school MiniFellowships in Research
 - 80% tracked after graduation
 - 98% matriculated to 4 year college
 - 75% STEM major
 - 48% underrepresented
 - 62% 1st generation to college
- Over 700 K-12 teachers received 50+ hours of inquiry-based Professional Development

Yale Peabody SEPA + Yale Clinical and Translational Science Awards (CTSA)

Climate Change And Patterns Of Vector-Borne Disease:
Development Of Translational Medicine for the Community

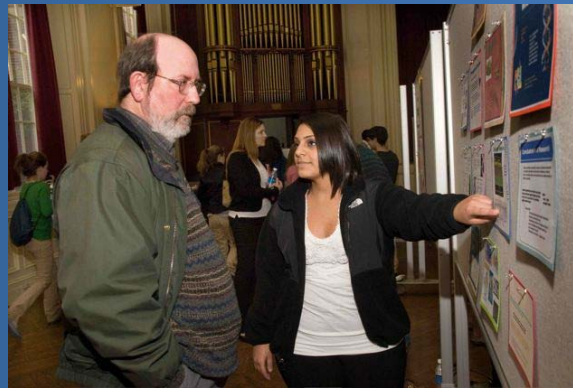


Project ARISE: Advancing Rhode Island Science Education

Program goal: Provide high school biology teachers with resources needed to implement inquiry-based life science curricula in their classrooms



Laboratory internships

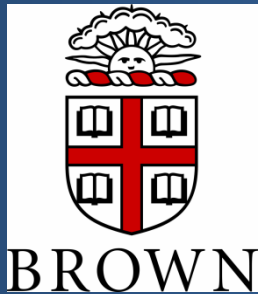


Poster presentations



Project ARISE - Deliverables





Project ARISE – Resource Leveraging

Partnerships – Teacher Internships

Institutional INBRE

Rhode Island Sea Grant

NSF – faculty CAREER awards

Leveraged Funding from SEPA

Rhode Island's NSF-funded Math Science Partnership Program

Rhode Island Board of Governors
for Higher Education

Department of Education Title II
- Improving Teacher Quality
State Grants

Multiple SEPAs and Pitt CTSA



Boston University Mobile Science Lab

NIH NHGRI "DNA Day"
at Dorsey Middle School



Pitt CTSI Mobile Science Lab

SEPA K-12

HHMI K-12

Pitt CTSI K-12

Health Fairs & CTSI
Patient Registry

Mobile Health Clinic