

EPSCoR/IDeA

Experimental Program to Stimulate Competitive Research
Institutional Development Award Program

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Basic Principles:

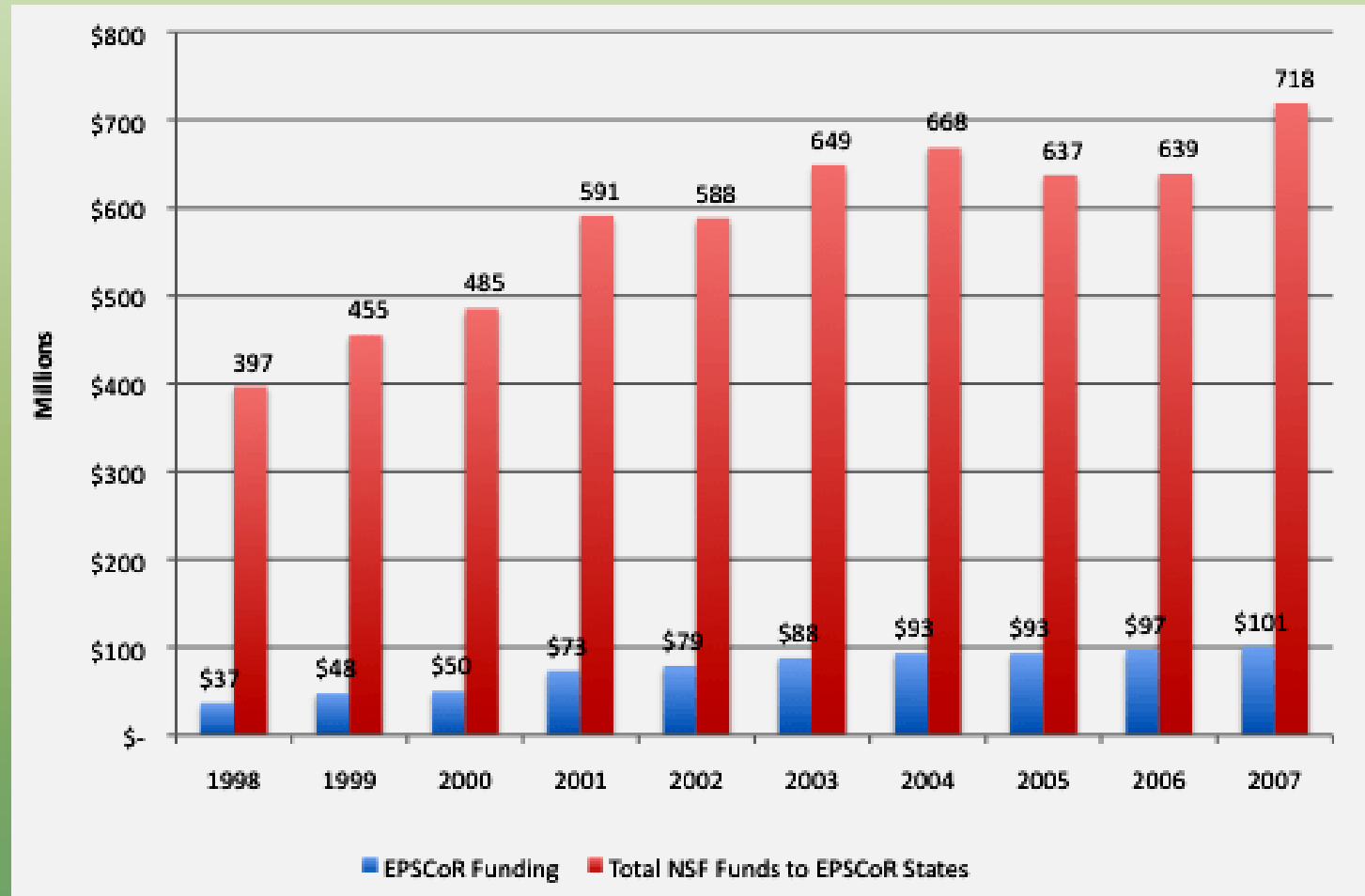
- Stimulate, not support
- Infrastructure development
- State-based effort
- State-federal partnership
- “Quality in context”

Agencies:

- National Science Foundation- \$115 M
- National Institutes of Health- \$220.5 M
- Department of Defense- \$17 M
- Department of Energy- \$15 M
- NASA- \$15.5 M
- USDA- \$19.2 M



Catalytic Impact of EPSCoR



EPSCoR/IDeA Impacts on the MUS

- The MUS has been continuously funded since 1980 by NSF EPSCoR
- Current award through July 2010 is funded at \$3 million per year for three years (no match required)
- Match/cost share funding has been a significant issue over the three decades of support (2001 through 2007 MBRCT funded match)
- NSF EPSCoR Research Infrastructure Improvement (RII) program has been a major factor in the growth of the MUS research programs
- The NSF EPSCoR RII has enabled the MUS to recruit outstanding faculty as well as improve other components of research infrastructure
- **16 MSU** and **7 UM** faculty recruited with NSF EPSCoR funds received NSF CAREER Awards



Accomplishments of Current Award

- 19 new faculty recruited with assistance from NSF EPSCoR
- 35 Graduate student stipends funded
- 193 Undergraduate students supported
- 12 Multi-investigator awards funded
- 6 Tribal college research awards
- More than 7,500 K-12 students reached through the NSF EPSCoR outreach program



New NSF EPSCoR Proposal Submitted October 2009

- The proposal is required to fit the focus of a state-wide Science and Technology Plan, MUS Science & Technology Advisory Committee (MUSSTAC) was created by OCHE in fall of 2008 to develop the plan
- MUSSTAC S&T Plan identified five core research focus areas
- Through a competitive process two of these focus areas were selected by MUSSTAC to be the themes for the new proposal; ***Energy Sciences & Engineering, Environmental & Ecosystem Science***
- If approved, research in these areas will be funded at \$4 million per year for five years (20% cost share required)



Goals of the new NSF RII Proposal

- Build interest and capacity of students in Montana in environmental and energy sciences and engineering with an emphasis on Native American participation
- Enhance research processes through improved cyberinfrastructure
- Build a sustainable collaborative research community in Montana that connects basic science in energy and environmental sciences & engineering with applied science and innovation in the state
- Enhance the level of interdisciplinary and multi-investigator environmental and energy science & engineering research programs
- Develop scientific and non-technical educational products for wide dissemination of research findings



Montana INBRE II

IDeA Network for Biomedical Research Excellence

\$17.5 million grant (2009-2014) from the National Institutes of Health to enhance biomedical education and research capacity at Montana's academic institutions, goals of MT INBRE are to:

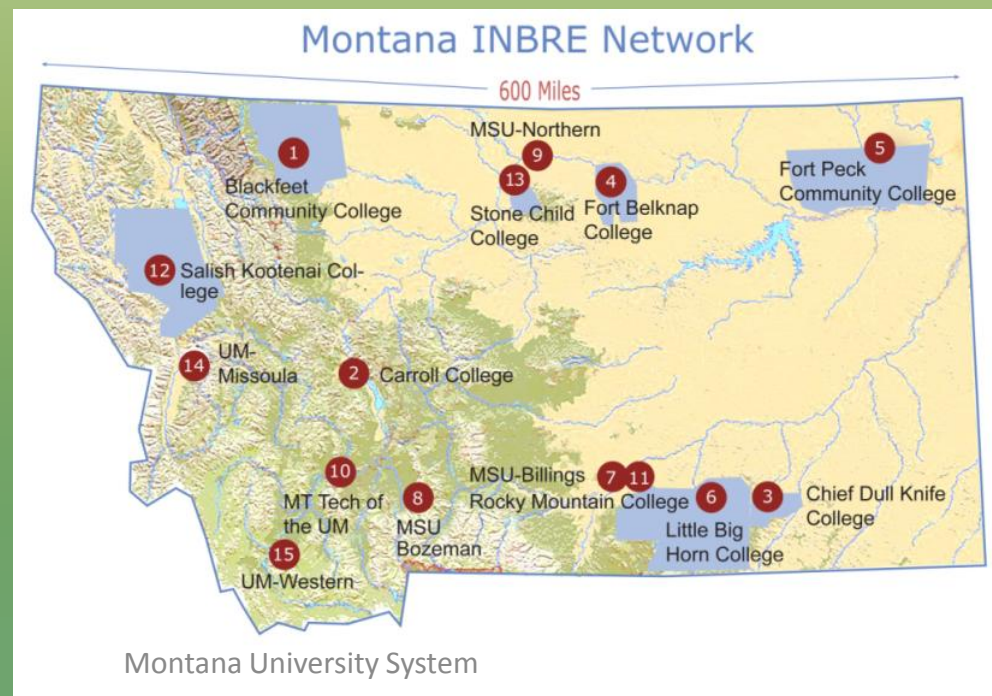
- Increase number of infectious disease, environmental health, and health disparities investigators to sustain productive and competitive research at Montana's academic institutions
- Develop and support community-based participatory research (CBPR) initiatives led by Montana tribal colleges to reduce health disparities in Native American communities



Montana INBRE II

Goals, continued...

- Strengthen the state's biomedical and bioinformatics infrastructure
- Expand research opportunities for students and enhance biomedical curricula from K-12 through college and graduate education to strengthen the pipeline to careers in health research



Montana INBRE II: Research Projects Across Montana

- **Carroll College:** infectious disease (1 project)
- **Montana State University-Billings:** infectious disease (2 projects)
- **Montana Tech of the UM:** infectious disease (2 projects), education outreach (1 project)
- **Rocky Mountain College:** education outreach (1 project)
- **The University of Montana-Western:** infectious disease (2 projects)
- **Blackfeet Community College:** CBPR and health disparities (1 project)
- **Chief Dull Knife College:** infectious disease (1 project)
- **Fort Belknap College:** infectious disease (1 project)
- **Fort Peck Community College:** CBPR and health disparities (1 project)
- **Little Big Horn College:** infectious disease (1 project), CBPR and health disparities (1 project)
- **Salish Kootenai College:** education outreach (1 project), CBPR and health disparities (1 project)
- **Stone Child College:** CBPR and health disparities (1 project)
- **The University of Montana:** education outreach
- **MSU:** Developing health disparities research in Nursing, Social, and Behavioral Sciences



Montana INBRE:

Economic, Educational, and Research Impact

Across Montana, MT INBRE has increased educational choices, created jobs, produced additional revenues in communities and developed the biomedical industry:

- Over \$20 million in research support has been distributed throughout Montana since 2004
- At least 57 new jobs were created by INBRE (2004-2008)
- \$15 million in additional grants related to INBRE projects was received during the 2007-2008 academic year
- 220 undergraduate students and 119 graduate students received research awards (2004-2008)



Montana INBRE:

Economic, Educational, and Research Impact, continued...

- INBRE developed research culture and undergraduate research opportunities at Montana academic institutions where biomedical research did not previously exist
- More than 120 Tribal College Students have participated
- Faculty Networking Forums – 7 statewide meetings held at tribal colleges focused on cross-cultural education and developing research infrastructure (60 – 100 participants each)



Centers of Biomedical Research Excellence (COBRE)

- COBRE Objective: ***“to strengthen an institution's biomedical research infrastructure through the establishment of a thematic multi-disciplinary center and to enhance the ability of investigators to compete independently for complementary NIH individual research grants or other external peer-reviewed support”***
- COBRE Awards are five-year awards each funded at \$1.5 million direct costs per year. The MUS currently has four COBRE's.
- Two COBRE Awards at UM in the areas of:
 - Neuroscience
 - Environmental Health
- Two COBRE Awards at MSU in the areas of:
 - Infectious disease
 - Systems Biology



Building Competitive Research in Montana State, Federal and Private partnerships

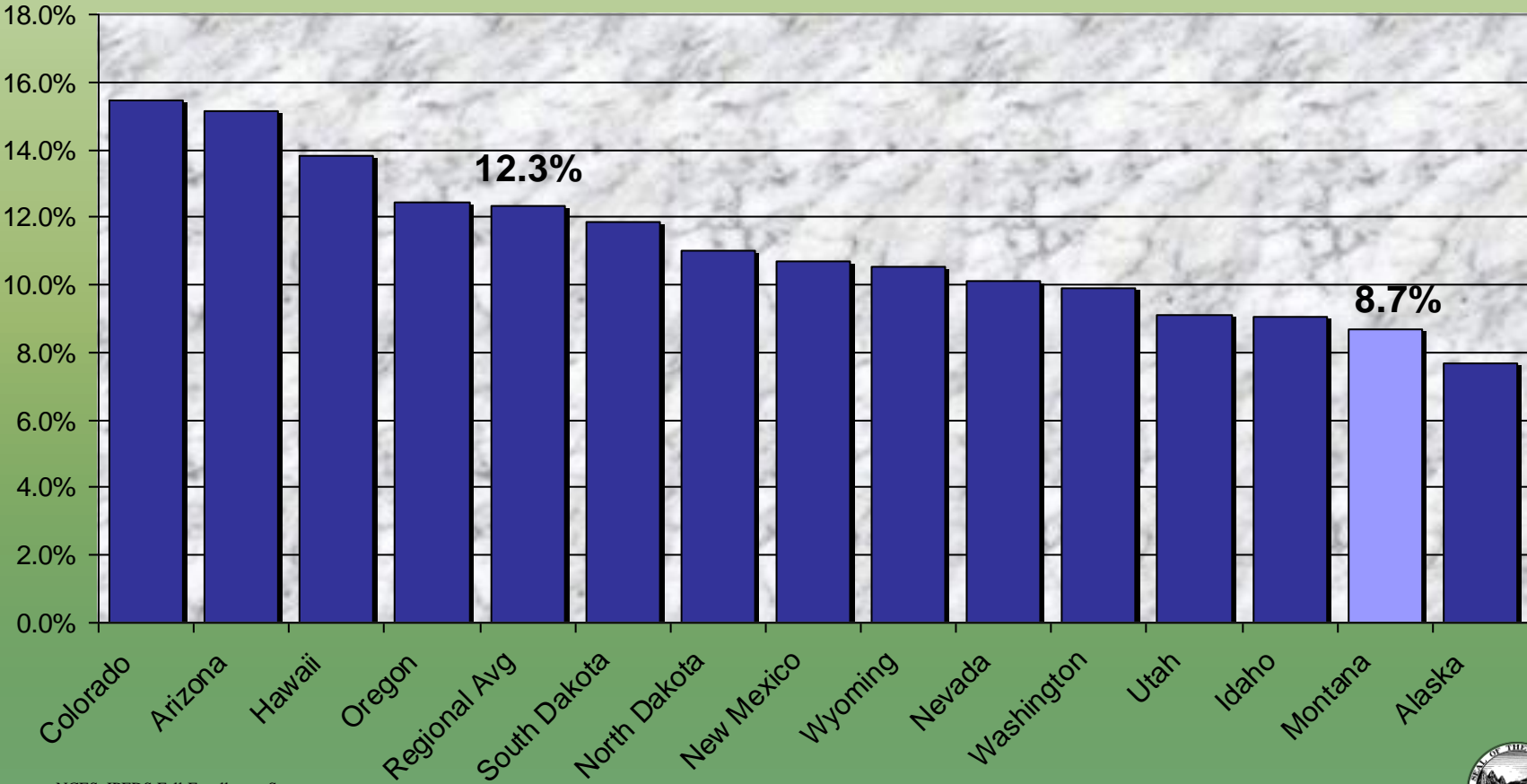
- Competitive Faculty
 - Compensation for recruitment and retention
 - “Start-up” package
- Competitive Graduate Students
 - Stipends
 - Resident tuition status
- Competitive Infrastructure
 - Modern facilities
 - Core instrumentation
 - Technical support



Enrollment in Graduate Programs Lags Behind Peers

Percent of Higher Education Enrollment in Graduate Programs

Unduplicated Headcount at Public & Private Institutions, Fall 2006



source: NCES, IPEDS Fall Enrollment Survey

