Continuing the Land Grant Adventure into the Landscape of our Imagination

CSU Researchers will advance the frontiers of knowledge and discovery, provide cultural and intellectual leadership, and make an impact in our communities and around the world.

Board of Governors Oct 7, 2016

Research Report 2016
2016 “By the Numbers”

From FY15 to FY16:

- Overall Awards - $282 million. 5.1% increase
- Federal Awards - $214 million. 3.6% increase
- Industry Awards - $14 million. 12.9% decrease
- Other Non-Federal – $54 million. 18.3% increase

- Proposals Sent - 2,211 ($885M) 3.6% (9.4%) decrease

- Expenditures - $331.9M – 4.6% increase

- Active Patents & Patent Applications - 622
- Record Number of License Agreements – 46

Board of Governors of the Colorado State University System
Behind the Numbers

Infrastructural Support

CSU Discoverers

Facilities

Strategic Investments

Board of Governors of the Colorado State University System
Research and Scholarly Success Initiative: Restoring the Foundations To Sustain and Grow Research Impact

• Great people and ideas need great facilities and strong administrative support

• Focused efforts to sustain and grow impact and revenue driven from publications, patents, rankings, awards

• Sustain and grow scholars that integrate teaching and research mission with well trained students

Survey of 14 Peer Institutions Comparing Investment in Shared Research Facilities

Award Size Trends
Transformational Core Research Investments: Medical Imaging

Equine 3T Imaging planned
For Institute for Translational Biological Therapies

Desired Human Imaging for Expanded Human Research Impacts

BOARD OF GOVERNORS of the COLORADO STATE UNIVERSITY SYSTEM
Example Needs in Shared Enabling Facilities that can Enable Research Impacts

Data Analytics and Computational Systems Biology in Era of Big Data Across Sectors and linked to NWC

Ecosystem Engineering of Climate Controlled Novel Environments

Safe Gene Study and Application

Linked to improved field outcomes and countermeasures in human animal and plant health, food and biosecurity
Leveraging Resources for Greater Impact

“Big Bet” Funding
- Driving towards multidisciplinary, multi-partner proposals of impact in excess of $10M
- Diverse funding base: Federal, Industry, Foundation, Private Donor

Cluster Hires
- Synchronized with Air Quality and Climate Team
- 5 new positions, linking social and physical sciences

Science Of Teams
- Research network formation, organization, impact on interdisciplinary research
- CPN case study, expanding to all of CIP

Leveraging Relationships
- Engagement with Advancement/Corporate Relations, Foundation Relations, International Programs, Extension, looking at innovation networks
- Cathay Biotech, Coke, Leprino, Mars, National Western Center, Starbucks, etc.

For the Future
- Research Development Office
- Institutionalizing bottom up program for team formation and infrastructure support
New Emerging Strategic Opportunities and Prioritized Investments

• One Health Institute (Food Systems, Urbanization, Climate)

• Center for Healthy Aging (Neuroscience, Exercise Sciences, Nutrition)

• Microbiome Discovery and Applications (Antimicrobial Resistance, Gut Health, Disease Outbreaks)

• Smart Agriculture (Precise, Predictive, Productive)

• Sustainability Research and Outcomes (Future Earth, Ecodistricts)
Predicting smoke movement and preventing smoke health effects remains an unsolved problem.

The CSU Partnership for Air Quality, Climate, and Health (PACH) is working to develop a national wildfire smoke health warning system to protect people from this growing public threat.
National Western Center: Align Research Enterprise with Strategic Growth

Convening/Facilitating/Fundraising

• One Health Partnership
• Institute for Built Environment /Ecodistricts
• Energy Institute
• National Renewable Energy Laboratory
• One Water Institute
• Ag Innovation

Board of Governors of the Colorado State University System
Working to Solve Issues of Today – Zika

$22M Proposed Research Funding

50,000 sq ft Biosafety Labs

BioMARC

GMP Manufacturing of Zika Vaccine

A new proposed facility for Vector Borne disease research
CSU Innovation Ecosystem Impact

Student Engagement & Education
- College of Business
- CSU Undergraduate Entrepreneurship Education
- CSU Collegiate Challenge

Faculty & Community Education & Assistance
- Financing Assistance
- Entrepreneurship Education & Training
- Start-up Assistance

Board of Governors of the Colorado State University System
Proposed Research and Scholarship Success Initiative

Phase I: Restoring the Foundation
- Accelerate Facilities Renovations
- Improve Research Administration (IT, Processes, Staffing, Training)
- Increase Investments in Existing Core Facilities
- Invest in Early Career Investigator Initiatives
- Invest in Student Initiatives for Undergraduate and Graduate Research
- Implement Safety Initiative

Phase II: Building a Framework for Success
- Establish New Core Facilities
- Engage in Teaming Activities
- Increase Faculty Start-Up for Research
- Invest in Existing Faculty Success
- Grow Research Development Activities
- Create New Workshops and Professional Development Activities

Phase III: Sustainable Growth
- Establish More Centers and Institutes
- Secure Investments in New Team Science Buildings
- Complete Foothills Master Planning
- Launch New Cluster Hiring Initiatives
- Prioritize Key Faculty Hiring
- Promote Translational Research
- Explore International Opportunities

Board of Governors of the Colorado State University System
Research Report 2016

Questions

Thank You