



# USTAR

Utah Science,  
Technology,  
and Research

Economic Development Initiative

**UtahState**  
UNIVERSITY



# USTAR Initiative Vision

- Increase university research capacity to expand Utah's high-tech industry
- Create statewide Technology Innovation Centers

Co-led by business and industry groups, including Salt Lake Chamber, Utah Information Technology Association (UITA), EDCU, ULSA



# Research Universities Drive Economic Growth

- **Silicon Valley:** Stanford, UCSF, UC-Berkeley
- **Research Triangle:** Duke, UNC- Ch. Hill, NC State
- **Boston's Route 128 corridor:** MIT, Harvard, +7



# Research University Return on Investment

- Create new knowledge, discoveries, technologies
- Educate high-tech workforce
- Increase jobs and tax revenues



# States Investing in Research Universities

- **Arizona:** \$1 billion for Proposition 301
- **California:** \$3 billion for stem cell research
- **Illinois:** \$2 billion for Venture Tech technology program
- **Michigan:** \$1 billion for Life Sciences Corridor
- **New York:** \$1.2 billion for high-tech and biotech development



# R&D Changes at USU since 2001

- Revised Policies
  - 50 % royalty now given to faculty
  - Revised tenure & promotion policy:  
Patents can count
  - Created new research policy



# R&D Changes at USU since 2001

- Built Technology Commercialization Office
  - **Steve Kubisen**; 2002; GE, Alcon, VEC Technologies
  - **Carole Golden**; 2003; Xanthon, MedTox, Microbiological Research Corp.
  - **Ray DeVito**; 2004; Siemens, Mosaic Imaging, Constellation Technology
  - **Henry Nowak**; 2004; Paradigm Genetics, Amgen, Novartis



# R&D Changes at USU since 2001

- Grown Innovation Campus
  - Completed master plan, 2003
  - Acquired 500 acres for Ag production, 2003
  - Awarded \$2.5M grant for Grand Ave., 2005
  - Moving Ag facilities to allow IC growth from 38 to 150 acres



# Potential USTAR Benefits for USU

- New facilities and equipment
- Additional talented faculty
- Increased F&A recovery
- Royalty Revenues from technology commercialization



# Requested Investment Over 5 Years

|                                |                |
|--------------------------------|----------------|
| Program Area Investment        | \$125 M        |
| Research Facilities Investment | \$250 M        |
| Technology Innovation Centers  | \$ 25 M        |
| <hr/>                          |                |
| <b>TOTAL INVESTMENT</b>        | <b>\$400 M</b> |



# S.B. 192 Allocation

|   |                 |
|---|-----------------|
| U of U Research Equipment                       | \$3.00 M        |
| Research Team Hiring<br>(\$1.6 million for USU) | \$4.00 M        |
| Planning & Development                          | \$0.35 M        |
| <hr/>   |                 |
| <b>TOTAL</b>                                    | <b>\$7.35 M</b> |



# USTAR Planning Prospectus

- Investment Strategy
- Implementation Plan
- Analysis of Utah's ROI



# USTAR Planning Prospectus

- Led by Jack Brittain, U of U
- Broad participation
  - U of U & USU
  - Utah Business & Industry
  - State Government
  - 6 subcommittees



# Criteria for USU Program Selection

- Economic development potential
- Competitive advantage
- High levels of research productivity
- Track record of IP/tech transfer
- Interdisciplinary



# Program Focus Areas at USU

- Discussions with Deans
- Discussions with TCO
- Interviews across campus



# Areas Selected for USTAR Investment at USU

- Life Sciences
  - **Microbe Biotechnology, \$1.6 M**
  - Advanced Nutritional Research
  - Infectious Disease
- Intelligent Systems – Sensors & Robotics
- Water, Watershed, Climate & Weather



# FY06 USTAR Investment at USU

- Hiring a major new research team in microbial biotechnology
- Interdisciplinary research focus with technology transfer experience
- Senior faculty, junior faculty, post-docs, graduate students



# USU Microbe Biotechnology Nomination Committee

- **Jeff Broadbent, NFS**
- Ron Sims, BIE
- Jon Takemoto, BIO
- Bart Weimer, CIB
- Lance Seefeldt, CAB
- Henry Nowak, TCO



# Why Microbe Biotechnology?

- Immense Economic Potential
  - Human Health
  - Environment
  - Fuels & Chemicals
  - Food Production & Processing
  - Other Industrial Applications
- Impact on 200 Utah Companies

# Why Microbe Biotechnology at USU?

- Unique expertise
- Broad-based interests
- Successful collaborations
- Intellectual property



# USU Specialization in Microbe Biotechnologies



1. Bioremediation & Waste Management



2. Food Fermentation & Processing



3. Plants & Soils



# Conclusion

- Prospectus or business plan for STAR/EDI ASAP
- Must recruit top research talent
- Additional laboratory research facilities critical
- Microbe biotechnology first year, other areas to follow
- Include statewide benefit and involvement