

**OFFICE OF THE VICE PRESIDENT FOR RESEARCH  
&  
OFFICE OF THE VICE PRESIDENT FOR STRATEGIC  
VENTURES & ECONOMIC DEVELOPMENT**

**ANNUAL REPORT**

**JULY 1, 2007 TO JUNE 30, 2008**

**BRENT C. MILLER, PH.D. VICE PRESIDENT FOR RESEARCH**

**NED M. WEINSHENKER, PH.D., VICE PRESIDENT FOR STRATEGIC VENTURES  
AND ECONOMIC DEVELOPMENT**

**INTRODUCTION**

Utah State is a research-intensive land-grant university that supports faculty and student researchers, solves problems, and contributes to the economy.

University research is fostered through improving campus research services and support, but more importantly through building multidisciplinary research programs and partnerships, both on and off campus, thereby enhancing the university's capacity for research excellence.

**Research Office Mission Statement**

It is the mission of the Research Office at USU to facilitate and stimulate research, scholarship, and creative activities by:

- Providing resources to recruit, retain, and recognize outstanding faculty and student researchers.
- Providing research support services that are highly responsive and efficient.
- Providing leadership to identify and pursue promising research opportunities and to grow external research funding.
- Fostering a culture of academic research integrity and promoting the responsible conduct of research.
- Fostering the creation of intellectual property and supporting appropriate technology commercialization.
- Fostering the expansion of international research projects and programs.
- Communicating the value of USU research throughout the state, nation, and the world.

Core campus constituencies of the Research Office are faculty, research professionals, students, and unit administrators. The VPR chairs the University Research Council, which consists of deans, major center directors, and student and faculty representatives. Because deans, center directors, and department heads are appropriately most concerned with their respective units, the VPR must take a broader, campus-wide perspective.

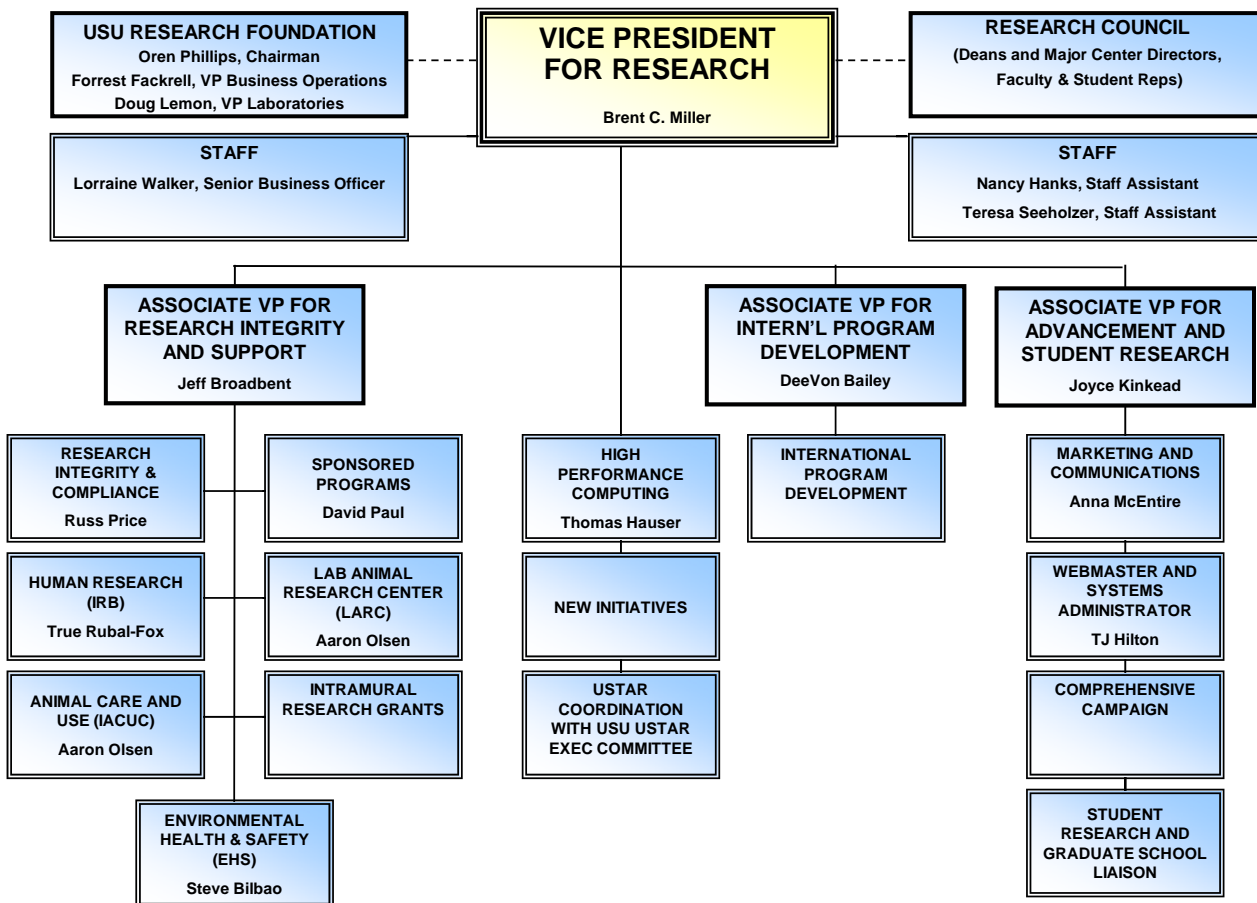
The VPR needs to be actively engaged in professional networks and with societies that have the advancement of research as their mission. The VPR also must be engaged with external constituencies, including local and state elected officials, as well as federal and industry funding sponsors to advance university research.

## **ANNUAL REPORT**

This annual report to the Faculty Senate covers the major activities of the Research Office and the Research Council from July 1, 2007 through June 30, 2008. It is a summary of all units for which the VPR has responsibility. It also includes a summary of units for which the Office of the Vice President for Strategic Ventures and Economic Development is responsible. This report is organized in five parts:

1. Overview of the VPR Office and Related Service Units
  - A. Institutional Review Board
  - B. Laboratory Animal Research Center
  - C. Environmental Health and Safety Office
  - D. Sponsored Programs Office
  - E. International Program Development
  - F. Center for High Performance Computing
  - G. Advancement & Activities of Student Research
  
2. Overview of the VP SVED and Related Strategic Units
  - A. Innovation Campus
  - B. Technology Commercialization Office
  - C. USTAR
  
3. Research Council Membership and Functions
  
4. Use of Facilities and Administration (F&A) Funds at USU, FY2007-2008
  
5. Selected Research Initiatives

## Utah State University Vice President for Research Organization



### 1. OVERVIEW OF VPR AND RELATED SERVICE UNITS

The VPR was responsible for the units shown in the previous diagram during fiscal year 2007-2008. The USU Research Foundation (USURF) is a wholly-owned subsidiary of the university. It is a major organization with large-scale research programs, most notably the Space Dynamics Laboratory (SDL). A cooperative working relationship with the Research Foundation is essential for accomplishing the research mission of the university. The USU Research Council advises the VPR, providing a forum for considering major research issues.

#### A) Institutional Review Board (IRB)

The IRB is charged with protecting the rights and welfare of human research participants. All research involving human participants, including unfunded research, must be reviewed in accordance with the Code of Federal Regulations. USU has a Federal Wide Assurance with the Office of Human Research Protections that commits USU to comply with federal regulations governing human participants in research and which is required

for Department of Health and Human Services-funded research. This Assurance is renewed every five years.

The IRB currently has a pending application to the Association for the Accreditation of Human Research Protection Programs (AAHRPP). This organization evaluates the institution's Human Research Protect Program (HRPP), and the IRB is one key component. There are 77 required elements to obtain accreditation; 31 center on IRB responsibilities, including the evaluation of the IRB membership. Preparation for this application took approximately two years. The purpose of this accreditation is to strengthen the HRPP through effective practices by means of sound policies and procedures, continually raising the ethical standards in research, and documenting practices to assure a commitment to quality improvement and protection for research participants. An extensive evaluation process was performed internally by the IRB Office and the Office of Compliance Assistance. Through these reviews the HRPP and associated IRB processes were assessed, and extensive changes were implemented.

Some of the most significant changes made as a result of the accreditation process have been:

- Increased monitoring and measurement of HRPP activities and outcomes to provide for continuous improvement of IRB and other university processes
- Implementation of an Institutional Conflict of Interest policy at USU
- Implementation of a more rigorous scientific validity review process in the departments and colleges
- Increased attention to non-compliance and unanticipated problems associated with human research
- Increased emphasis on documentation of the IRB review process, discussions and decisions
- Bifurcation of the Standard Operating Procedures into two publications – one focused on IRB procedures (the SOPs) and the other on information pertinent to investigators (the Investigator Handbook).

The IRB consists of volunteer members with diverse experience to provide an adequate and comprehensive review of USU research activities. Regulations require that an IRB have at least one scientist, one nonscientist, and one member not affiliated with the institution; terms of service are three years and can be renewed.

USU IRB board members are:

- Kim Corbin-Lewis ( interim chair) – COMDDE
- Thorana Nelson (Vice-Chair) - Department of Family, Consumer, and Human Development
- True Fox – IRB Administrator
- Gretchen Gimpel Peacock - Department of Psychology
- Richard Albiston - Prisoner Advocate
- John Allen - Department of Sociology, Social Work and Anthropology

- Melanie Domenech-Rodriguez - Department of Psychology
- Nick Eastmond – Instructional Technology
- Joanna Endter-Wada - Environment and Society
- Chris Fawson (alternate) - Department of Economics
- Richard Gordin - Department of Health, Physical Education and Recreation
- Stacey Hills - Department of Business Administration
- Stuart Howell - Community Representative
- Mike Monson (alternate) – Community Representative
- Bob Morgan - Department of Special Education and Rehabilitation
- Ron Munger - Department of Nutrition and Food Sciences
- Russ Price (ex officio) - Compliance Assistance
- Dr. Ed Redd - Deputy Director of the Bear River Health Services
- Noreen Schvaneveldt - Department of Nutrition and Food Sciences
- Tim Slocum (alternate) - Department of Special Education and Rehabilitation

The IRB meets at least once per quarter, and more frequently if needed, to review protocol applications requiring regulatory approval. Certain research protocols do not require full board review and can be classified as “Exempt” or “Expedite.” All reviews follow criteria provided in the federal regulations. All on-going research projects are reviewed yearly; however, if there is more than a minimal risk, the continuation research reviews may be more frequent. Any proposed change or revision to a currently approved study that affects human participants must be reviewed and approved by the IRB prior to the implementation of that change. A special Amendment/Revision document is required from the PI.

The IRB Office documents compliance with federal regulations by maintaining a database of all research protocols submitted and of actions taken by the board.

Written policies and procedures established by the university and congruent with federal guidelines have been instituted to address procedures such as yearly continuing review, reporting of unanticipated problems, changes in research methods and objectives, and researchers’ conflict of interest. An IRB Handbook is on the VPR Web site at <http://irb.usu.edu/>

The IRB Administrator is actively involved in implementing revised federal procedures and updating USU procedures; providing continuing education for faculty, students, and board; and helping to coordinate ethics-in-research training for researchers and IRB members. Appendix E illustrates the number of IRB research applications by types of review categories from 2004 through 2008.

## **B) Laboratory Animal Research Center (LARC)**

The primary mission of the LARC is to support university animal research, testing, and teaching by providing resources for animal procurement, housing, husbandry and care, health care, and disposal. Space is also provided for researchers to conduct short- and long-term research. The LARC staff is also a resource for expert information on the use

of live animals in research and teaching. The LARC is an accredited by the Association for Assessment and Accreditation of Laboratory Animal Care (AAALAC) International, is public Health Service (PHS) assured, and is a United States Department of Agriculture (USDA) registered animal research center.

The permanent LARC staff consists of the following: A director (A. Olsen), who is a Utah-licensed and USDA-accredited veterinarian and is a member of the American Association of Laboratory Animal Practitioners and the American Association of Laboratory Animal Science; a full-time supervisor (K. Udy), who is a certified Registered Laboratory Animal Technologist by the American Association of Laboratory Animal Science; a full-time secretary (B. Demler); one full-time animal caretaker (T. Lauritzen); and a part-time animal caretaker (L. Potter). There are also part-time students employed who work in the washroom and provide basic animal care. In exceptional cases, researchers provide part or all of their own animal care. The Director (Olsen), full-time supervisor (Udy) and secretary (Demler) have shared assignments with the Institutional Animal Care and Use Committee (IACUC).

Major accomplishments for FY2008:

- The USDA inspector found the LARC to be in full compliance during the annual facility inspection.
- All available animal space is occupied.
- Capital equipment upgrades continue. Federal funding is being sought to purchase additional equipment.
- Remodeling was completed to upgrade the facility for additional work in the antiviral program.

### **C) Environmental Health and Safety Office (EH&S)**

The EH&S Office provides expertise and guidance for compliance with federal, state, and local safety and health regulations, as well as current professional practices and guidelines. Its goal is to prevent injuries, illnesses, and environmental damage through the recognition, evaluation, and control of potential hazards arising from university activities. This is accomplished through services that ensure a safe and healthy environment for all students, faculty, and staff at USU and the surrounding community. Services include assisting in compliance with regulations and training university personnel and students in appropriate safety measures. General areas of focus include biological, radiological, occupational, and chemical health and safety.

The EH&S Office interacts with many governmental regulators in the course of normal business, including: Environmental Protection Agency (EPA), State of Utah-Department of Environmental Quality (DEQ), Division of Radiation Control (DRC), Occupational Safety and Health Administration (OSHA), Centers for Disease Control (CDC), and the National Institutes of Health (NIH). Many of these entities perform routine and unannounced inspections and require written programs, documented training, permits, and numerous reports of differing types that the EH&S Office completes on behalf of the university.

Responsibilities of the EH&S program cross many traditional aspects of the campus community. In FY2008, EH&S accomplished the following:

- Transported, managed and disposed of approximately 74,101 lbs. of hazardous waste, 1,335 lbs. of biological waste, approximately 2,750 lbs. of radiation waste, and recycled 86,071 lbs. of hazardous materials.
- Continued application of the radioactive waste volume reduction plan resulted in cost savings by reducing the amount of waste shipped off-site for disposal by 95 pounds.
- Provided safety training to approximately 574 faculty, staff, and students in 36 courses.
- Provided Logan City Fire Department 435 pre-incident plans for campus buildings. Provided Geographical Information System (GIS) emergency response data for all academic units (100% complete), non-academic units (100 buildings complete), and for SDL (100% complete). Provided 7 Emergency Response Map Books and 10 building evacuation plans.

#### **D) Sponsored Programs Office (SPO)**

The USU Sponsored Programs Office (SPO) is responsible for supporting and protecting the university and individual researchers as they propose, submit, and administer externally funded sponsored research projects. This role puts SPO in a unique situation to interact with virtually every college, department, research center, and administrative unit at USU. Further, the interdependent nature of contracting requires strong accountability if research endeavors are to be successful. Therefore, SPO makes every effort to provide the excellent service, effective resources, timely responsiveness, and accountability necessary to not only promote a successful research environment, but also to build the strong relationships necessary to promote continued research growth.

Some of the specific responsibilities of SPO include providing training and workshops, budgeting and proposal development assistance, assisting in the completion of mandatory internal and external forms, communicating and negotiating with sponsors to develop mutually advantageous agreements that protect the researchers as well as the university, and administering awards. Consequently, SPO has offered and will continue to offer workshops for grant writing, locating funding opportunities, industry contracting, and electronic research administration. SPO also offers a Compliance Professional Educational Program to communicate university, federal and state regulations, policies and procedures to promote compliance and consistency throughout the university.

SPO fosters research at the university by helping researchers to develop and submit proposals that have the highest likelihood for success. To accomplish this, SPO provides the following services: budget development, interpreting contractual terms and

conditions, completing required forms, grant editing, tracking pending proposals, notifying researchers upon award, and negotiating award terms and conditions with sponsors to protect the researcher and university. SPO also works closely with the Controller's Office to ensure that accounts are set up properly and that USU is compliant with federal and state regulations, sponsor-specific terms and conditions, as well as University policies.

A single point of contact approach allows researchers to easily identify their assigned SPO administrator. Further, this approach allows each SPO administrator to become more familiar with sponsor-specific regulations as well as to familiarize themselves with individual researchers and their unique needs. SPO has also developed an excellent working relationship with the Controller's Office creating a team approach for pre- and post-award functions that further supports research efforts.

SPO continues to update its website (<http://spo.usu.edu>) to enhance proposal development, provide more user-friendly interfaces, and making information more accessible and easier to locate. SPO policies and procedures are posted on the web and additional policies and procedures continue to be developed and published. Some new features and information available on the website include: guidelines for industry contracting; distinguishing between gifts, grants and contracts; export control; and resources for graduate/undergraduate students. SPO is also working on a step-by-step guide for PIs that provides information to simplify the entire grant lifecycle process (i.e. from locating funding opportunities to closeout procedures).

SPO provides monthly reports to the VPR regarding the status of research proposals and awards at Utah State University. Appendix A provides a summary of Sponsored Program Awards, FY2004 through FY2008. Appendix B compares awards by month and type of award for FY2007 and FY2008. Appendix C provides a summary of Sponsored Program Awards by Awarding Agency, FY2004 through FY2008; and Appendix D provides a summary of Sponsored Program Awards by Research Center, FY2004 through FY2008. Note that awards in the Colleges of Agriculture, Engineering, and Science (Appendix A) were much lower in FY2005 than FY2004, mostly because USURF awards were removed from colleges and shown separately for the first time in FY2005. Note also that total awards were about \$40 M lower in FY2005 than FY2004 (\$122 M vs. \$162 M). This is largely due to the cancellation of RAMOS, the largest program at Space Dynamics Laboratory at that time.

#### **E) Office of International Program Development (OIPD)**

OIPD was actively involved in a variety of faculty-led international projects and activities during the last fiscal year. Among them are:

##### Middle East Water and Livelihood Initiative

Initiative led by Scott Christiansen at the International Center for Agricultural Research in Dry Land Areas (ICARDA). Five U. S. universities (Florida, TAMU, Illinois, Cal-Davis, and USU) are involved along with seven countries (Yemen, Palestine, Lebanon,



Egypt, Jordan, Iraq, and Syria). Areas of focus include: water, livestock, horticulture, socio-economics, and extension. The first year of funding provided \$500,000 to develop the proposal (\$40 - \$50 million over ten years is the target).

#### Iraq Agricultural Extension Revitalization (IAER)

Texas A&M University is the lead institution with this project. USU's portion is related irrigation and has resulted in a two year extension (~ \$500,000 to USU) with training to take place in Baghdad.

#### Global Livestock-Climate Change Collaborative Research Support Program (GL-CRSP)

Project centered in Ethiopia and Kenya with Layne Coppock as PI. Due to funding gap, this is the last year of funding after eleven years (\$200,000 this year compared to \$600,000 in previous year). Funding is being pursued (Gates, USAID) and the Global Livestock-Climate Change Collaborative Research Support Program (GL CRSP) is in development.

#### Early Childhood Development

This project in Jordan is led by Vonda Jump (Center for Persons with Disabilities). Vonda has completed one visit thus far and the work is progressing well. Future seminar on CPD capabilities will take place. (~ \$450,000 over three years)

#### El Alto-Lake Titicaca Pollution Management

Project is through International Resources Group (IRG) with Wayne Wurtsbaugh representing USU as a participant. USU's portion focuses on bio-diversity (\$100,000 - \$150,000 over 18 months).

#### Irrigation Assessments for Millennium Challenge Corporation

Bob Hill and Gary Merkley represent USU and are partnered with USDA/Foreign Agricultural Services in Moldova (\$287,995) and Burkina Faso (\$299,824).

#### USDA, FAS GIS Training Workshops

One session held in Amman (Doug Ramsey is USU participant), with other sessions planned (~ \$50,000).

#### China Initiative

- Biotechnology and Extension (Noelle Cockett is the PI). Federal funding of \$450,000 with money being divided between USU departments of ADVS (Ken White), PSC (Roger Kjalgren), and Extension (Noelle Cockett).
- In process of planning research and teaching activities

#### Projects in Development

- NASULGC Africa-U. S. Higher Education Initiative
  - University Cheikh Anta Diop de Dakar (UCAD) in Senegal
  - University of Bamako in Mali
- Restoration of Gorangosa Game Park in Mozambique (Greg Carr)
  - <http://www.cbsnews.com/video/watch/?id=4546597n>

- Watershed monitoring systems in Ethiopia (Government of Ethiopia) – Letter of Interest CPD, LDS Church, and Asian Development Bank.

## **F) The Center for High Performance Computing (HPC)**

The HPC was established in FY2006 utilizing funds from an NSF major research instrumentation (MRI) grant and the research office. A 256-processor cluster with three different networks was purchased. Thomas Hauser (faculty member in Mechanical and Aerospace Engineering) continues as the part-time center director, and Nate Benson was hired from Flying J Corporation as HPC's system administrator to support the efforts of the center.

Major accomplishments for FY 2008:

- HPC director Thomas Hauser and HPC undergrad and graduate researchers developed and lead the Utah Advanced Computing Summer Institute at SUU in August 2008. Attendees from throughout Utah, including the governor's science advisor Tamara Goetz, learned HPC techniques and were introduced to the power of HPC resources in supporting research.
- HPC@USU again collaborated with Uof U and SUU to attend SC08 in Austin Texas. USU undergrad and graduate students presented research posters, attended workshops and enhanced their expertise in HPC capabilities.
- Thomas Hauser organized and chairs the Utah Cyber Infrastructure Committee which includes partners from UoU, WSU, UVU and SUU. The purpose of the committee is to promote, organize and seek funding to develop cyber infrastructure in support of research and collaboration in Utah and beyond. In 2008, Thomas Hauser presented Utah Cyber Infrastructure accomplishments to the state legislature.
- The HPC utilized its visualization and access grid laboratory to provide faculty and students with resources for high-resolution visualization, remote collaboration through the Access Grid, and three-dimensional visualization. In addition, high end workstations are available for faculty and students for data analysis, and pre-/post-processing. This laboratory is successfully used for distance education engineering and visualization classes.
- The HPC increased its disk storage capacity from about 10TB to 90TB.
- HPC director Thomas Hauser was a co-organizer of the CASC and Educause CCI-WG sponsored workshop "Developing a Coherent Cyberinfrastructure from Local Campus to National Facilities: Challenges and Strategies"
- As a service center, HPC is available to collaborate with USU faculty and researchers to quickly and efficiently offer cost-effective HPC solutions to

support USU researchers. Current users include researchers in the colleges of Agriculture, Engineering, Natural resources, and Science.

### **G) Advancement & Activities of Student Research**

Undergraduate research has become one of the primary marketing messages for Utah State University, particularly in recruiting highly talented prospective students. The culture that allows students to “get their hands on research” at an early point in their undergraduate career brings benefits to students and also national recognition to Utah State University. Key to this success is the faculty, who have an ethic of working with undergraduates.

Support was provided to 56 undergraduates through the Undergraduate Research and Creative Opportunities (URCO) Grant Program in FY2008. The interest in URCO and the funding needed has nearly doubled in the past few years; however, the Undergraduate Research Advisory Board has recommended that we investigate increasing the maximum award to take into account increased cost of materials. The URCO Program is one of the oldest in the nation and has funded 500 undergraduates since its inception in 1975. URCO alumni are the basis for a new fund-raising effort to support the undergraduate research program.

The 8th annual, Research on Capitol Hill event, designed to illuminate the effect of a research university on undergraduate education, featured 42 Utah State students and a similar number from the University of Utah. In the second annual Utah Conference on Undergraduate Research (UCUR), hosted on the Utah Valley State College campus, 26 USU students presented, joining almost 300 students from practically every institution of higher education in the state. Sixteen USU students were accepted to present at the National Conference on Undergraduate Research (NCUR) held at Salisbury University in Maryland in April, 2008.

Student Showcase, which is part of our annual Research Week, featured the most undergraduates in its history, topping out at over 100 posters and presentations. At noon, eight undergraduate researchers, representing each college as well as the regional campuses, were recognized with the newly-endowed David and Terry Peak Undergraduate Researcher of the Year Award. Likewise, outstanding faculty mentors for undergraduate research were recognized. The student award was also featured at Robins Awards Ceremony, where Adam Kynaston, a psychology major, was designated as the inaugural University Undergraduate Researcher of the Year.

An Undergraduate Research Advisory Board, chaired by Associate Dean of Science Lisa Berreau and including faculty and student membership from each college and the regional campuses was convened to identify the successes and opportunities for undergraduate research. The URAB made a report to Research Council outlining the following needs: increased funds for URCO Grants; increased opportunity for students in the humanities, arts, and social sciences; improved communication and contact regarding undergraduate research for each department and college; support for interdisciplinary projects; support for international projects.

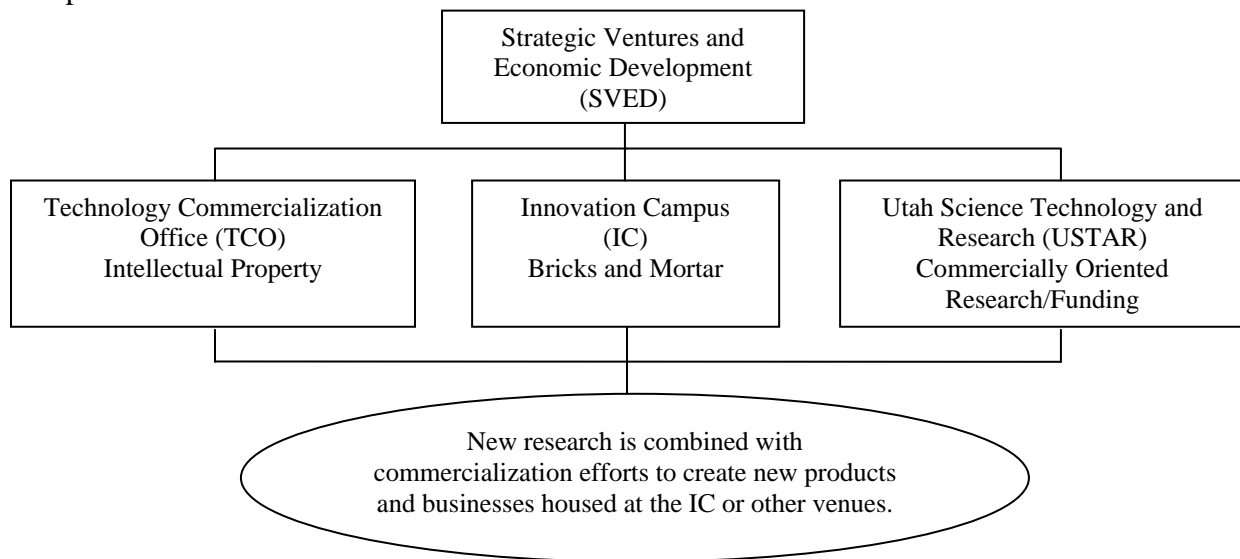
The Undergraduate Research Program was commended during the Northwest Council on Colleges accreditation visit in October 2007. Joyce Kinkead, Associate Vice President, who oversees Undergraduate Research, was elected to the Undergraduate Research Program Directors Division of the Council on Undergraduate Research (CUR) for a three-year term; Kenneth Bartkus, Director of Undergraduate Research for the Huntsman School of Business was elected to a term in the Social Sciences Division. Kinkead, Bartkus, and Alexa Sand gave a presentation on Undergraduate Research in the Arts, Humanities, and Business at the 2008 CUR Convention. Bartkus was also recognized for his article about the innovative Research Group by the American Association of University Administrators in June 2008.

The signature program of undergraduate research, the University Undergraduate Research Fellows, chose its fifth cohort in March at Scholars Day. Research Fellows number over 100 and have led the campus in prestigious awards such as the Goldwater Scholarship. As a result of the Fellows Program, students are presenting earlier at professional conferences and other undergraduate events and being more competitive for external awards.

**2. OVERVIEW OF VPSVED AND RELATED STRATEGIC UNITS**

In July 2006, President Albrecht hired Ned M. Weinshenker, as the Vice President for Strategic Ventures and Economic Development. Ned has a broad experience in the start-up and development of multiple companies in the pharmaceutical industry along with 7 years as a venture capitalist.

The mission of Strategic Ventures and Economic Development is to enhance University driven economic development by coordinating three important initiatives: USTAR and other University research, the Technology Commercialization Office, and the Innovation Campus. Combining these three functions under a single management umbrella allows for a streamlined process to support the evolution of research to patent to spinout companies or licenses to existing companies.



## **A) INNOVATION CAMPUS (IC)**

The Innovation Campus is an effective working environment to conduct knowledge-based research for state-of-the-art technology enterprises, research institutes and laboratories. The Innovation Campus fosters partnerships between the University, business, government and the community, thus enhancing research opportunities and technological development. Tenants at the Innovation Campus have access to the expertise and services of USU's research faculty and graduate students.

Although Space Dynamics laboratory has constructed new buildings in the past few years no new developer owned buildings have been constructed for several years. In addition, the IC was granted rights to expand from 38 acres to 150 acres as some Ag Experiment Station activities move to other Cache Valley locations. Therefore a plan has been initiated to begin the process to attract more interest in the IC. Significant additional development is expected during calendar year 2009 after plans to begin building in 2008 were postponed due to financial conditions. In addition, actions are underway to sell USU's leasehold interest in two buildings to a syndicate headed by Woodbury Corporation. This adds to two other buildings that were sold to Woodbury in 2007. It has been determined that this is in the best interest of the University and the Innovation Campus. The IC is not the best entity to manage rental buildings and has been running at a loss for several years. The cash infusion from the sale will allow USU to fund other IC and research projects to foster economic development. The USTAR initiative also called for the construction of a research building of at least 100,000 SF and it was decided to place it in the IC. As part of that plan USU had to contribute \$10MM to the \$60MM from USTAR so a decision was made to make an existing USU building an in-kind donation for the funding match. This provided immediate space for USTAR teams and initiated the planning process for another new building. The total USTAR building space is expected to be in excess of 125,000 SF and will be part of a 10 acre portion of the IC set aside for USU use. The plan for the new USTAR building is complete with the design/build stage underway. Groundbreaking is expected to take place in October 2008 and foundation will be poured starting early February 2009. Completion and occupancy is expected in 2011.

As the technology and research develops and commercializes, new companies will be created and developed adjacent to and within the expanding Innovation Campus.

## **B) TECHNOLOGY COMMERCIALIZATION OFFICE (TCO)**

The TCO complements the instructional and research activities of USU and expands the University's impact on society by commercializing technologies developed at USU. Once technologies are commercialized for public use and benefit they provide additional income to the University and its partners.

Translating University research into commercial products and services is a multi-step process that requires a major transition from a research environment to a commercial business environment. The key to managing this process is having tech-savvy business people who can bridge this "commercialization chasm." The technology commercialization process also

requires three keys for success: a robust technology addressing clearly defined needs, knowledgeable business people, and financing of early stage ventures.

TCO strives to extract the fair market value of intellectual property by using the best business practices for the benefit of the inventor, the University, the Research Foundation, and the community. By effectively commercializing technology, TCO provides additional revenue to the University, its departments, faculty, and staff. Additionally, the TCO creates potential for local job creation through forming new businesses. Each member of the staff combines business experience with a strong science and technology understanding. The TCO is committed to serving the interests of Technologists, Companies, and the Organization. In FY 2008 TCO accomplished the following:

- Collected license revenue of \$525,316
- Executed 11 licenses
- Invention Disclosures increased to 67 from 62 the previous year
- Filed 26 patent applications – 20 of which were new technology (See Appendix F)
- Received five patents:
  1. A Method for Modeling Material Constitutive Behavior  
Patent # 7,240,562 B2 -Ning Fang and Thomas Fronk
  2. Thermoacoustic Cooling Devise  
Patent # 7,263,837 – Barton Smith
  3. Infinite Impulse Response Multiplierless Digital Filter Architecture
  4. Patent # 7,289,558 – Tamal Bose, Alan Shaw, Chirag Sharma, Kay Thamvichai
  5. Improved IBR Functions  
Patent # 7,290,669 – Conly Hansen, Carl Hansen
  6. Novel Anti Bacterial Compounds  
Patent # 7,371,733 – Tom Chang

### **C) UTAH SCIENCE TECHNOLOGY AND RESEARCH INITIATIVE (USTAR)**

USTAR is designed to increase the flow of university-driven economic development. This will benefit not only the University, but the entire state of Utah through the accelerated growth of new businesses and industries in Utah, which will create high-paying jobs and increase tax revenue.

Research focus areas will be recommended by Utah State and approved by the USTAR Governing Authority as those areas most likely to create a large return on investment. At USU, three areas were previously identified and funded: Sustainable Energy Research Center, Center for Active Sensing & Imaging and Center for Advanced Nutrition, with others currently in planning stages. In FY08 three additional teams were approved for FY09. They are Space Weather, Synthetic Bio-Manufacturing Center (SBC), and High Flux Neutron Generation.

The funding for USTAR is to be used for three specific functions, those being:

- 1) Hiring new faculty who are entrepreneurial and commercially-oriented to operate synergistically with the existing expertise at USU.
- 2) Building state-of-the-art facilities to house the research. The programming for the second USTAR building at USU is completed and groundbreaking is expected to occur in October 2008; occupancy planned by Q1 2011.
- 3) Creating outreach, not only from entrepreneurs to university researchers, but also from researchers to the entrepreneurs, fostering as much university-driven economic development as possible.

### **3. RESEARCH COUNCIL MEMBERSHIP AND FUNCTIONS**

The Research Council provides advice and recommendations to the Vice President for Research. Additionally, members of the Council provide direct and important channels of communication between researchers and those who make decisions affecting research at USU. Members of the Research Council are college deans or their representatives, and selected center/lab directors as specified by the University code of policies and procedures. Appendix G is a current membership list of the University Research Council. This group meets about once a month to discuss and make recommendations on research issues.

The following is a summary of major issues addressed by USU's Research Council in FY2008:

- Accreditation Activities - The Human Research Protection Program (HRPP) protects the rights and welfare of human participants in university research activities. At USU this program encompasses many different institutional levels organized under the Vice President for Research. USU's IRB has an essential role in this program to review and monitor human research under USU policy and assure USU personnel receive on-going training and certification before any human research begins. USU decided to apply for accreditation of its HRPP through the Association for the Accreditation of HRPP (AAHRPP). Benefits of AAHRPP accreditation include:
  - Increased protection of human participants in research programs
  - Streamlined process for USU researchers
  - Meeting the expectations among agencies
  - USU's differentiation as an accredited non-medical land-grant university
  - Less likely audits and investigation

USU completed the pre-application in October 2007 with the final application submitted on March 5, 2008. The accreditation site visit is scheduled for October 2008 and USU hopes to receive accreditation when the AAHRP Council meets in June 2009.

- New Faculty Research Orientation - Thirty-six of the thirty-nine new faculty hires attended this orientation on August 16, 2007. Orientation covered the following focus areas: 1) Student Research, 2) Grant Administration, 3) Funding Opportunities, 4) Research Integrity, 5) I.P. & Tech Commercialization, 6) Environmental Health & Safety, 7) IRB and Human Research, and 8) Animal Welfare. From faculty feedback, this orientation was very successful and the agenda for 2008 will be modified to also address policies and procedures pertaining to human subjects. The goal is to help new faculty be more successful and provide information on how to avoid problems that may arise with compliance related issues.
- Undergraduate Research Advisory Board –This new board was established at USU in October, 2007, with Lisa Berreau, Associate Dean in the College of Science, appointed as Chair. Representation includes each college, students, library, Honors Office, Provost Office, V.P. for Research Office, and the USU Chapter of Sigma Xi. This Board has been organized to expand ideas on current successes as well as ideas that will improve undergraduate research at USU. See presentation of activities and recommendations from Research Council (October 2007 & November 2008) minutes. Website reference: [http://research.usu.edu/htm/research\\_areas/research\\_council/minutes](http://research.usu.edu/htm/research_areas/research_council/minutes)
- Undergraduate Research Advisory Board –This new board was established at USU in October, 2007 with Lisa Berreau, Associate Dean in the College of Science, appointed as Chair. Representation includes each college, students, library, Honors Office, Provost Office, V.P. for Research Office, and the USU Chapter of Sigma Xi. This Board has been organized to expand ideas on current successes as well as ideas that will improve undergraduate research at USU.
- Reimbursed Overhead on State & Local Government Contracts – The effective rate is a critical part of recovering the costs of research. As indirect cost funds are collected, USU is able to invest in seed programs, startup packages, and equipment. Unfortunately, USU's current effective rate of 15.4% is very low as compared to USU's peer institutions. The State of Utah policy, R537 – Reimbursed Overhead on State and Local Government Contracts, outlines the following: *Institutions of higher education shall charge, as partial reimbursement of costs incurred, a ten percent overhead rate on all contracts with state and local government agencies funded from non-federal sources, unless an overhead charge is expressly prohibited in the RFP issued by the state or local government agency.* This policy also addresses “flow through federal funds”, and clarification on retaining ten percent overhead on all contracts from non-federal sources. USU has some cases with federal flow through funds, but faculty (and agencies) will relay that the contract doesn't carry any overhead. This outcome significantly hinders USU's ability to recover indirect costs and reduces available funding for startup packages and seed grants. This information was relayed to the colleges to help assure the R537 policy is followed so USU can collect the full overhead where possible.
- Center of Excellence Program (COEP) Applications and Review Procedures - The Governor's Office for Economic Development (GOED) implemented significant changes to available COE funding for FY2009 as follows:



- No new university centers will be awarded in the next fiscal year, but existing centers may apply for yearly renewal.
- Available funding will be targeted to companies who are a licensee under a university within the state.

USU's Electrical and Computer Engineering Department will be able to participate in the FY2009 funding proposal phase, but many questions remain with this funding decision as the program now resembles a Small Business Innovation Research (SBIR) concept. These new changes to the COE proposal process are firm for FY2009.

- Shared Credit for Co-Investigators on Joint Projects –Research Council participants, along with several college representatives, requested that USU's reports associated with sponsored program efforts be adjusted to more accurately reflect contributions of individual faculty members. Current University practice has been to allocate credit for an entire research project only to the project's principal investigator. This has resulted in under reporting research awards and proposal information, as well as research expenditure data, for some colleges and over-reporting in others. This reporting method can negatively impact the colleges as program support to the individual college is prorated based upon the amount of indirect cost generated by the college in relation to the other colleges. Improvements were implemented that included the USU transitioning to a web-based portal to allow proposal and award changes/updates in a timely manner. The SP01 form was also modified to include fields where investigators can now designate when a budget split is necessary.
- Graduate Student Health Insurance - First Risk (part of United Health Care) was selected as USU's graduate student health insurance vendor. Coverage was implemented around August 15, 2008; however, graduate students who arrived in FY2008 were given coverage options at a pro-rated amount. This coverage is mandatory for graduate students. Should a graduate student have other insurance coverage, they are required to provide proof of alternate insurance in order to bypass this coverage.
- Responsible Conduct of Research (RCR) Training - USU's interest in RCR training stems back to 1992 when the federal government passed a requirement that anyone receiving a NIH training award was also required to acquire RCR ethics training. In 2000, NIH sought to extend that requirement to all grantees, but it was later suspended. In 2004, USU began to offer a Research Integrity course (6900); however, the course has received low participation. In 2007, Byron Burnham, School of Graduate Studies dean, approached the research office to discuss the possibility of the two offices partnering together to expand RCR training at USU. Utah State's RCR training is currently voluntary; however, the America Competes Act, which was passed this last year, increased NSF's budget over the next 3 years. Part of the requirements associated with this new act is that all undergraduate, graduate, or postdoc researchers who are supported by an NSF grant must receive RCR training from their institution. Information will be provided to USU researchers who need this training so that they are aware of the requirement and programs available to assist them. In the future, work will continue at USU to expand the RCR program based on best practices nationally.

- Faculty Activity Data Base – Digital Measures was selected as USU’s vendor to develop a web-based software management tool for data collection. A contract has been signed between both parties and customization and beta testing is underway.
- Fixed Price Contract Procedures - This procedure includes an overview of the Cost Accounting Standard 9905.501 (Appendix A of OMB Circular A-21). A portion of this standard states that on sponsored projects, “Consistent application of cost accounting practices will facilitate the preparation of reliable cost estimates used in pricing a proposal and their comparison with the costs of performance of resulting sponsored agreement.” To assure USU complies with the standard, a process is needed where USU can review awards with significant variance between that which was estimated and actual costs.

When fixed price contracts are awarded, USU is obligated to complete the deliverables regardless of costs incurred during the duration of the contract, thereby subjecting the university to risk. As proposals are submitted on these types of contracts, budgets are therefore adjusted to cover incidental costs that occur in the last period of the contract. Once the project completion date occurs, steps outlined in the procedure would then be implemented to assure consistency in handling residuals.

#### Guest Research Council Presentations in FY2008

The following faculty presented a summary of their research to the Research Council:

- October: Cache Valley Air Quality Inversion Study (Phil Silva, Chemistry & Biochemistry Department)
- November: National Children’s Study (Richard Roberts, CPD/Early Intervention Research Institute)
- January: Parenting Intervention Research with Spanish-speaking Latinos/as in Cache Valley (Melanie Domenech-Rodriguez, Psychology Department)
- February: Center for Active Sensing & Imaging (CASI - Robert Pack, CEE Department)
- March: Animal Models of Drug and Alcohol Abuse (Tim Shahan, Psychology Department)
- April: Prospecting for Paleoindian Sites in Southeastern Idaho (Bonnie Pitblado, Sociology, Social Work & Anthropology)

#### **4. USE OF FACILITIES AND ADMINISTRATION FUNDS AT USU, FY2007-2008**

Facilities and Administrative (F&A) costs are the shared indirect or overhead costs of doing research. The federal government audits actual F&A costs and establishes a rate that the university seeks to recover from sponsors. Recovered F&A funds are used to pay actual indirect costs of research and to stimulate and expand research opportunities.

Appendix H is a report compiled by the Controller's Office that summarizes the amount of F&A generated in FY2007-08 by department; 30% returned to the cost center; and allocations of the 70% held centrally in the VPR Office.

## **5. SELECTED RESEARCH INITIATIVES**

In addition to those items discussed in Research Council, listed below are strategic initiatives that the VPR continues to refine in FY2007-2008:

### Vision and Strategy to Grow Research at USU

In 2007, Vice President Miller introduced a goal to Research Council to increase the volume and competitiveness of USU research by 25% over the next 3 years. A committee, called the Research Focus Group and chaired by Associate V.P. for Research Jeff Broadbent, was formed in March 2007 to recommend initiatives that the Research Office could implement to achieve this goal. The Committee, which included representatives from all colleges, SDL/USURF, and major research centers, issued a strategic plan that recommended implementation of two major initiatives: 1) Restructure VPR seed grants toward more targeted programs with specific missions/goals and expected outcomes; and 2) Establish a network of proposal development specialists to pursue strategic grant opportunities and improve the grant-writing skills and awards won by researchers. To view a summary of the committee's recommendations, please see the link at [http://research.usu.edu/htm/grants\\_funding](http://research.usu.edu/htm/grants_funding).

### Implementation of the Research Focus Group's Recommendations

1. Restructuring of VPR Seed Grants. New Faculty Research Grant (NFRG) and Community University Research Initiative (CURI) seed grant programs have been phased out and replaced with three targeted seed grant programs that have more specific missions/goals and expected outcomes. See Appendix J for a comparison of past programs and the new programs as outlined below:
  - a. Grant-Writing Experience through Mentorship (GEM). The GEM program provides funding of up to \$5,000 to enhance the professional development of junior faculty through one-on-one research and grant-writing interaction with successful senior faculty mentors. The purpose of this program is to build the University's research capability and increase extramural funding for scholarly activities by enhancing the proposal development skills of junior faculty. To facilitate this goal, it is expected that each funded GEM project will result in the development and submission of at least one proposal to an external funding agency. Eligible junior faculty members include all USU tenure-eligible assistant professors and non-tenure track research assistant professors or research professionals with no more than four (4) years in rank who have not previously received a New Faculty Research Grant.
  - b. Research Catalyst (RC). The RC program provides 1-year seed funding of up to \$20,000 to help applicants develop new initiatives or directions in their discipline that will lead to

new externally funded grants. The purpose of this program is to build the University's research capability and increase extramural funding for scholarly activities from government agencies and private sources. Thus, it is required that funded RC projects will directly lead to the submission of at least one proposal to an external funding agency. All tenured or tenure-eligible faculty, research faculty, or other USU research professionals are eligible to apply.

- c. Seed Program to Advance Research Collaboration (SPARC). The SPARC program provides 1-year seed funding of up to \$35,000 to catalyze development of large interdisciplinary research teams and projects that involve scholarly research in more than one department, research center, college or institution. It is anticipated that new projects catalyzed by SPARC will extend the University's research capability and increase extramural funding for scholarly activities from government agencies and private sources. Thus, SPARC proposals require mutual effort by faculty and researchers from multiple disciplines, and directly lead to the submission of a new, large-scale (solicit at least \$1 million in new research funding), interdisciplinary proposal to an external funding agency. All tenured or tenure-eligible faculty, research faculty, or other USU research professionals are eligible to apply.

One major departure from NFRG and CURI seed grant programs is that each of the new seed grants requires the PI to develop and submit at least one proposal to an external funding agency within three months of project completion. Because proposal submission deadlines vary widely among different agencies, funding for VPR seed grant programs is now offered twice yearly, with anticipated start dates of January 1 or July 1. The first request for applications was issued in March of 2007, and generated 2 GEM, 4 SPARC, and 31 RC proposals. Thirteen proposals, including 1 GEM, 2 SPARC, and 10 RC projects, were selected for funding on July 1, 2008.

2. Creation of the Office for Proposal Development (OPD). As part of its review of best practices for growing research, the Research Focus Group examined the services offered by Office of Grant Writing & Publications (OGWP) at the University of Missouri-Columbia. The OGWP has an impressive record of success in helping researchers develop high quality extramural grant proposals that yield more grant awards, and part of this success stems from an annual Grant Writers Institute that provides in-depth faculty training in proposal development. To learn more about the OGWP and how Utah State might implement a similar program, Dr. Mary Licklider, Director for the Office of Grant Writing & Publications at the UM-Columbia was invited to USU in November, 2007, and spent a day with the Research Focus Group. In addition, the VPR sent a USU representative to UM-Columbia in June of 2008 to observe and participate in the OGWP annual Grant-Writers Institute.

As a result of these experiences, the VPR approved the creation of the USU Office for Proposal Development and hiring of a central proposal development specialist that will also serve as OPD manager. The mission of the OPD is to help USU researchers develop stronger and more competitive proposals through: 1) management of the proposal development process on strategically important submissions; 2) training researchers on proposal

development; 3) fostering interdisciplinary collaborations; and 4) providing other services to researchers that will advance their skills and success in obtaining extramural funding.

USU's OPD will be comprised of a network of proposal development staff located in the units across campus. These individuals will provide a variety of services to their college researchers in addition to pooling their efforts on large, institutionally strategic proposals. To promote participation by research units in the OPD network, the VPR will commit 50% of a proposal developer's salary for the first year and 10% each year thereafter to units that wish to hire a proposal developer. Each unit's proposal developer will report not only to their respective units' dean but also coordinate their activities with the Manager of Proposal Development and be expected to support their unit's researchers on proposals as directed by the dean/department head/director and also assist on larger, institutionally strategic proposals under the direction of the Manager of Proposal Development.

### Establishing Research Goals

Increasing the volume and competitiveness of USU research will require an even stronger institutional "culture of research". To promote this change, and encourage unit participation in the new seed programs and OPD, Vice President Miller and Provost Raymond Coward met with each Dean to discuss opportunities and challenges in growing external research, and to develop 3-year goals for extramural funding in each of the seven colleges.

### Research Recognition

There are many awards offered by USU to recognize outstanding researchers. The highest accolade given by USU is the **D. Wynne Thorne Career Research Award**. This annual prize of \$5,000 is given to an individual on the USU campus who has completed outstanding research within the past 5 years. The recipient each year is chosen by a special committee comprised of the 5 previous winners and the Vice President for Research.

The recipient of the 2008 D. Wynne Thorne Career Research Award is Natural Resources professor Fred Provenza. For the past 30 years, Provenza's team has produced ground-breaking research that laid the foundations for what is now known as behavior-based management of livestock, wildlife and landscapes. This research has led to the creation in 2001 of a consortium that includes scientists and land managers from five continents. This consortium, known as BEHAVE (Behavioral Education for Human, Animal, Vegetation and Ecosystem), is committed to integrating behavioral principles and processes with local knowledge to enhance ecological, economic and social values of rural and urban communities and landscapes.

Annually, each of the seven academic colleges selects a **College Researcher of the Year** who is recognized for his or her accomplishments during Research Week. Beginning in 2008, the Vice President for Research has selected the **University Researcher of the Year** from the pool of College Researchers of the Year that are chosen annually by each of the seven academic colleges. The Office of the Vice President for Research oversees a selection committee that includes College Researchers of the Year from prior years. The University Researcher of the

Year is announced at the Robins Awards Ceremony in April, along with the Teacher of the Year, and Advisor of the Year.

**The 2008 USU Researcher of the Year is Engineering professor Jagath Kaluarachchi.** Dr. Kaluarachchi's research specialty lies in ground water hydrology and quality for water resources planning and management. He has become a world expert in the assessment of environmental risks, costs, and benefits associated with the complicated issues of ground water pollution, the fate of ground water contaminants and their implication toward human health risk, and the management of ground water contamination sources to protect public health.

Utah State also works hard to recognize its student researchers. The Student Showcase allows students to share the research and be recognized as an undergraduate researcher. In addition, an Undergraduate Researcher of the Year award called the **Peak Prize** is given annually in each college. Students who complete at least two semesters of undergraduate research can also earn a designation on their transcript. Beginning in 2008, each of the seven Peak Prize winners were invited to the Robins Ceremony, where one was announced as the **University Undergraduate Researcher of the Year**. In 2008, this award went to Adam Kynaston of Psychology.

The **Undergraduate Research Mentor of the Year** Award is also given annually in each college. This award fosters and rewards excellence in involving and guiding students in scholarly research. To qualify, faculty members must demonstrate a sustained record of mentoring undergraduates in research projects, working with students to disseminate the results through professional meetings or publications, and having an impact on students' careers as they move to graduate school or employment.

APPENDIX A

SPONSORED PROGRAM CONTRACT/GRANT AWARDS  
BY COLLEGE<sup>1</sup>

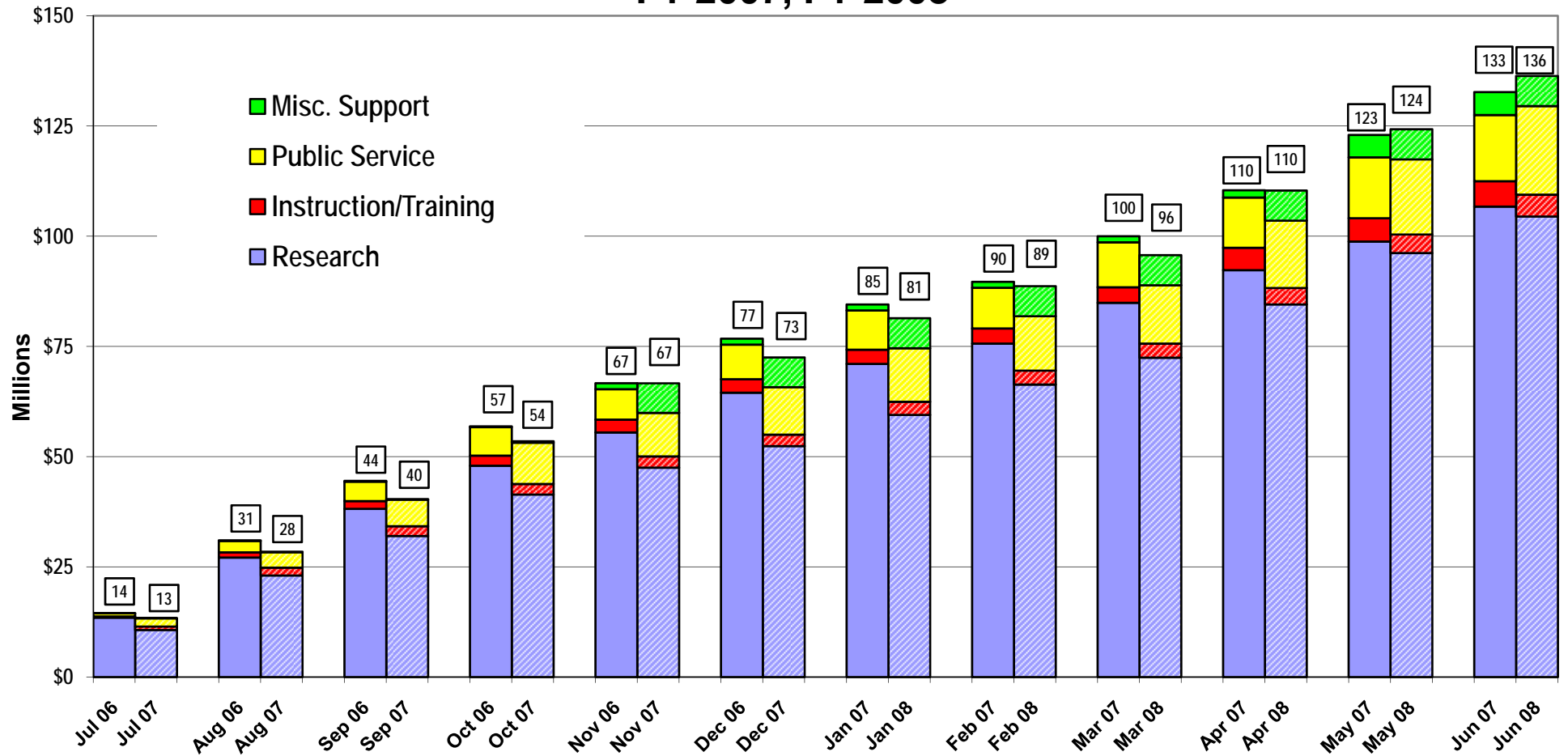
|   | <b>2003-2004</b>            | <b>2004-2005</b>            | <b>2005-2006</b>            | <b>2006-2007</b>            | <b>2007-2008</b>            |
|---|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| Agriculture                             | 33,940,899                  | 13,650,668                  | 16,979,327                  | 12,022,213                  | 15,309,673                  |
| Business                                | 1,773,316                   | 1,985,155                   | 2,373,466                   | 1,334,038                   | 960,504                     |
| Education                               | 25,047,073                  | 25,789,744                  | 20,722,283                  | 22,730,535                  | 18,256,237                  |
| Engineering                             | 70,912,859                  | 9,911,299                   | 10,223,439                  | 13,258,408                  | 15,179,544                  |
| HASS                                    | 703,482                     | 925,631                     | 1,456,615                   | 1,088,437                   | 1,199,615                   |
| Natural Res.                            | 8,024,624                   | 9,786,361                   | 9,684,998                   | 10,482,217                  | 8,200,490                   |
| Science                                 | 14,855,670                  | 10,038,023                  | 8,123,447                   | 7,890,437                   | 8,598,964                   |
| USURF <sup>2</sup>                      | -----                       | 43,566,429                  | 49,353,930                  | 54,000,033                  | 57,557,872                  |
| Other                                   | 8,107,176                   | 7,222,649                   | 5,525,978                   | 10,279,740                  | 11,698,365                  |
| Jointly Admin.<br>Programs <sup>3</sup> | <u>-882,436</u>             | <u>-660,217</u>             | <u>-1,391,647</u>           | <u>-395,158</u>             | <u>-601,324</u>             |
| <b>TOTAL</b>                            | <b><u>\$162,482,663</u></b> | <b><u>\$122,215,742</u></b> | <b><u>\$123,051,836</u></b> | <b><u>\$132,690,900</u></b> | <b><u>\$136,359,943</u></b> |
| Financial Aid-Pell<br>Grants, etc.      | 21,527,791                  | 22,402,674                  | 24,374,592                  | 19,474,007                  | 19,902,221                  |
| <b>Adjusted Total</b>                   | <b><u>184,010,454</u></b>   | <b><u>144,618,416</u></b>   | <b><u>147,426,428</u></b>   | <b><u>152,164,907</u></b>   | <b><u>156,262,164</u></b>   |

<sup>1</sup> College awards include centers most closely aligned with that college (See Appendix D for Center totals).

<sup>2</sup> USURF/SDL awards were first removed from college totals and shown separately in FY2005.

<sup>3</sup> Awards for jointly administered programs are reflected in the total of both colleges involved with these programs. The amount in the jointly administered programs category is an accounting function designed to eliminate double counting of awards.

## Utah State University Sponsored Program Awards FY 2007, FY 2008





**APPENDIX C  
RESEARCH AWARDS  
BY FEDERAL SPONSORING AGENCY (IN DOLLARS)**

|   | <b>FY03-04</b>              | <b>FY04-05</b>              | <b>FY05-06</b>              | <b>FY06-07</b>            | <b>FY07-08</b>            |
|---|-----------------------------|-----------------------------|-----------------------------|---------------------------|---------------------------|
| Department of Agriculture                   | 11,501,852                  | 14,844,728                  | 12,933,403                  | 11,291,025                | 11,313,340                |
| Department of Defense                       | 56,454,422                  | 6,229,055                   | 20,718,470                  | 23,854,478                | 35,294,360                |
| Department of Education                     | 16,776,033                  | 17,795,729                  | 16,683,226                  | 14,080,060                | 14,180,883                |
| Department of Health and Human Services     | 13,327,011                  | 9,568,985                   | 10,997,713                  | 10,488,329                | 11,709,196                |
| Department of the Interior                  | 2,949,134                   | 3,754,104                   | 5,096,481                   | 3,596,782                 | 2,309,079                 |
| Department of State                         | 98,267                      |                             | -                           | 188,281                   | 195,135                   |
| Environmental Protection Agency             | 294,821                     | 643,766                     | 911,386                     | 116,509                   | 0                         |
| National Aeronautics & Space Administration | 24,749,979                  | 24,977,824                  | 23,596,496                  | 21,987,757                | 13,864,987                |
| National Science Foundation                 | 4,510,344                   | 8,761,253                   | 9,331,392                   | 6,099,684                 | 9,525,689                 |
| State Agencies & Others <sup>1</sup>        | 53,348,591                  | 58,042,973                  | 47,157,861                  | 60,461,975                | 57,869,495                |
| <b>TOTAL</b>                                | <b><u>\$184,010,454</u></b> | <b><u>\$144,618,417</u></b> | <b><u>\$147,426,428</u></b> | <b><u>152,164,907</u></b> | <b><u>156,262,164</u></b> |

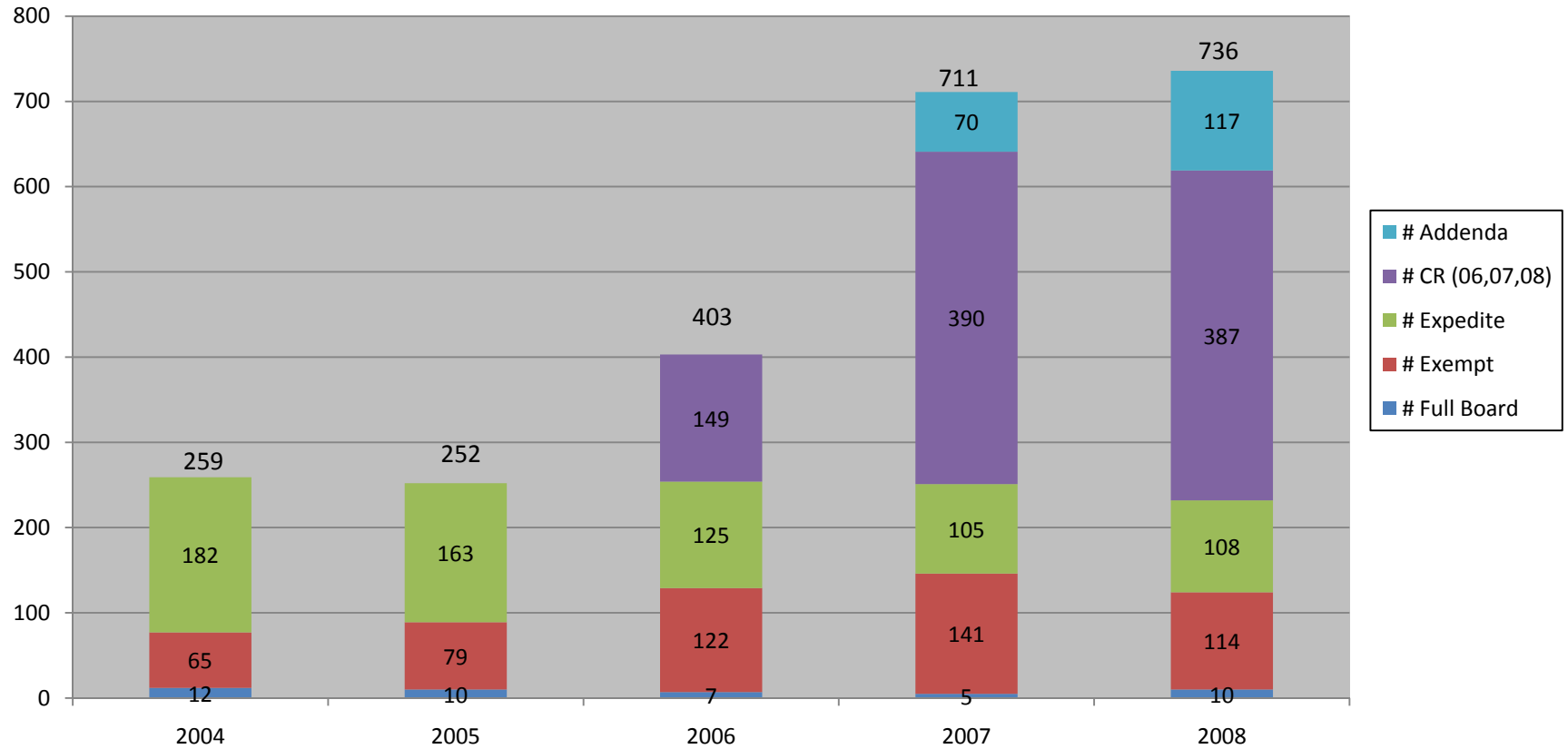
<sup>1</sup>This number is a composite of international banks, state agencies, other federal agencies, local agencies, private industry, and others.

APPENDIX D

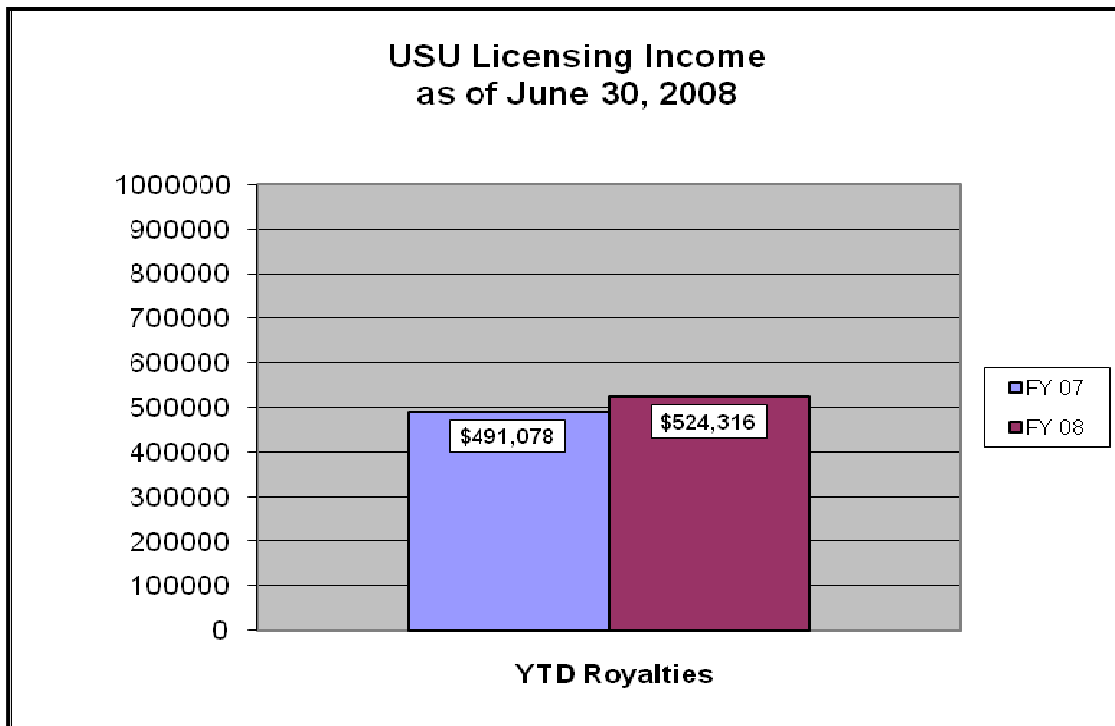
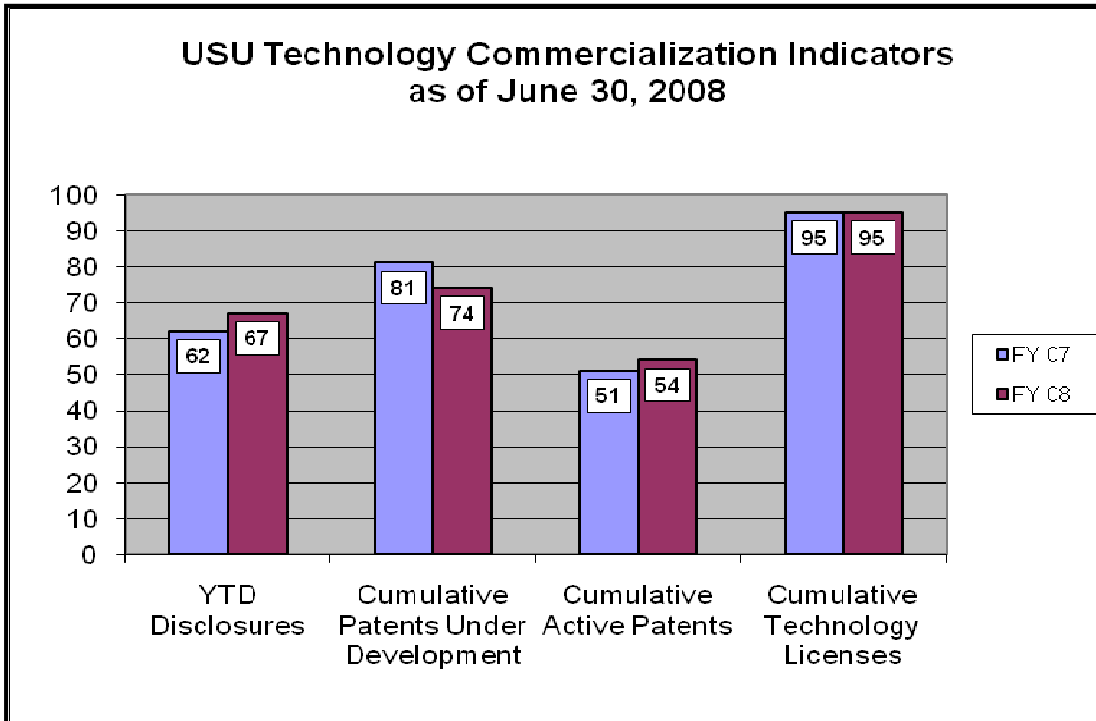
**SPONSORED PROGRAMS CONTRACT/GRANT AWARDS  
BY RESEARCH CENTER**

| <b>RESEARCH CENTER</b>  | <b>FY 03-04</b>             | <b>FY04-05</b>              | <b>FY05-06</b>              | <b>FY06-07</b>              | <b>FY07-08</b>              |
|---|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| Ag. Experiment Station  | 10,891,952                  | 11,605,967                  | 13,881,355                  | 12,933,734                  | 15,064,305                  |
| Center for Integrated BioSystems  | 0                           | 0                           | 0                           | 0                           | 90,000                      |
| CASS  | 1,709,473                   | 1,647,479                   | 537,175                     | 1,226,610                   | 1,134,720                   |
| CPD   | 11,791,164                  | 11,873,218                  | 6,071,622                   | 7,275,949                   | 9,796,797                   |
| Center for Space Eng.<br>(Beginning FY2002, USURF reassigned reporting centers) | 689,420                     | 0                           | 0                           | 0                           | 0                           |
| Cooperative Extension   | 5,771,652                   | 4,339,414                   | 3,242,340                   | 1,761,756                   | 3,355,502                   |
| Ecology   | 2,609,198                   | 2,424,505                   | 3,250,987                   | 2,755,350                   | 2,722,347                   |
| Eng. Experiment Station   | 3,263,631                   | 274,991                     | 558,532                     | 776,561                     | 306,613                     |
| Financial Aid-Pell Grants, etc.   | 21,527,791                  | 22,402,675                  | 24,374,592                  | 19,474,007                  | 19,902,221                  |
| High Performance Computing  | 0                           | 0                           | 0                           | 523,700                     | 33,713                      |
| International Programs  | 0                           | 0                           | 0                           | 0                           | 0                           |
| School of the Future  | 0                           | 0                           | 0                           | 0                           | 0                           |
| Provost   | 76,826                      | 24,699                      | 0                           | 0                           | 0                           |
| Univ. Research & Training   | 35,337,214                  | 44,267,770                  | 44,506,542                  | 45,486,402                  | 41,463,628                  |
| USTAR   | 0                           | 0                           | 0                           | 177,292                     | 250,942                     |
| USURF/SDL   | 86,951,616                  | 43,566,429                  | 49,353,930                  | 54,000,033                  | 57,557,873                  |
| Remote Sensing  | 1,007,343                   | 0                           | 0                           | 0                           | 65,372                      |
| UT Transportation Center  | 0                           | 0                           | 0                           | 1,801,834                   | 460,261                     |
| Utah Water Research Lab.  | <u>2,353,174</u>            | <u>2,191,270</u>            | <u>1,649,352</u>            | <u>3,971,679</u>            | <u>4,057,870</u>            |
| <b>Total USU</b>  | <b><u>\$184,010,454</u></b> | <b><u>\$144,618,417</u></b> | <b><u>\$147,426,427</u></b> | <b><u>\$152,164,907</u></b> | <b><u>\$156,262,164</u></b> |

**Institutional Review Board (IRB)  
New Approved Research Projects by Category and Total  
2004 -2008  
(Continuing Review FY 2007, 2008 and Addenda for FY 2008)**



APPENDIX F



## APPENDIX G

### UNIVERSITY RESEARCH COUNCIL Membership (2007-2008)

|                        |  | Phone<br>Ext. | UMC  |
|------------------------|--|---------------|------|
| Brent C. Miller        | Vice President for Research, Chairman                            | 1180          | 1450 |
| Clifford Skousen       | College of Business  | 2331          | 3500 |
| Jeff Broadbent         | Associate Vice President for Research                            | 1199          | 1450 |
| Byron Burnham          | School of Graduate Studies                                       | 1191          | 0900 |
| Noelle Cockett         | College of Agriculture   | 2201          | 4900 |
| Ray Coward             | Executive Vice President and Provost                             | 1167          | 1435 |
| Jim Dorward            | College of Education & Human Services                            | 1469          | 2800 |
| Mary Hubbard           | College of Science   | 3515          | 0305 |
| Nat Frazer             | College of Natural Resources                                     | 2452          | 5200 |
| Douglas Lemon          | Space Dynamics Laboratory  | 4501          | 9700 |
| H. Scott Hinton        | College of Engineering   | 2776          | 4100 |
| M. K. Jeppesen         | Information and Learning Resources                               | 2630          | 1495 |
| Yolanda Flores-Niemann | College of Humanities, Arts, & Social Sciences                   | 1195          | 0700 |
| Joyce Kinhead          | Associate Vice President for Advancement and<br>Student Research | 1706          | 1450 |
| James MacMahon         | Ecology Center   | 2555          | 5205 |
| Mac McKee              | Utah Water Research Laboratory                                   | 3188          | 8200 |
| Vincent Wickwar        | Faculty Senate   | 3641          | 4405 |
| H. Paul Rasmussen      | Agricultural Experiment Station                                  | 2207          | 4810 |
| Bryce Fifield          | Center for Persons with Disabilities                             | 1982          | 6800 |
| <br><u>Student</u>     |  |               |      |
| Jeri Brunson           | ASUSU Graduate Studies VP  | 1736          | 0105 |

APPENDIX H

31-Oct-08

Utah State University  
 Analysis of Facilities and Administrative Costs Generated and Allocated  
 July 1, 2007 through June 30, 2008

| College or Other Unit                                | Budget<br>Generated | Budget<br>Allocations From<br>30% Return | Budget<br>Allocations From<br>70% Centrally Held | Total Budget<br>Allocations | Budget<br>as a % of<br>Generated |
|--|---------------------|--|--|-----------------------------|----------------------------------|
| College of Agriculture                               |                     |  |  |                             |                                  |
| Dean's Office - Agriculture                          |                     |  | \$ 70,132.00                                     | \$ 70,132.00                | N/A                              |
| Agriculture - Economics                              | \$ 56,389.80        | \$ 16,916.94                             |  | 16,916.94                   | 30.00%                           |
| Agricultural Experiment Station                      | 26,675.59           | 8,002.68                                 |  | 8,002.68                    | 30.00%                           |
| Animal, Dairy and Veterinary Sciences                | 1,002,308.52        | 300,692.56                               | 18,748.00  | 319,440.56                  | 31.87%                           |
| Agricultural Systems Technology and Education        | 2,828.17            | 848.45                                   | 3,400.00   | 4,248.45                    | 150.22%                          |
| Center of Epidemiologic Studies                      | 185,587.55          | 55,676.27                                |  | 55,676.27                   | 30.00%                           |
| Nutrition and Food Science                           | 113,826.36          | 34,147.91                                | 341,100.00                                       | 375,247.91                  | 329.67%                          |
| Plants, Soils and Biometeorology                     | 103,543.85          | 31,063.16                                | 46,748.00  | 77,811.16                   | 75.15%                           |
| Total College of Agriculture                         | 1,491,159.84        | 447,347.97                               | 480,128.00                                       | 927,475.97                  | 62.20%                           |
| College of Business                                  |                     |  |  |                             |                                  |
| Dean's Office - Business                             |                     |  | 82,295.00  | 82,295.00                   | N/A                              |
| Accounting   |                     |  | 15,899.00  | 15,899.00                   | N/A                              |
| Business Administration                              | 83,065.50           | 24,919.65                                |  | 24,919.65                   | 30.00%                           |
| Business Information Systems                         |                     |  | 19,495.00  | 19,495.00                   | N/A                              |
| Economics  |                     |  | 12,750.00  | 12,750.00                   | N/A                              |
| Management and Human Resources                       |                     |  | 18,555.00  | 18,555.00                   | N/A                              |
| Total College of Business                            | 83,065.50           | 24,919.65                                | 148,994.00                                       | 173,913.65                  | 209.37%                          |
| College of Education and Human Services              |                     |  |  |                             |                                  |
| Dean's Office - Education and Human Services         | (25.81)             | (7.74)                                   | 87,855.00  | 87,847.26                   | N/A                              |
| Center for Persons with Disabilities                 | 855,303.07          | 256,590.92                               | 77,486.00  | 334,076.92                  | 39.06%                           |
| Communicative Disorders                              | 107,410.19          | 32,223.06                                | 126,812.00                                       | 159,035.06                  | 148.06%                          |
| Edith Bowen  | 15,350.15           | 4,605.05                                 |  | 4,605.05                    | 30.00%                           |
| Elementary Education                                 | 49,336.40           | 14,800.92                                | 45,480.00  | 60,280.92                   | 122.18%                          |
| Family Consumer and Human Development                | 165,655.22          | 49,696.57                                | 19,982.00  | 69,678.57                   | 42.06%                           |
| Health, Physical Education and Recreation Department |                     |  | 23,257.00  | 23,257.00                   | N/A                              |
| Instructional Technology                             | 266,417.38          | 79,925.21                                | 47,317.00  | 127,242.21                  | 47.76%                           |
| Psychology   | 473,067.65          | 141,920.30                               | 185,536.00                                       | 327,456.30                  | 69.22%                           |
| School of the Future                                 | 125.89              | 37.77                                    |  | 37.77                       | 30.00%                           |
| Secondary Education                                  |                     |  | 14,274.00  | 14,274.00                   | N/A                              |
| Special Education and Rehabilitation                 | 42,022.00           | 12,606.60                                | 25,466.00  | 38,072.60                   | 90.60%                           |
| Total College of Education and Human Services        | 1,974,662.14        | 592,398.66                               | 653,465.00                                       | 1,245,863.66                | 63.09%                           |
| College of Engineering                               |                     |  |  |                             |                                  |
| Dean's Office - Engineering                          | 187,669.01          | 56,300.70                                | 57,063.00  | 113,363.70                  | 60.41%                           |
| Biological and Irrigation Engineering                | 165,224.29          | 49,567.29                                | 49,676.00  | 99,243.29                   | 60.07%                           |
| Civil and Environmental Engineering                  | 263,737.38          | 79,121.21                                | 278,826.00                                       | 357,947.21                  | 135.72%                          |
| Electrical and Computer Engineering                  | 311,033.56          | 93,310.07                                | 151,616.00                                       | 244,926.07                  | 78.75%                           |
| Engineering and Technology Education                 | 61,602.23           | 18,480.67                                | 25,209.00  | 43,689.67                   | 70.92%                           |

**Utah State University**  
**Analysis of Facilities and Administrative Costs Generated and Allocated**  
**July 1, 2007 through June 30, 2008**

**Appendix H (continued)**

| <b>College or Other Unit</b>                           | <b>Generated</b> | <b>Budget<br/>Allocations From<br/>30% Return</b> | <b>Budget<br/>Allocations From<br/>70% Centrally Held</b> | <b>Total Budget<br/>Allocations</b> | <b>Budget<br/>as a % of<br/>Generated</b> |
|--|------------------|---|---|-------------------------------------|---|
| Mechanical and Aerospace Engineering                   | 293,282.48       | 87,984.74   | 138,593.00  | 226,577.74                          | 77.26%                                    |
| Utah Water Research Laboratory                         | 847,924.33       | 254,377.30  |   | 254,377.30                          | 30.00%                                    |
| Total College of Engineering                           | 2,130,473.28     | 639,141.98  | 700,983.00  | 1,340,124.98                        | 62.90%                                    |
| <b>College of Humanities, Arts and Social Sciences</b> |                  |   |   |                                     |   |
| Dean's Office - Humanities, Arts and Social Sciences   | 126,314.87       | 37,894.46   | 18,317.00   | 56,211.46                           | 44.50%                                    |
| Art  |                  |   | 7,796.00  | 7,796.00                            | N/A                                       |
| English  |                  |   | 23,402.00   | 23,402.00                           | N/A                                       |
| History  |                  |   |   | -                                   | N/A                                       |
| Intensive English                                      |                  |   |   | -                                   | N/A                                       |
| Interior Design  |                  |   | 9,537.00  | 9,537.00                            | N/A                                       |
| Journalism and Communication                           | 476.44           | 142.93  |   | 142.93                              | 30.00%                                    |
| Landscape Architecture and Environmental Planning      | 18,233.35        | 5,470.01  | 14,371.00   | 19,841.01                           | 108.82%                                   |
| Languages and Philosophy                               |                  |   |   | -                                   | N/A                                       |
| Music  |                  |   | 7,421.00  | 7,421.00                            | N/A                                       |
| Political Science                                      | 1,375.23         | 412.57  | 25,990.00   | 26,402.57                           | 1919.87%                                  |
| Sociology, Social Work and Anthropology                | 32,796.78        | 9,839.03  | 44,408.00   | 54,247.03                           | 165.40%                                   |
| Total College of Humanities, Arts and Social Sciences  | 179,196.67       | 53,759.00   | 151,242.00  | 205,001.00                          | 114.40%                                   |
| <b>College of Natural Resources</b>                    |                  |   |   |                                     |   |
| Dean's Office - Natural Resources                      | \$ 60.57         | \$ 18.17  | \$ 46,327.00  | \$ 46,345.17                        | N/A                                       |
| Aquatic, Watershed and Earth Resources                 | 360,779.76       | 108,233.93  | 133,096.00  | 241,329.93                          | 66.89%                                    |
| Ecology Center   | 86,211.41        | 25,863.42   | 9,200.00  | 35,063.42                           | 40.67%                                    |
| Environment and Society                                | 135,585.29       | 40,675.59   | 82,868.00   | 123,543.59                          | 91.12%                                    |
| Forest, Range and Wildlife Sciences                    | 398,801.44       | 119,640.43  | 78,048.00   | 197,688.43                          | 49.57%                                    |
| Total College of Natural Resources                     | 981,438.47       | 294,431.54  | 349,539.00  | 643,970.54                          | 65.61%                                    |
| <b>College of Science</b>                              |                  |   |   |                                     |   |
| Dean's Office - Science                                |                  |   | 65,250.00   | 65,250.00                           | N/A                                       |
| Biology  | 321,981.84       | 96,594.55   | 142,530.00  | 239,124.55                          | 74.27%                                    |
| Center for Atmospheric and Space Sciences              | 426,921.10       | 128,076.33  |   | 128,076.33                          | 30.00%                                    |
| Chemistry and Biochemistry                             | 262,535.02       | 78,760.51   | 83,144.00   | 161,904.51                          | 61.67%                                    |
| Computer Science                                       | 213,534.73       | 64,060.42   | 90,848.00   | 154,908.42                          | 72.54%                                    |
| Geology  | 75,382.64        | 22,614.79   | 80,611.00   | 103,225.79                          | 136.94%                                   |
| Mathematics and Statistics                             | 48,209.00        | 14,462.70   | 29,812.00   | 44,274.70                           | 91.84%                                    |
| Physics  | 195,089.36       | 58,526.81   | 22,546.00   | 81,072.81                           | 41.56%                                    |
| Total College of Science                               | 1,543,653.69     | 463,096.11  | 514,741.00  | 977,837.11                          | 63.35%                                    |
| <b>Vice President - University Extension</b>           |                  |   |   |                                     |   |
| Cooperative Extension                                  |                  |   | 62,983.84   | 62,983.84                           | N/A                                       |
| Extension Agriculture and Natural Resources            | 80,452.41        | 24,135.72   |   | 24,135.72                           | 30.00%                                    |
| Extension Field Staff                                  | 50,126.82        | 15,038.04   |   | 15,038.04                           | 30.00%                                    |
| Extension Youth Programs                               | 23,834.50        | 7,150.35  |   | 7,150.35                            | 30.00%                                    |
| Uintah Basin Center                                    | 22,093.21        | 6,627.96  |   | 6,627.96                            | 30.00%                                    |
| Total Vice President - University Extension            | 176,506.94       | 52,952.07   | 62,983.84   | 115,935.91                          | 65.68%                                    |

**Utah State University**  
**Analysis of Facilities and Administrative Costs Generated and Allocated**  
**July 1, 2007 through June 30, 2008**

**Appendix H (continued)**

| <b>College or Other Unit</b>  | <b>Generated</b>     | <b>Budget<br/>Allocations From<br/>30% Return</b> | <b>Budget<br/>Allocations From<br/>70% Centrally Held</b> | <b>Total Budget<br/>Allocations</b> | <b>Budget<br/>as a % of<br/>Generated</b> |
|---|----------------------|---|---|-------------------------------------|---|
| <b>Vice President - Student Administration and Services</b>           |                      |   |   |                                     |   |
| Campus Recreation   | 43,393.18            | 13,017.95   |   | 13,017.95                           | 30.00%                                    |
| Student Support Services  | 19,028.20            | 5,708.46  |   | 5,708.46                            | 30.00%                                    |
| Student Wellness  | 1,527.16             | 458.15  |   | 458.15                              | 30.00%                                    |
| Vice President for Student Services                                   | 9,053.08             | 2,715.92  |   | 2,715.92                            | 30.00%                                    |
| Undergraduate Scholarships and Recruitment                            |                      |   | 85,000.00   | 85,000.00                           | N/A                                       |
| <b>Total Vice President - Student Administration<br/>and Services</b> | <b>73,001.62</b>     | <b>21,900.48</b>                                  | <b>85,000.00</b>  | <b>106,900.48</b>                   | <b>146.44%</b>                            |
| <b>Vice President - Information Technology</b>                        |                      |   |   |                                     |   |
| Information Technology  | 802.34               | 240.70  | -   | 240.70                              | 30.00%                                    |
| <b>Total Vice President - Information Technology</b>                  | <b>802.34</b>        | <b>240.70</b>                                     | <b>-</b>  | <b>240.70</b>                       | <b>30.00%</b>                             |
| <b>Utah State University Research Foundation</b>                      |                      |   |   |                                     |   |
| Space Dynamics Laboratory   | 11,289,494.00        | 11,289,494.00                                     | 61,846.00   | 11,351,340.00                       | 100.55%                                   |
| <b>Total Utah State University Research Foundation</b>                | <b>11,289,494.00</b> | <b>11,289,494.00</b>                              | <b>61,846.00</b>  | <b>11,351,340.00</b>                | <b>100.55%</b>                            |
| <b>School of Graduate Studies</b>                                     |                      |   |   |                                     |   |
|   | 8,593.33             | 2,578.00  | 272,000.00  | 274,578.00                          | 3195.25%                                  |
| <b>Total School of Graduate Studies</b>                               | <b>8,593.33</b>      | <b>2,578.00</b>                                   | <b>272,000.00</b>   | <b>274,578.00</b>                   | <b>3195.25%</b>                           |
| <b>Total Colleges and Non-Academic Units</b>                          |                      |   |   |                                     |   |
|   | <b>19,932,047.82</b> | <b>13,882,260.16</b>                              | <b>3,520,921.84</b>                                       | <b>17,403,182.00</b>                | <b>87.31%</b>                             |
| <b>Support of Infrastructure</b>                                      |                      |   |   |                                     |   |
| <b>Vice President - Research</b>                                      |                      |   |   |                                     |   |
| Center for Advanced Nutrition   | \$35,153.82          | \$10,546.15                                       |   | \$ 10,546.15                        | 30.00%                                    |
| Center for High Performance Computing                                 | 9,666.75             | 2,900.03  | \$ 48,603.00  | 51,503.03                           | 532.79%                                   |
| Disallowance Account  |                      |   | 50,000.00   | 50,000.00                           | N/A                                       |
| Internet II   |                      |   | 97,000.00   | 97,000.00                           | N/A                                       |
| Technology Commercialization Office                                   |                      |   | 600,000.00  | 600,000.00                          | N/A                                       |
| Special Projects  |                      |   | 24,000.00   | 24,000.00                           | N/A                                       |
| Women and Gender Research Institute                                   |                      |   | 35,500.00   | 35,500.00                           | N/A                                       |
| URCO  |                      |   | 13,000.00   | 13,000.00                           | N/A                                       |
| Undergraduate Research  |                      |   | 15,000.00   | 15,000.00                           | N/A                                       |
| Washington Based Support  |                      |   | 191,400.00  | 191,400.00                          | N/A                                       |
| <b>Total Vice President - Research</b>                                | <b>44,820.57</b>     | <b>13,446.18</b>                                  | <b>1,074,503.00</b>                                       | <b>1,087,949.18</b>                 | <b>2427.34%</b>                           |
| <b>Vice President - Business and Finance</b>                          |                      |   |   |                                     |   |
| Accounting and Financial Reporting                                    |                      |   | 168,152.00  | 168,152.00                          | N/A                                       |
| Controller's Office   |                      |   | 63,756.00   | 63,756.00                           | N/A                                       |
| Facilities and Administrative Cost Study                              |                      |   | 265,371.00  | 265,371.00                          | N/A                                       |
| Federal Single Audit  |                      |   | 27,920.00   | 27,920.00                           | N/A                                       |
| Purchasing  |                      |   | 25,275.00   | 25,275.00                           | N/A                                       |
| <b>Total Vice President - Business and Finance</b>                    | <b>-</b>             | <b>-</b>  | <b>550,474.00</b>   | <b>550,474.00</b>                   | <b>N/A</b>                                |

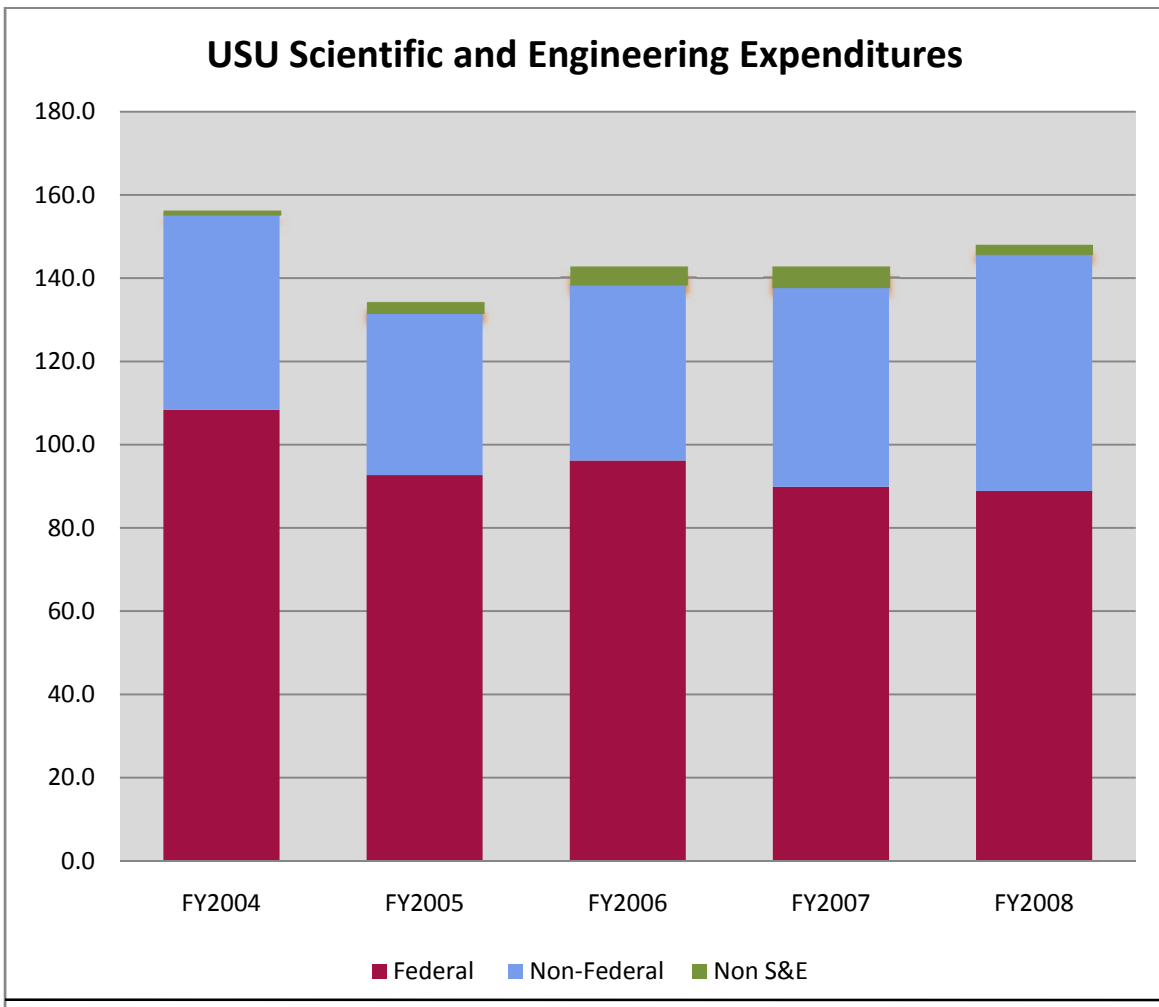


**Utah State University**  
**Analysis of Facilities and Administrative Costs Generated and Allocated**  
**July 1, 2007 through June 30, 2008**

**Appendix H (continued)**

|  | <b>Generated</b>        | <b>Budget<br/>Allocations From<br/>30% Return</b> | <b>Budget<br/>Allocations From<br/>70% Centrally Held</b> | <b>Total Budget<br/>Allocations</b> | <b>Budget<br/>as a % of<br/>Generated</b> |
|--|-------------------------|---|---|-------------------------------------|---|
| <b>Total Support of Infrastructure (% is computed on<br/>total Facilities and Administrative costs generated<br/>from all units)</b> | <b>44,820.57</b>        | <b>13,446.18</b>                                  | <b>1,624,977.00</b>                                       | <b>1,638,423.18</b>                 | <b>3655.52%</b>                           |
| Vice President - Research  |                         |   |   |                                     |   |
| Biotechnology Bond   |                         |   | 788,680.00  | 788,680.00                          | N/A                                       |
| Hydraulics Modeling Building Bond  |                         |   | 178,939.00  | 178,939.00                          | N/A                                       |
| Total Vice President - Research  |                         |   | 967,619.00  | 967,619.00                          | N/A                                       |
| <b>Total</b>   | <b>\$ 19,976,868.39</b> | <b>\$ 13,895,706.34</b>                           | <b>\$ 6,113,517.84</b>                                    | <b>\$20,009,224.18</b>              | <b>100.16%</b>                            |

## APPENDIX I



Millions of Dollars

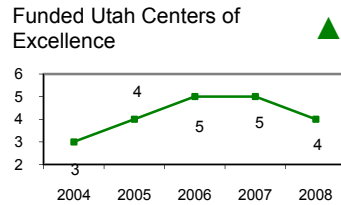
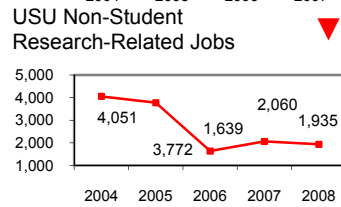
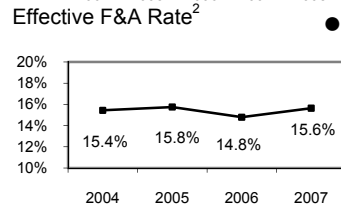
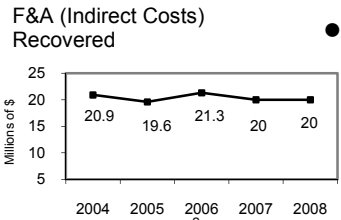
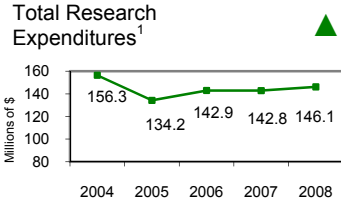
|                        | <b>FY2004</b> | <b>FY2005</b> | <b>FY2006</b> | <b>FY2007</b> | <b>FY2008</b> |
|------------------------|---------------|---------------|---------------|---------------|---------------|
| Non-Federal            | 47.3          | 38.9          | 42.4          | 48.2          | 57.2          |
| Federal                | 108.4         | 92.7          | 96.2          | 89.9          | 88.9          |
| Total S&E              | 155.7         | 131.6         | 138.6         | 138.1         | 146.1         |
| Non S&E                | 0.6           | 2.6           | 4.3           | 4.7           | 2.1           |
| Total<br>Research Exp. | 156.3         | 134.2         | 142.9         | 142.8         | 148.2         |

**VPR SEED FUNDING PROGRAMS**

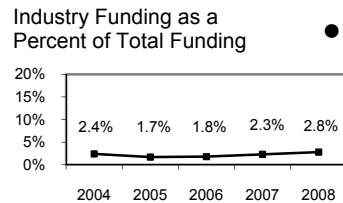
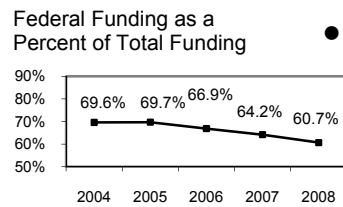
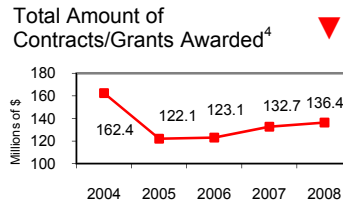
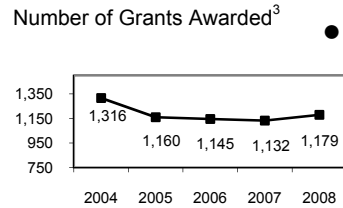
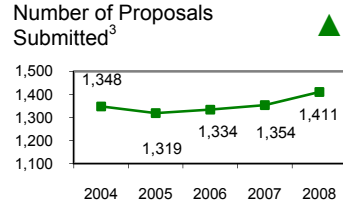
| PROGRAM   | ELIGIBILITY   | FUNDING                                   | NOTES  | REQ. OUTCOME  |
|---|---|---|--|---|
| <b>Past:</b>  |   |   |  |   |
| <a href="#"><u>New Faculty Research Grant (NFRG)</u></a>                      | Tenure- track asst. profs during 1 <sup>st</sup> 2 yrs  | 1-yr, \$15,000 max (annual)               | Funds can be used for 1 mo faculty salary support, student RA, travel required to do research, supplies and equipment needed to complete the project.  | Final report at project completion  |
| <a href="#"><u>Community-University Research Initiative (CURI)</u></a>        | Tenured, tenure-eligible, or research faculty   | 1-yr, No limit; ave. ~ \$20,000. (annual) | Same as above  | Final report at project completion  |
| <b>New:</b>   |   |   |  |   |
| <a href="#"><u>Grant-Writing Experience Through Mentorship (GEM)</u></a>      | Tenure-eligible asst. profs, research asst. profs., or research professionals with ≤4 yrs in rank       | 1-yr, \$5,000 max (semiannual)            | Requires active collaboration between the junior faculty member and a successful senior colleague.<br><br>Funds cannot be used for salary support of junior faculty member, but mentors can receive \$1,000. | Develop and submit an external grant proposal within 3 mo of project completion<br><br>Serve on review panel for 2 yrs afterward. |
| <a href="#"><u>Research Catalvst (RC)</u></a>                                 | All tenured or tenure-eligible faculty, research faculty, or other USU research professionals           | 1-yr, \$20,000 max (semiannual)           | Funds can be used for 1 mo faculty salary support, student RA, travel required to do research, supplies and equipment needed to complete the project.  | Develop and submit an external grant proposal within 3 mo of RC award end date.   |
| <a href="#"><u>Seed Program To Advance Research Collaboration (SPARC)</u></a> | Same as RC, but must also engage faculty from more than 1 dept, research center, college or institution | 1-yr, \$35,000 max (semiannual)           | Funds use is same as above plus travel to meet with collaborators or representatives of funding agencies.<br><br>To obtain full award level, PIs must utilize a professional proposal development service.   | Develop and submit an interdisciplinary external grant proposal seeking ≥\$1M within 3 mo of SPARC award end date.                |

# USU RESEARCH PERFORMANCE DASHBOARD – FY 2008

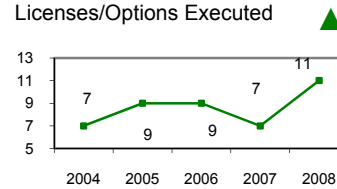
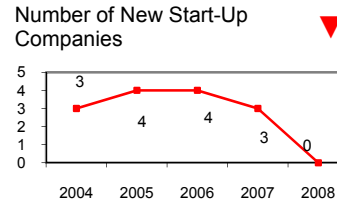
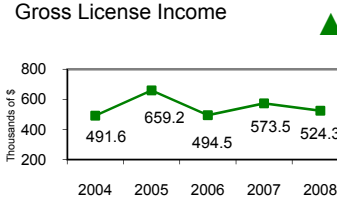
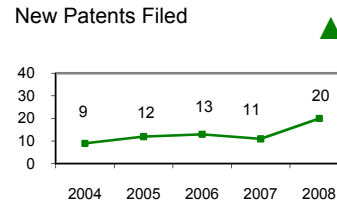
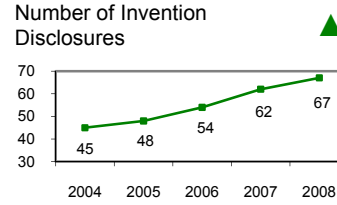
## Research Funding



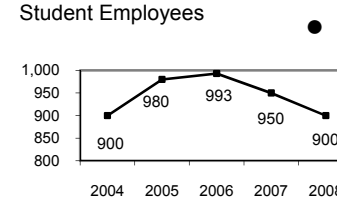
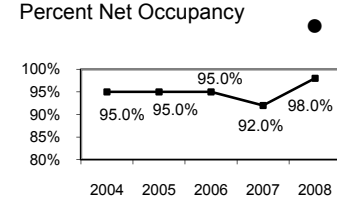
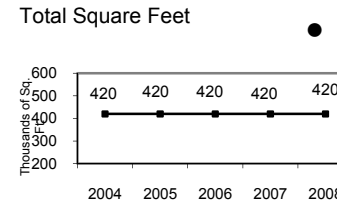
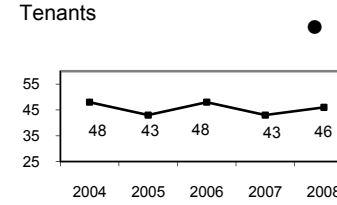
## Sponsored Programs



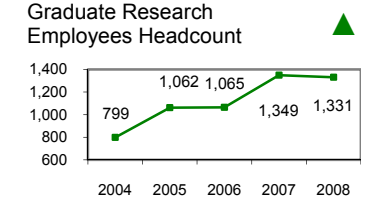
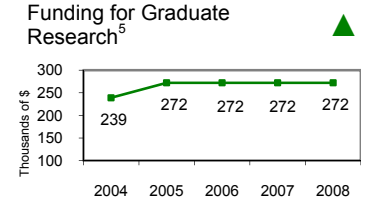
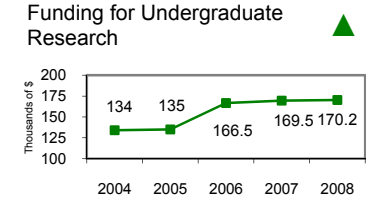
## Tech. Commercialization



## Innovation Campus



## Student Research



### TREND KEY:

- ▲ higher
- ▼ lower
- no change
- green = better
- red = worse
- black = neutral

### FOOTNOTES:

- <sup>1</sup> According to NSF Report
- <sup>2</sup> Some funding agencies by policy limit the recovery of F&A costs to less than the negotiated rate. Effective F&A is the ratio between modified total direct costs and actual F&A collected.
- <sup>3</sup> One proposal can be awarded in multiple years.

<sup>4</sup> The largest SDL project, RAMOS, was canceled in 2005.

<sup>5</sup> Graduate research funding includes: fellowships, travel, and graduate student recruitment.

<sup>6</sup> 2008 number includes students who graduated in December 2007 and May 2008.