



UNIVERSITY OF OREGON

Federal Priorities

April 2004

OFFICE OF GOVERNMENTAL AFFAIRS

1292 UNIVERSITY OF OREGON

EUGENE OR 97403-1292

(541) 346-5020 PH (541) 346-6251 FAX

<http://oga.uoregon.edu>

FEDERAL PRIORITIES 2004

TABLE OF CONTENTS

Letter from President Dave Frohnmayer	3
Summary of Congressional Interest Priorities	4
Introduction	
Quick Facts.....	5
Seeding Oregon’s Economy.....	6
Working for Oregon	7
Congressional Interest Priorities	
Oregon Nanoscience and Microtechnologies Institute (ONAMI)	10
Brain, Biology and Machine Initiative	12
Museum of Natural History	15
Lane County “United Front” I-5/Franklin-Glenwood Interchange Study	17
Federal Policy Issues	
Balanced Research Initiatives	18
Green Chemistry.....	24
Opportunities in Higher Education	
Higher Education Act Reauthorization.....	26
Federal Student Aid	27
Child Care Access Means Parents in School (CCAMPIS)	28
International Education.....	29
IRA Charitable Rollover.....	29
Contact Information	30

To the Oregon Congressional Delegation:

Thank you for your efforts on behalf of the University of Oregon and higher education. We cannot continue to do our part without the assistance of Congress and the federal government. Each year the campus community identifies the most needed and most important improvements that are crucial to our ability to carry out our mission for the state.



The University of Oregon is an economic engine, creating jobs and technology for Oregon's future and educating Oregonians across a broad range of professions. The university is a robust importer of capital into the state bringing in more dollars in federal grants and contracts, in non-resident tuition, and in private gifts than it receives in state general fund support.

When one looks around the country at those states with strong, diverse economies one invariably finds strong research universities. Further examination discovers partnerships characterized by a strong commitment on the part of the political leadership, the state board of higher education, the leadership of the business community and universities. These key partnerships are working in Oregon, and we will continue to work closely with the Oregon Congressional delegation to make this collective endeavor a success.

Of special note this year is a new joint project that pools the research strengths of our three largest universities. The Oregon Nanoscience and Microtechnologies Institute (ONAMI) is a joint effort by the University of Oregon, Oregon State University and Portland State University, with active support and involvement by the Governor's Office and Oregon's leading high-tech industries, to create better and safer products and processes. We look forward to working closely with the Oregon delegation on this exciting initiative.

Oregon's public universities are doing their part to create economic development opportunities for the state, educate tomorrow's workforce and discover ways to make Oregon and the world a safer place for generations to come.

A handwritten signature in black ink that reads "Dave Fohnmayer". The signature is written in a cursive, flowing style.

President, University of Oregon

SUMMARY OF CONGRESSIONAL INTEREST PROJECT REQUESTS

- **Oregon Nanoscience and Microtechnologies Institute (ONAMI)**

\$5 million (Defense-Army), Miniature Tactical Energy Systems Development

\$5 million (Defense-Air Force), Safer Nanomaterials and Nanomanufacturing

ONAMI brings together the complementary research strengths of Oregon's three largest universities and Oregon's high tech industries. The Miniature Tactical Energy Systems Development initiative will work in cooperation with the U.S. Department of Energy's Pacific Northwest National Laboratory and Ft. Belvoir (Army) to address modern warfare's increased demand for battlefield energy systems. The Safer Nanomaterials and Nanomanufacturing initiative seeks to develop functional nanomaterials and nanomanufacturing methods that simultaneously meet the military's need for high performance materials, protect human health and minimize harm to the environment.

ONAMI project descriptions on page 7.

- **Brain, Biology, and Machine Initiative (BBMI)**

\$6 million (Defense, Army Medical RTD&E)

BBMI integrates the university's internationally recognized strengths in cognitive neuroscience, molecular biology and medical imaging technologies to investigate fundamental processes of the human brain and mind.

Project description on page 9.

- **Museum of Natural History**

\$2.5 million (Labor/HHS, Institute of Museum and Library Services and authorization in the Water Resources Development Act)

As the state-mandated repository of all archaeological items found on public lands, the university must expand and consolidate its Museum of Natural History's research collections storage facilities and research laboratories that are almost at capacity. The university seeks continued support of the museum as it preserves a record of human settlement in Oregon dating back more than 10,000 years.

Project description on page 12.

- **Lane County "United Front" I-5/Franklin-Glenwood Interchange Study**
\$5 million For Expanded Environmental Impact Study

The planning for an Interstate-5 replacement bridge across the Willamette River near the UO campus creates a unique opportunity to study a new interchange that would improve access between I-5 and Eugene, Glenwood and Springfield. The additional environmental impact work would cost approximately \$5 million.

Project description on page 14.

INTRODUCTION

The University of Oregon is a comprehensive research university that serves its students and the people of Oregon, the nation and the world through the creation and transfer of knowledge in the liberal arts, the natural and social sciences and the professions. It is the Association of American Universities flagship institution of the Oregon University System.

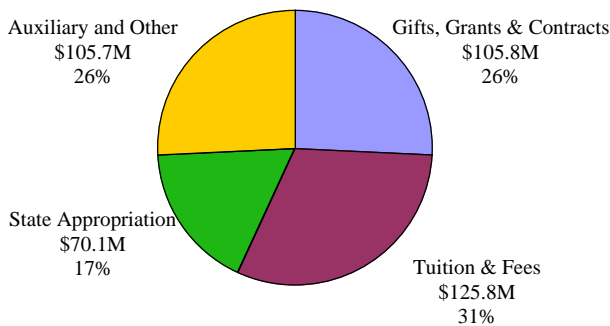
University of Oregon Mission Statement

Of more than 4,000 institutions of higher education in the country, the University of Oregon is in that group of 143 identified as “Carnegie Extensive Institutions.” These are the country’s major research universities, such as the University of Washington, Stanford and MIT, where over 80% of federal research funds are spent, and a similar percentage of the country’s doctorates are earned. Within this Carnegie Extensive group, 62 institutions are members of the Association of American Universities (AAU), and 34 of those are public institutions.

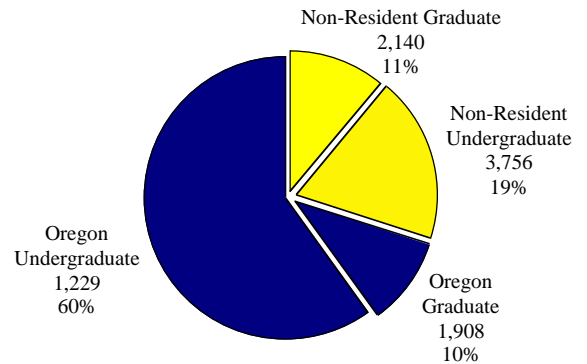
QUICK FACTS

FY 2002-2003 revenues	\$407.4 million
FY 2002-2003 state appropriation as percentage of total revenues	17%
Grants and contracts received in FY 2002-03	*\$77.8 million
* all-time UO record	
Increase in grants and contracts from FY 2000-2001	34.6%
Fall 2003 Headcount	20,033
Enrollment growth over last 5 years	19%
Average freshmen incoming Grade Point Average	*3.54
* all-time UO record	
Fall 2003 Estimated Average Full Time Undergraduate Resident Tuition	\$4,683
Family Income: 74% of Oregon resident freshmen come from neighborhoods where average family incomes are in the bottom half of all neighborhoods (average of \$47,000 per year)	

**UO Revenue
FY 2002-2003**



**UO Enrollment by Residency
Fall 2003**

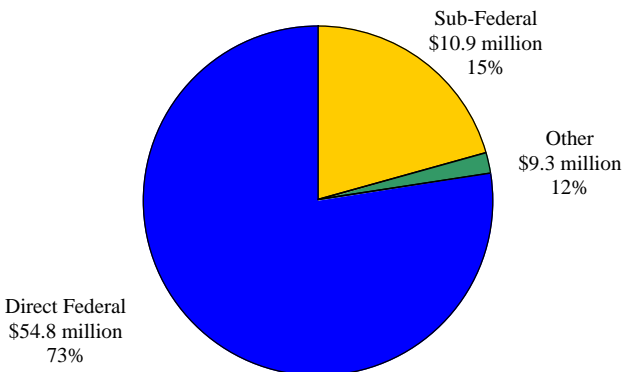


SEEDING OREGON'S ECONOMY

Oregon's research universities are key players in retooling the state's economy for new conditions. Major research universities like the University of Oregon secure millions of dollars in research funds each year creating direct and indirect jobs. Universities prepare the workforce in changing economic times, generate start-up companies and attract new and relocating companies – companies that stay in Oregon because of ready access to high quality faculty, well-trained students and well-equipped facilities.

The University of Oregon's research centers and institutes, funded largely through competitively awarded federal grants to faculty members, are the major source of the university's innovations that drive its technology transfer efforts. Grants and contracts received by the University of Oregon in the state's fiscal year 2002-03 (July '02 – June '03) reached an all-time record of more than \$77.8 million. Federal and sub-federal support was \$69.3 million or 89 percent of this total. The U.S. Department of Commerce estimates that 40 jobs are created in Oregon for every \$1 million in research support.

**Total Grants and Contracts
Awarded at UO FY 2002-2003**



The UO – An Economic Engine

- Oregon's 18th largest employer.
- In FY 2002, \$703 million total impact through direct in-state spending and its multiplier effects. This was achieved with a state investment of \$70 million. **Oregon taxpayers received a \$10 return for every \$1 invested in the University of Oregon.**
- \$1.60 in tax revenue generated for every \$1 invested in UO students based solely on the value added by a University of Oregon degree – 4.5 times greater than the average return on equities in the stock market over the last 50 years.
- \$121 million estimated increase in the present value of state income tax revenue for a single UO graduating class over their career.

Construction

The University of Oregon is nearing completion on almost \$150 million in capital construction projects, only \$10 million of which has come from state funds.

Knowledge Economy

While the University of Oregon operates as an economic engine for the state, it continues to pursue its most important mission – providing students with critical thinking and leadership skills to prepare them for responsible citizenship and professional careers in businesses, industry, education and government. The university is the state's largest generator of brain power for the future – human capital – conferring more degrees than any other university in the state system. University of Oregon graduates become the next generation of Oregon's leaders.

- More than two-thirds of UO graduates remain in Oregon after graduation.
- UO alumni have been at the helm of such global organizations as Nike, Procter and Gamble, Liberty Mutual Insurance, Columbia Sportswear and Levi-Strauss International.
- Alumni include winners of two Nobel Prizes, nine Pulitzers, and 18 Rhodes Scholarships
- Alumni include seven Oregon governors, seven U.S. senators, 11 representatives and two presidential cabinet members.

WORKING FOR OREGON

The university aligns its research agenda with state industry and economic goals, and works in partnership with other universities and Oregon industries to ensure that it is indeed the University of Oregon.

University/Industry Partnerships

- The University of Oregon, Oregon State University and Portland State University are working together on the **Oregon Nanoscience and Microtechnologies Institute (ONAMI)**. This joint research and development collaboration will put nanotechnology to work in real micro systems with applications in sensors for human safety, reactors for reduced environmental impact, more efficient energy sources, life saving medical devices and integrated circuits for the next generation of computers and communication systems. Endorsed by the Governor, the Oregon Council on Knowledge and Economic Development, and Oregon's leading high-tech industries, ONAMI is a multi-pronged, multi-year effort to improve university facilities and instrumentation. The research group associated with ONAMI can already lay claim to approximately \$50 million in competitive research funding over the past five years.
- The university's **Center for Advanced Materials Characterization of Oregon (CAMCOR)** provides state-of-the-art materials characterization facilities 24 hours, 7 days a week to researchers in Oregon universities and all Oregon companies including high-tech start-ups. This provides an incredible opportunity for companies to use expensive equipment on an as-needed basis, and to consult with some of the nation's best researchers. CAMCOR also maximizes the use of this taxpayer-supported equipment.
- The **Materials Science Institute (MSI)** places graduate-level chemistry and physics students in nine-month paid internships with Oregon high-tech industries. Typically 100% of MSI interns are offered permanent positions following internships. Industries benefit from having students who are up-to-speed on the latest engineering and materials science research and practices, and UO students benefit from applying their education as engineers and researchers in real-life work situations.

Industries Driven By UO Research

- **Electrical Geodesics Inc.** designs, produces and sells electro physical neuroimaging equipment, such as dense-array EEGs for measuring brain activity. Located at the university's Riverfront Research Park, Electrical Geodesics Inc. is a direct spin-off from research undertaken at the university.

- **Language Learning Systems** researches and markets language testing and learning tools to universities throughout the country. Language Learning Systems is a direct spin-off of the university's Center for Applied Second Language Studies.
- **Marker Gene Technologies**, founded by an adjunct faculty member in the university's Institute of Molecular Biology and located in the Riverfront Research Park, explores, develops and manufactures new ways to use marker genes in molecular biology and in the medical field.
- **Molecular Probes/Invitrogen**, a corporate partner of the university, develops novel fluorescent reagents and detection solutions that advance scientific and biomedical research world-wide. Molecular Probes has successfully marketed antibodies researched and developed in the university's Monoclonal Antibody Facility.
- **On Time Systems** applies search-based optimization technology to solve a large variety of optimization problems for military and industrial clients. It is a direct spin-off of research conducted in the university's Computational Intelligence Research Laboratory.

Industry Eyes UO Research

- IBM recently announced new project with UO and Electrical Geodesic, Inc. that uses grid computing, Linux and IBM supercomputer technology to speed and improve the diagnosis of epilepsy, stroke, depression and other brain conditions. EGI is a private medical device and imaging software developer based in the Riverfront Research Park adjacent to the UO campus. The grid computing technology from IBM will play an important role in helping EGI provide doctors and researchers speed and improve brain-wave monitoring at hospitals and research centers.
- A professor of the UO Institute of Molecular Biology was the lead inventor in a multi-institution research team that reported that a compound called zubarine can reactivate a silenced cancer-suppressor gene in mice. The discovery has been named by the National Institute of General Medical Sciences as one of the top ten discoveries arising during FY 2002-2003. The next step of the research is to begin testing on humans.
- A chemistry professor recently received his sixty-second patent, making him one of Oregon's most prolific inventors. His latest patent – creating semi-carbazone and thiosemi-carbazone compounds – have potential use in the treatment of nerve damage caused by disease.

CONNECTIONS – GIVING BACK TO OREGON COMMUNITIES

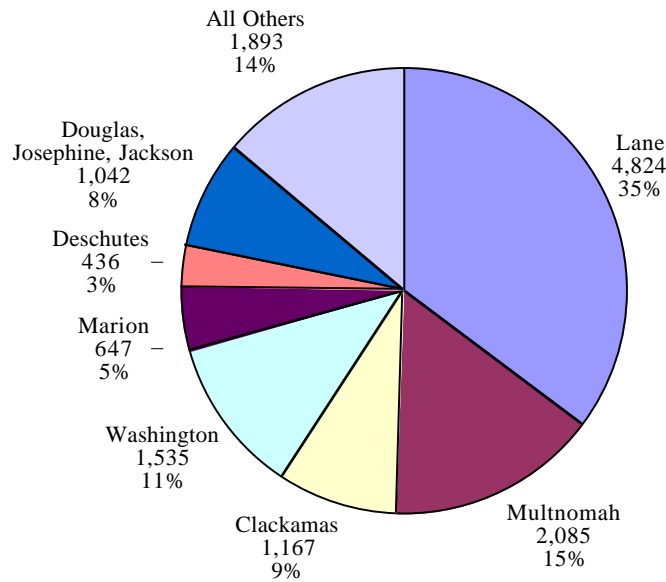
Community Service Center: \$2.2 million each year. Through its six programs, the Community Service Center engages students in more than 43,000 hours of service assisting and writing grants for 82 communities in 29 Oregon counties.

College of Education: \$1.5 million each year to Oregon K-12 schools. The university places more than 150 student teachers in Oregon classrooms. In addition, University of Oregon research is routinely applied throughout the nation improving teaching practices, reading instruction, preventing school violence and transforming special education. The college was just ranked second nationally among public graduate schools of education, and seventh among all public and private institutions in the latest *U.S. News & World Report* rankings.

School of Law: \$134,500 in free legal help in 2003. Last year UO law students volunteered 11,214 hours of public service, or 72 percent of the total hours volunteered by all law students in Oregon. At law clerk wages that equated approximately \$134,500 worth of free legal help.

College of Business: \$2.5 million over the last five years. 20 strategic business plans are developed each year by the Lundquist College of Business Opportunity Planning Team for Northwest companies.

UO Oregon Students by County Fall 2003





OREGON NANOSCIENCE AND MICROTECHNOLOGIES INSTITUTE

FORMERLY KNOWN AS MULTISCALE MATERIALS AND DEVICES
SIGNATURE RESEARCH CENTER



UNIVERSITY
OF OREGON



PORTLAND STATE
UNIVERSITY

Project Requests:

1. Miniature Tactical Energy Systems Development
DOD (Army)\$5 million/year
2. Safer Nanomaterials and Nanomanufacturing
DOD (Air Force).....\$5 million/year

Nanoscience and nanotechnology promise to revolutionize many areas within science and technology ranging from electronics to medicine. The potential impact of nanotechnology derives from the fact that unprecedented material properties are being discovered in nanoscale materials. These properties can be harnessed to invent entirely new products and processes.

The Oregon Nanoscience and Microtechnologies Institute (ONAMI) is a unique collaboration that brings together the complementary research strengths of Oregon’s three largest universities. The University of Oregon excels in materials science and materials characterization programs, is a world leader in green chemistry, and has an established nanotechnology research program; Oregon State University is a leader in microtechnology-based energy, chemical, and biological systems; and Portland State University has highly advanced microscopy and nanocharacterization programs, electrical test systems, and programs in nanoscale and microscale simulation that are especially important to the industries located in the Portland area.

The commercial applications of ONAMI’s research and development may well lead to new commercial firms and perhaps whole new industries, providing unlimited economic development opportunities for Oregon.

FY05 Strategy

- Full implementation of the 21st Century Nanotechnology Research and Development Act, P.L. 108-153 (S. 189), ensuring that:
 1. authorized funding levels are appropriated in FY05 to the agencies identified in the Act (note: the Act does not authorize DOD funding);
 2. the recommended micro/nano focus is included in calls for competitive funding, including center funding; and
 3. the focus on the societal/ethical implications of nanoscience research includes a commensurate commitment to proactive research that minimizes or eliminates risks to society.
- Multiyear competitive funding and influence within the competitive funding environment; and congressional interest funding in FY05-FY08 in two targeted areas:
 1. Miniature Tactical Energy Systems Development
 2. Safer Nanomaterials and Nanomanufacturing

Miniature Tactical Energy Systems Development

In cooperation with the U.S. Department of Energy's Pacific Northwest National Laboratory (PNNL), ONAMI will work with Ft. Belvoir (Army) to provide tactical energy systems for a wide range of military applications. Modern warfare has an increased demand for:

- 1) battlefield energy systems including personal power systems for the dismounted war fighter;
- 2) light weight transportable battlefield support energy systems; and
- 3) energy systems that minimize the logistics requirements of field forces.

ONAMI proposes that \$5 million be added to the FY05 Department of Defense budget to provide funding for the first year of a proposed five year research effort focused on the development of tactical energy systems. Funding will be used to conduct research and product development among the initiative's partners and will provide funding for aggressive technology development in ONAMI.

Contact Information:

- **ONAMI** – Skip Rung, 541-231-4883, rung@proaxis.com
- **PNNL** – Landis Kannberg, 509-375-3919, landis.kannberg@pnl.gov



*left to right: Hewlett-Packard vice president **Steve Nigro**, UO nanoscience researcher **Dave Johnson** and OSU engineering researcher **Kevin Drost**. HP is one of ONAMI's corporate supporters.*

Safer Nanomaterials and Nanomanufacturing

This ONAMI initiative seeks to develop functional nanomaterials and nanomanufacturing methods that simultaneously meet the military's need for high performance materials, protect human health and minimize harm to the environment. The initiative takes advantage of the world-class expertise within ONAMI in green chemistry, nanoscale materials and processes and the design and fabrication of microscale systems, such as reactors.

Three general areas of activity included within the initiative include: rational design of safer and greener materials based upon unique properties found at the nanoscale, systematic assessment of the biological impacts of engineered nanomaterials and development of technology for high-volume manufacturing of high-performance nanomaterials.

ONAMI proposes that \$5 million be added to the FY05 Department of Defense budget to provide funding for the first year of a proposed five year research effort focused on safer/greener nanomaterials and nanomanufacturing. Funding will be used to conduct research and product development among the initiative's partners.

Contact Information:

- **ONAMI** – Skip Rung, 541-231-4883, rung@proaxis.com

Brain, Biology and Machine Initiative

Integrating the University of Oregon's internationally recognized strengths in cognitive neuroscience, molecular biology and medical imaging technologies to investigate fundamental processes of the human brain and mind.

Estimated Funding: \$6 million

Likely Sources of Funding: Department of Defense (Army RTD&E)

Project Summary: It is recommended that \$6 million be included in the RDT&E, Medical Advanced Technology (R1 #34) section of the Department of the Army's FY 2005 budget for continuing development of BBMI in association with the Telemedicine and Advanced Technology Research Center (TATRC). The University of Oregon continues to enjoy an effective working relationship with TATRC that includes routine faculty participation in TATRC-sponsored events and research planning. The FY05 allocation would focus on:

1. Core funding of recently-established centers associated with brain imaging and informatics (Lewis Center for Neuroimaging, Neuroinformatics Center);
2. Support of new centers focused on genetic factors important in human brain function and behavior (Genomics and Proteomics Facility, Mammalian Genetics Center);
3. Procurement of an additional fMRI facility devoted primarily to investigations of genetic factors impacting on brain function;
4. Funding to support the high performance computing, scientific visualization, modeling, and networking capabilities essential to the UO's interdisciplinary research efforts related to brain, biology and machine;
5. Development of university-industry joint ventures for technology transfer involving telemedicine and medical informatics applications;
6. Initial establishment of an institute devoted to cognitive neuroscience (proposal to NIH was submitted in February 2004); and
7. Assistance with laboratory space renovation, technical support and faculty recruitment to enhance the BBMI research infrastructure.

Defense Applications: The basic research under BBMI has numerous links to defense applications and the TATRC mission through its work to integrate neuroscience ("Brain"), molecular biology ("Biology"), and medical imaging and informatics technology ("Machine"). Advances in cognitive neuroscience will have ultimate impact on optimizing the training and performance of military personnel, such as their ability to function in stressful and complex environments and to improve the integration of human and machine. Examples include developing the ability to "lock out" undesirable battle responses, or to assess a soldier's suitability to particular military tasks involving aspects such as attention, decision making, emotion, memory, and communication.



The development of technologies combining neuroimaging research, telemedicine and informatics are closely tied to the interests of TATRC in medical applications and in optimizing human performance for defense-related applications. An improved understanding of genetic factors also is of fundamental importance in treating various disorders and diseases related to impaired brain or neurological function, including those that could be induced by chemical or biological agents used in military actions or terrorist attacks. New BBMI research findings may be exceptionally important in the understanding and treatment of short and long-term psychological and stress disorders affecting some military personnel.

Through the continuing DOD support, the UO would be uniquely positioned to address the most fundamental questions about the human brain and mind by combining its expertise in molecular biology, the genetics of neural development, and cognitive neuroscience. The new appropriation will be cost shared by \$2-3 million annually from non-Federal sources, and an additional \$5-10 million from competitive federal grants such as those from NIH and NSF. There will also be support for the continuing development of the Neuroimaging and Neuroinformatics Centers, including technology transfer related to new instrumentation, measurement techniques and software devoted to clinical applications, diagnostics and modeling of brain processes.

PROJECT HISTORY

FY 2000: The University of Oregon (UO) was awarded \$2.7 million from TATRC to establish a neuroimaging center housing functional magnetic resonance imaging (fMRI) instrumentation capable of measuring dynamic processes in the human brain with high temporal and spatial resolution. The fMRI center began operations at the UO in the Spring of 2002, with additional support provided through competitive federal grants, as well as private contributions totaling \$6.5 million to date. Core faculty involved with the fMRI receive approximately \$10 million in competitive grants, largely from the National Institutes of Health. The neuroimaging and cognitive neuroscience research programs examine fundamental processes that give rise to human thought and behavior. Examples include integration of motor and sensory control, memory retrieval and forgetting, the neurobiology of emotions and the development of language.

FY2001: DOD funding in FY2001 of \$0.5 million supported the expansion of the fMRI projects and the formal establishment of the Robert and Beverly Lewis Center for Neuroimaging. Experimental techniques have been developed for manipulating sensory, perceptive and cognitive processes so that they can be imaged selectively in the fMRI. In addition, a Neuroinformatics Center was established in the Fall of 2002 to provide enhanced computational resources and software. Applications include the visualization and interpretation of complex images related to brain processes, as well as the development of computational tools for telemedicine and potential medical diagnostic applications. In collaboration with the Lewis Center, the Neuroinformatics Center was awarded over \$1 million from NSF in 2003 to acquire a high performance computational network to address neuroimage analysis. Faculty directing the Neuroinformatics Center currently has approximately \$1.2 million in competitive grants.

FY2002: The scope of work to be funded by this \$1.8 million for BBMI was finalized in consultation with TATRC in January 2003 and an award of \$1.49M to the UO was made in the fall of 2003. Major objectives are to support core research activities in the Neuroimaging and Neuroinformatics Centers, and to expand the scope of the programs through additional faculty recruitment and technical support. There are also technology transfer opportunities being developed, such as specialized instrumentation to enhance fMRI imaging capabilities, and computational methods for telemedicine applications such as the evaluation of victims of acute stroke or head trauma. Further collaborative interactions with the TATRC research group in aspects such as medical imaging and informatics will be explored.

FY2003: The DOD appropriations bill for FY03 included \$3 million for BBMI to strengthen the connections between genetics and neuroscience research, both areas in which the UO has internationally recognized excellence. Pioneering research has begun to link genetic factors with complex traits such as personality, learning and attention. Connecting a broader range of disciplines under BBMI will allow UO researchers to probe genetic mechanisms underlying our uniqueness, both as individuals and as a species. Specific tasks to be addressed include:

- Enhance the basic infrastructure to identify specific DNA segments and to isolate associated proteins influencing behavioral traits and related brain functions or disorders (genomics and proteomics)
- Exploit the ability to selectively manipulate and transplant individual genes in experimental animals to study how genetic factors affect brain function (transgenics).

FY2004: The scope of work to be funded by the FY03 and FY04 appropriations is under discussion with TATRC and an award will be made in 2004 of the appropriated funds. The major new objective would be to develop an advanced fMRI facility optimized for animal studies to permit the direct study of genetic influences on brain function. These small animal and mammalian studies, supported by further enhancements in the UO's genomics, proteomics and neuroimaging research facilities, would be integrated with studies of human brain function and behavior. Specifically, the UO would begin to use the results of the fMRI studies of genetically manipulated animals to guide studies of brain structure and function in humans. Such studies ultimately would include human subjects at risk for specific genetic disorders, and those in whom disease-related genes have been expressed.

A recent example of the international impact of faculty research on brain function is the work of UO professor of psychology Michael Anderson published in the January 8, 2004 *Science* journal and reported in the January 19 issue of *Newsweek*. The research offers the first neurobiological model of voluntary repression of memory. There are major implications for the understanding and treatment of psychological disorders such as those associated with Post Traumatic Stress Syndrome.

Museum of Natural History

Collections Storage Facility and Research Laboratory

Estimated Funding: \$2.5 million

Likely Sources of Funding: Institute of Museum and Library Services (Labor/HHS), and/or authorization in the Water Resources Development Act (Army Corps of Engineers Projects authorization).

Project Summary: The University of Oregon Museum of Natural History is running out of room. Its collections, now held in five buildings on campus in addition to the main museum building, grow continuously through gifts and with the specimens and related data generated by ongoing archaeological research in Oregon. To continue to provide and support research and educational opportunities, and to ensure the security of the collection, the museum must improve and expand its collection storage areas. The needed facility would provide new collections space, storage shelving, faculty and administrative offices, laboratory space, and field equipment storage. It would replace antiquated and irreparable facilities, greatly improving the physical conditions under which much of the collection is currently stored.

Background: The museum holds the largest and most important collections of archaeological materials from Oregon. They include the world's oldest shoes, 10,000 year-old sandals woven of sagebrush bark from Fort Rock cave, and evidence of North America's oldest house, a 9,400 year old summer settlement buried under layers of volcanic ash at Newberry Crater. The museum is designated by the Oregon State Law as the official repository of the state's anthropological collections and is the central repository for archaeological research collections in Oregon. The



museum works regularly with public agencies to perform “rescue archaeology” prior to the construction or expansion of public works projects. The collection is available to all qualified researchers for study, and is so used on a continuing basis.

Partnerships and Collaborations: The museum and its laboratories support archaeological research in Oregon, including rescue archaeology mandated by state and federal law. The museum provides research and curation support to the Oregon Department of Transportation and curation support for agencies including the Bureau of Land Management, U.S. Fish and Wildlife Service, U.S. Forest Service and U.S. Army Corps of Engineers. The federal agencies now pay a fee to cover new accessions, but much of the museum's storage space is taken up by items unearthed during dam construction on the Columbia and John Day systems, for which the museum has never been compensated.

Legislative History: In FY02, the project received \$50,000 in an earmark to the Institute of Museum and Library Services (IMLS) program. These funds were used to cover the costs of a complete audit of the collections. This involves re-checking and updating existing records, rectifying some long-standing problems, and creating a new computerized database.

Much work has been done on The Dalles (Columbia River) and Klamath Reservation collections, which are significant both for their archaeological content and historical value, and as pioneering research projects on Northwest cultures carried out under the direction of museum founder L.S. Cressman. These collections continue to be used for major research, playing a central role in a University of Washington student's doctoral dissertation on ancient fishing, and more recently in a Washington State University student's master's thesis on the avian fauna from The Dalles.

Last year, a museum intern organized these collections and archived the documentation by consolidating correspondence, field notes, maps, photographs and other records. This work will improve research and other access to the collections, and facilitate moving much of the collection to a greatly needed new facility when it becomes available. The museum has also conducted a thoroughgoing Conservation Assessment of all its collections under a separate IMLS grant and the report of the two conservators will guide further expenditures under the IMLS earmark.

In the 107-02 Congress, the House Transportation and Infrastructure Committee included an authorization for \$2.5 million in the Water Resources Development Act for the museum. Last year, in the 108-01 session, the House again included the language and the bill is now pending in the Senate.



Contacts:

Dave Frohnmyer, President
Office of the President
1226 University of Oregon
Eugene, OR 97403-1226
Phone: 541/346-3036
Fax: 541/346-3017
pres@uoregon.edu

C. Melvin Aikens, Director
Museum of Natural History
1224 University of Oregon
Eugene, OR 97403-1224
Phone: 541/346-3024
Fax: 541/346-5334
maikens@uoregon.edu

LANE COUNTY “UNITED FRONT” INTERSTATE 5 FRANKLIN-GLENWOOD INTERCHANGE STUDY

The University of Oregon supports the request of Lane County local governmental agencies (a.k.a., “The United Front”) for federal transportation funding to expand the environmental documentation required for the I-5 bridge replacement near the UO campus to include an Environmental Impact Study of a new interchange that would allow vehicles traveling north or south to exit and enter I-5 from Franklin Boulevard. The estimated cost of the study is \$5 million.

Background

The Oregon Department of Transportation has initiated the planning and design for the replacement of the I-5 bridge across the Willamette River near Franklin Boulevard. The planning for the replacement bridge creates a unique opportunity to study a new interchange system that would improve access between I-5 and Eugene, Glenwood and Springfield as well as simplifying and integrating the existing ramps on I-5 northbound to Franklin Boulevard westbound, Franklin Boulevard eastbound to I-5 southbound, and the on- and off-ramps connecting I-5 to Glenwood Boulevard.

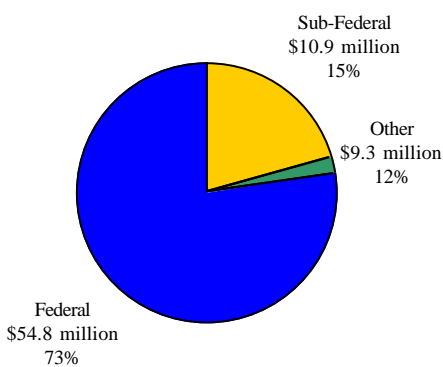
An improved interchange at the I-5 and Franklin Boulevard/Glenwood complex would increase regional mobility, create an entryway to the University of Oregon in east Eugene, improve access to downtown Eugene and Springfield and spur redevelopment along Franklin Boulevard and in Glenwood.

BALANCED RESEARCH INVESTMENTS

The University of Oregon supports increased funding for research and education in the following federal agencies: the National Institutes of Health, the Department of Education, the National Science Foundation, the Department of Energy and the National Endowment for the Humanities. We urge members of Congress to continue to champion the federal government's critical role in supporting research, graduate education, and student aid.

Why are federal research funds so important to the University of Oregon? Of the UO's record \$77.8 million in grants and contracts received in state FY2002-03 (July '02 – June '03), \$69.3 million were direct federal and sub-federal dollars. In addition, only three percent of the state's direct appropriations to the university are designated specifically for research activities. Simply put, without federal research funds there would be almost no research activity at the UO.

**Total Grants and Contracts to UO
FY 2002-2003**



The partnership between the University of Oregon and federal research agencies has been and will continue to be extraordinarily productive. The university is extremely successful in securing competitive, peer-reviewed grants that are awarded based on merit review by scientists or experts in the field of study. Though universities receive research funding from a variety of public and private sources, the federal government is the largest contributor to university-based research, and competition for these funds is intense. The university will continue to work closely with the Oregon Congressional delegation and federal agencies in support of the federal government's critical role in supporting research.

National Institutes of Health

The University of Oregon applauds the sustained commitment Congress has made to NIH and advocates a ten percent increase in the budget of the National Institutes of Health (NIH). In the past 20 years, NIH-supported scientists have transformed the health and quality of life of all Americans. But more can be done. A ten percent increase for NIH will help maintain the research enterprise by enabling faster and cheaper genomic sequencing, reducing the costs and increasing the precision of disease diagnosis, and minimizing the time it takes to develop vaccines – all of which will benefit millions of suffering patients. The President's proposed 2.6% increase in the NIH budget fails to provide the support needed to accomplish these goals.

The university received over \$25 million from the Department of Health and Human Services in the University's FY 2002-03, the vast majority from the NIH, representing 37% of all federal funds received by the University.

National Science Foundation

The University of Oregon seeks full funding for the National Science Foundation (NSF). The President's budget for NSF is inadequate. NSF has supported research, education and discovery for more than fifty years. Since its inception, NSF has had an extraordinary impact on American scientific discovery. Despite its small size, it is the only federal agency with responsibility for research and education in all major scientific and engineering fields. NSF supports thousands of faculty and students nationwide and plays a critical role in supporting university research.

The University of Oregon received over \$12 Million from NSF in FY03, or 18% of all federal funds received.

Department of Education

The University of Oregon seeks full funding for the Department of Education's research grant programs. Competitive research grants from the Department of Education have helped the University of Oregon's College of Education gain national visibility and presence and have helped improve student behavior and academic performance in K-12 school districts nationwide. In fact, in seven of the last eight years the UO College of Education ranked the number one college of education faculty and staff in receipt of funded research and training grants in the annual rankings by *U.S. News & World Report*.

The university received \$22.7 million in grants and contracts from the Department of Education in FY03, representing 27% of total award dollars for the UO and an 18% increase in support over FY02.

Individuals With Disabilities Education Act (IDEA) reauthorization

The University of Oregon has one of the highest ranked special education programs in the country and has provided critical research in the special education field for decades. The Individuals With Disabilities Education Act (IDEA) reauthorization could jeopardize this important Oregon resource. One provision could drastically impact the University of Oregon's ability to provide research in the field of special education: moving IDEA research and evaluation programs out of the Office of Special Education Programs (OSEP) and to place them in the Institute of Education Sciences (IES), and to sever the connection between the IDEA research program and the other IDEA programs. Over the last 10 years the University of Oregon has secured more than \$100 million in grants through this program. This change could seriously jeopardize Oregon's ability to secure future federal grant support for special education research. The University of Oregon requests that the responsibility for the administration of the IDEA research authority and the studies and evaluation authority be retained at OSEP.

Department of Energy

The University of Oregon supports full funding for the Department of Energy (DOE) Office of Science at the authorization level approved last year by the House and Senate in their respective versions of the Energy Policy Act. Funding for the DOE Office of Science at this level would allow the nation to fully pursue the tremendous scientific opportunities outlined in the Department's 20-year scientific facilities plan and the Secretary of Energy Advisory Board's recent report on DOE science. However, given the fiscal constraints facing Congress and the Administration, UO urges a 10-percent, \$350 million, increase for the DOE Office of Science in FY05, raising the office's budget to more than \$3.8 billion. While significantly less than the FY05 levels approved in the House and Senate versions of the Energy Policy Act, this figure is similar to the authorization levels these bills contained for FY04. The university believe that this request is reasonable and necessary to our efforts to keep United States science and engineering at the forefront of global research and development

The University of Oregon received \$2.3 million from DOE in FY 2002-03, representing 3% of total federal awards received.

National Endowment for the Humanities (NEH)

The University of Oregon supports the Administration's FY05 request of \$162 million for NEH. This would be a \$26.7 million (19.7 percent) increase over the FY04 level of \$135.3 million. The request includes \$33 million for the *We the People* program, an increase of \$25 million. All NEH programs potentially benefit from *We the People* because the initiative enables NEH to bolster support for research and scholarship, classroom teaching, preservation efforts, media programming, and museum exhibitions. The FY05 request also includes \$13.1 million for research activities, \$18.9 million for preservation and access activities, \$12.6 million for education activities, and \$31.8 million for state humanities councils.

RESEARCH GRANT SUCCESS AT THE UNIVERSITY OF OREGON FY03 a Record Year, and FY04 On Pace For Another Record

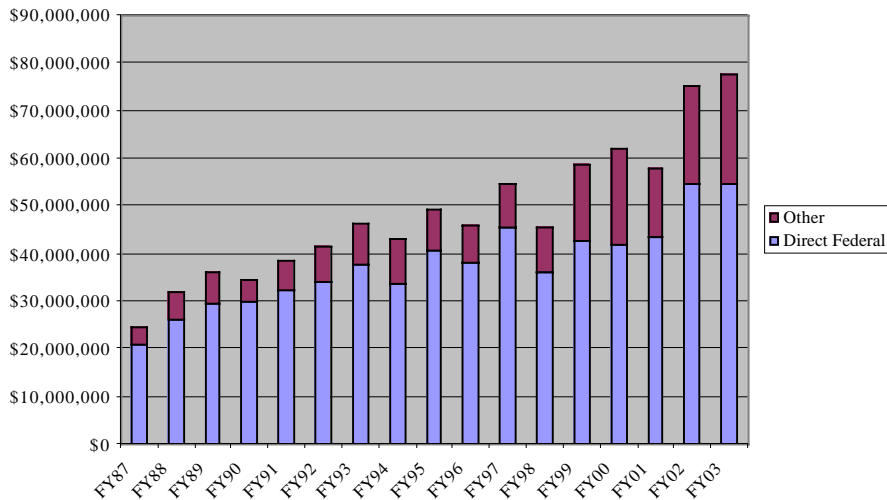
Grants and contracts received by the University of Oregon in state FY 2002-03 reached an all-time record of \$77.8 million, an increase of 3.6% over the prior fiscal year and a 34.6% increase over FY 2000-01. Of the total amount, \$69.3 million were direct federal and sub-federal dollars.

This reflects an upward trend in grants and awards experienced by the university over the past decade, due in large part to the federal government's greater investments in research, particularly at the National Institutes of Health. Since 1992, the amount of sponsored research has increased 678 percent. Total awards for that time exceed half a billion dollars.

The University has several internationally recognized research institutes, in molecular biology and neuroscience, which together received \$20.8 Million in FY03. Federal awards for these institutes provided \$3.4 Million in support of an international resource center and comprehensive database on zebrafish, a model organism first developed for use in research by the UO and now utilized by researchers around the world.

The Increasing Importance of Federal Research Funds

Total Awards Received by UO Since FY87



Examples of Grants Received by the UO in FY03 and the First Two Quarters of FY04

Helping Communities Avoid Natural Disasters

The UO’s Community Service Center has an \$180,000 contract with Oregon Emergency Management to help communities avoid disaster losses through research, development and implementation of disaster action plans. The UO team provides technical resources, coordinates training, and helps communities develop plans that meet the new federal requirements.

Bacteria Research Looks at Cancer Link

A bacterium known as H. Pylori colonizes the stomachs of over half the world’s populations. In most infected individuals it is a benign gastric resident, but in certain cases it becomes a serious threat causing gastritis, ulcers or even cancer. A UO biology researcher received \$600,000 from the American Cancer Society to determine why the bacteria makes some people so sick while it has no effect on others.

Nurturing an Interest in Science

A grant awarded to two UO chemistry professors will ease budget pressure on local schools while encouraging an interest in science. The \$560,000 National Science Foundation grant will pay for UO graduate students to teach science in elementary schools and help their teacher learn how to use science experiment kits.

Key Support for Project SUPPORT

Preventing one youth from entering a correctional facility saves the state tens of thousands of dollars annually says a UO College of Education professor. In 1999 the Oregon Youth Authority, U.S. Department of Education and the UO teamed up to form Project SUPPORT to address the problem. The program has helped more than 300 incarcerated Oregon youth with disabilities find stability in their communities. Now, the U.S. Department of Education has award Project SUPPORT \$250,000 each year for three years to expand the program to Multnomah and Lane Counties.

Preventing Adolescent Drug Abuse

The director of the UO Child and Family Center and the intervention director for the Project Alliance office in Portland co-authored a book titled *Intervening in Adolescent Problem Behavior* and were awarded \$1.6 million from the National Institutes of Health last year to continue their research on early, family-centered prevention of drug abuse with 1,000 Portland families.

Teaching Support for Native American Communities

A grant of nearly \$264,000 awarded to Patricia Rounds, Teacher Education, from the U.S. Department of Education, for the “Sapsik”w’alá” (Teacher) Program, to recruit, train, and mentor Native American teachers serving Native American communities.

Preventing Reading Difficulties

College of Education faculty have been instrumental in creating and disseminating the scientific understanding of what works to prevent reading difficulties in children, and to address the improvement in reading achievement for all students. Two professors received \$480,000 in support of the Oregon Reading First Center, for the first year of a multi-million dollar sub-federal award through the Oregon Department of Education.

Studying Venture Capital for Start-up Companies

A Professor of Entrepreneurial Management in the College of Business received a grant from the National Science Foundation for \$359,000 to continue research on corporate equity investment as venture capital for start-up companies.

Sexual Assault Prevention Education

The Office of Student Life received a federal award of \$186,000 from the U.S. Department of Justice to support education on sexual assault prevention.

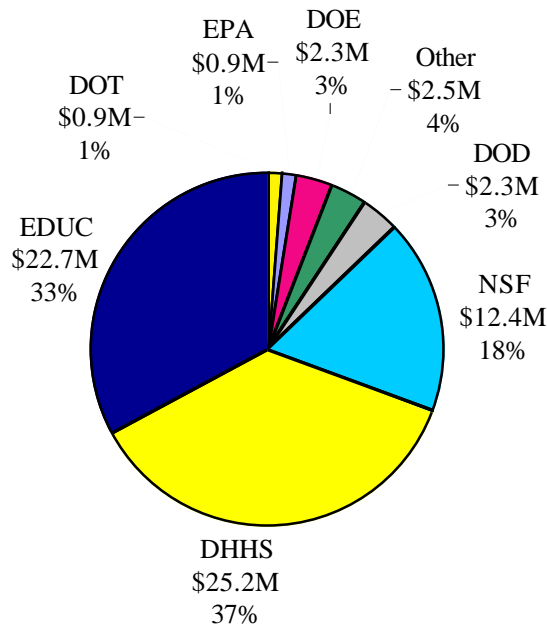
Keeping Oregon Memories Alive

The UO's Museum of Natural History received a grant of \$241,000 from the Institute of Museum and Library Services to work with the UO library on a project called "Keeping Oregon Memories Alive for 21st Century Learners."

Teaching Marine Science in Oregon's Coastal Communities

The UO's Oregon Institute of Marine Biology received an award from the National Science Foundation for \$492,759 to train graduate students and public school teachers in marine science in the coastal communities of North Bend and Coos Bay.

**Federal and Sub-Federal Grants and Contracts
Awarded to UO By Agency, State Fiscal Year 2002-03
Total: \$69.3 Million**



GREEN CHEMISTRY

The University of Oregon supports H.R. 3970, the Green Chemistry R&D Act of 2004, and appreciates Congressman Wu's efforts to add an "Oregon Amendment" making the Act even more beneficial to the university.

Green chemistry is the deliberate design of new products and manufacturing processes where the design eliminates or reduces the use or generation of hazardous substances. By eliminating hazards, green chemistry promotes public safety, homeland security, and environmental protection. Green chemistry promotes economic development and competitiveness by minimizing the amount of revenue that must be spent on health care, security measures and environmental remediation.

The University of Oregon is a world leader in green chemistry and helping direct the course of this emerging field. The UO's innovative Green Organic Chemistry Laboratory curriculum and wide range of research programs that focus on developing new materials and processes for making materials safer have attracted international attention. Examples of the leading research efforts of UO research teams include low-temperature manufacturing routes to new materials, development of polymers that degrade into harmless by-products in the environment, and new agents for cleaner processing and cleanup of nuclear waste.



The University of Oregon has played a major role in developing new *products* and *processes* that minimize or eliminate the negative impacts of chemicals on human health and the environment. Cutting edge research programs are developing greener products and processes that are technologically and economically superior to current technologies.

A representative example of a greener *process* is the preparation of functionalized gold nanoparticles, building blocks to fuel the nanoscience revolution.

- Nanoparticles are a principle building block for nanoscience
- Processes for preparation for nanoparticles often involve dangerous or environmentally damaging substances

- In 2000, UO developed a greener (and more convenient) preparation of an important nanoscale building block – functionalized 1.5-nm gold nanoparticles. The new method:
 - Eliminates the use of highly toxic and explosive reactants
 - Eliminates the use of a cancer-causing solvent
 - Permits synthesis of at least 100 times more material per week than the old method
 - Provides a safer working environment
 - Reduces the cost, thus increasing the availability to researchers
- A patent on this process will be issued very soon
- ONAMI research efforts on the development of microscale reactors for the preparation of nanoparticles will extend this technology
- ONAMI research on the health effects of nanoparticles will enable us to develop nanomaterials that are designed to be safer products.

A representative example of a greener *product*, enabled by fundamental nanoscience research at the UO, is thermoelectric materials based upon nanoscale superlattice design.

- Thermoelectric materials have several applications as greener products
 - Cooling (“refrigeration”) without liquid refrigerants is greener due to the elimination of chemical refrigerants that contribute to global change (global warming or ozone depletion).
 - Conversion of waste heat into electricity. When a thermoelectric material is exposed to a temperature gradient, electricity can be generated.
- UO researchers developed a fundamentally new approach to thermoelectrics based upon nanoscale superlattices. This new class of materials:
 - Exhibit higher performance owing to their nanoscale structure
 - Provide access to *bulk* superlattice materials needed for practical application of these materials
 - Are made using a procedure that allows convenient integration with other devices, such as microelectronic chips.

OPPORTUNITIES IN HIGHER EDUCATION

For many people, the most important factor in their decision to pursue a higher education is cost. The University of Oregon urges Congress to renew its commitment to student aid when it reauthorizes the Higher Education Act. High priority should be given to increased support for federal need-based student aid programs. Federal funding levels that have not kept pace with inflation leave low- and middle-income students nowhere to turn. Despite increases in recent years to federal grant aid, the purchasing power of federal grants has remained at 1980 levels, forcing students to turn to loans programs, private banks and credit cards to finance their education. The most effective means of reducing reliance on loans is restoring the value of federal grant assistance.

Family Finances

74% of the University of Oregon's resident freshmen come from neighborhoods where average family incomes are in the bottom half of all neighborhoods (average of \$47,000 per year).

A One-Year Look at Student Aid at the University of Oregon

At the University of Oregon in academic year 2000-2001 alone, there was \$30.5 million in un-met need.

Need vs. Available Funds, Academic Year 2000-01

	Resident Undergraduate	Non-Resident Undergraduate	Resident Graduate	Non-Resident Graduate	TOTAL
Number of Students	5,124	795	789	779	7,487
Need	\$47,803,180	\$12,304,700	\$12,188,060	\$15,773,520	\$88,069,460
Paid	\$32,128,250	\$4,888,610	\$10,227,180	\$10,305,370	\$57,549,410
GAP	-\$15,674,930	-\$7,416,090	-\$1,960,880	-\$5,468,150	-\$30,520,050

HEA Reauthorization

The reauthorization of the Higher Education Act (HEA) is a time for Congress to renew its commitment to making higher education possible, regardless of a student's economic circumstances. The federal grant, loan and work-study programs are proven, having helped millions of students attend and graduate from the institution of their choice. When Congress rewrites the HEA, these programs would remain the primary focus. Some points to consider:

- The primary purpose of the HEA since its enactment in 1965 has been to provide grants and loans to help students afford college.
- The number of Pell Grant recipients has increase by almost 1 million students in recent years, while the maximum Pell Grant Award has been effectively frozen.

- The limit on how much students may borrow through the student loan program has not increased in over a decade, forcing many students to enter the private lending market to finance their education.
- With state funding on the decline and projected enrollment growth on the rise, we face an access crisis without a substantial federal investment in student aid.
- Restoring the purchasing power of federal student aid is essential to keeping higher education possible and maximizing the nation's investment in students.
- The most effective way to address tuition is to bring student aid up to date.

Federal Student Aid

The University of Oregon supports increases for federal student aid programs, especially Pell Grants and campus-based student aid programs. For FY05 the university supports a \$450 increase in the maximum Pell Grant for all students to \$4,500 and full funding of the Pell Grant program. The university also seeks additional funding for Supplemental Education Opportunity Grants (SEOG), Federal Work-Study (FWS), Perkins Loans, capital contributions and loan cancellations, Leveraging Education Assistance Partnerships (LEAP), GEAR UP, and the TRIO programs. These grant and loan programs remain crucial to ensuring access for low-income students to higher education.

Federal Student Financial Aid at the University of Oregon 2002-2003 Academic Year		
Program	# of students paid	\$ paid
Pell	4,108	\$10,853,800
SEOG	2,154	1,003,449
FWS	1,687	2,382,544
Perkins Loan	2,503	3,898,493
Direct Stafford loans		
Subsidized loans	7,724	35,385,821
Unsubsidized	5,700	24,800,683
PLUS	2,160	18,250,064
Oregon Opportunity Grant	1,907	1,812,022
SEOG - supplemental educational opportunity grant		
FWS - federal work study program		
PLUS - Parent loan for undergraduate students		
Oregon Opportunity Grant - formally the Oregon State Need Grant program		

The university supports full funding of the graduate education programs of the Department of Education, including the Graduate Assistance in Areas of National Need (GAANN) and the Jacob K. Javits Fellowship programs (\$50 million and \$17 million respectively). The university also supports increased funding for the Department's Title VI international education programs. When combined, these graduate and international education programs serve national economic and security needs by providing support to graduate students pursuing studies in the physical and natural sciences, the humanities and arts, and the social sciences, mathematics, and computer science, as well as foreign languages and area studies.

Child Care Access Means Parents in School (CCAMPIS)

The University of Oregon supports efforts to maintain or expand funding for CCAMPIS, a small U.S. Department of Education grant program. Last year CCAMPIS allocated child care funds to Pell Grant-eligible low-income student families at 428 colleges and universities, including the University of Oregon. Since 1999 the grants have allowed 15-35 families each year to receive funds for child care thereby making a university education accessible. The FY04 budget reduced funds for CCAMPIS substantially below the authorized level meaning renewals and new grants were unfunded. The UO was in its final year of a four year renewable grant and could not reapply for funds, thus ending the program at the university. Continued or expanded funding could be used to reinstate the program at the university's campus child care center.

INTERNATIONAL EDUCATION

The nation should maintain its international educational capacity in order to effectively meet its economic competitive needs and its national security goals. The University of Oregon is an international university that has made a significant and sustained investment in language study programs and international education programs.

- 1,272 international students from 86 countries registered at the University of Oregon in fall 2003. Nearly three-quarters came from Asia.
- Fourteen percent of UO undergraduates have some form of international experience during their academic careers.
- UO graduates include 18 Rhodes Scholars and 148 Fulbright Scholars.
- In March 2004, the deputy director of the Peace Corps came to campus to personally recognize and thank the UO for continually producing a high number of Peace Corps volunteers. Nationally the UO ranks seventh in the number of volunteers that come from its campus (81 volunteers from the UO in 2003), but as the deputy director noted, the UO is without question number one in volunteers per capita.

IRA CHARITABLE ROLLOVER CHANGES WILL BENEFIT OREGON'S UNIVERSITIES

The University of Oregon supports legislation that would permit individuals over the age of 59 to contribute Individual Retirement Account (IRA) funds to charities, including universities, without having to pay income tax on their gifts. Under current law, withdrawals from Individual Retirement Accounts are subject to income tax. This creates a disincentive for retirees to contribute some or all of their IRA funds to charity. The individuals and communities served by the nation's charitable sector will benefit from the proposed change because it will encourage new contributions from individuals who would no longer have to pay tax on a charitable gift.



DAVE FROHNMAYER
President

1226 University of Oregon
Eugene OR 97403-1226
(541) 346-3036 ph
(541) 346-3017 fax
pres@uoregon.edu

JOHN MOSELEY

Senior Vice President
and Provost
1258 University of Oregon
Eugene OR 97403-1258
(541) 346-3186 ph
(541) 346-2023 fax
provost@uoregon.edu

RICHARD LINTON

Vice President for Research
and Graduate Studies
1258 University of Oregon
Eugene OR 97403-1258
(541) 346-3081 ph
(541) 346-2023 fax
rlinton@uoregon.edu

ALLAN PRICE

Vice President for University
Advancement
1270 University of Oregon
Eugene OR 97403-1270
(541) 346-5555 ph
(541) 346-0499 fax
aprice@uoregon.edu

MICHAEL REDDING

Associate Vice President
Office of Governmental Affairs
1292 University of Oregon
Eugene OR 97403-1292
(541) 346-5022 ph
(541) 346-6251 fax
mredding@uoregon.edu

BETSY BOYD

Federal Affairs Director
Office of Governmental Affairs
1292 University of Oregon
Eugene OR 97403-1292
(541) 346-0946 ph
(541) 346-6251 fax
eaboyd@uoregon.edu

UNIVERSITY OF OREGON
OFFICE OF GOVERNMENTAL AFFAIRS