UNIVERSITY OF OREGON

JULY 2023

FAST FACTS FOR POLICYMAKERS
NATIONAL INSTITUTES OF HEALTH AND THE UO

$399.7 Million
TOTAL NIH AWARDS TO OREGON

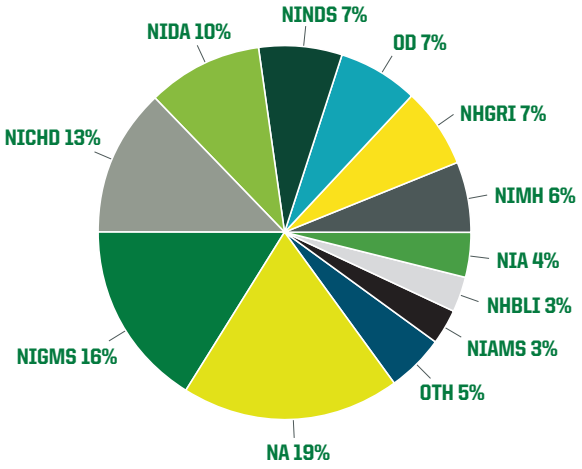
6,716
JOBS SUPPORTED

$989 Million
ECONOMIC ACTIVITY SUPPORTED

OHSU • UO • OSU • OSLC* • PSU
TOP NIH-FUNDED INSTITUTIONS IN OREGON
* OREGON SOCIAL LEARNING CENTER

$58.0 Million
ACTIVE NIH AWARDS TO UO RESEARCHERS IN FY2022

139
TOTAL ACTIVE NIH GRANTS AT THE UO



GRANTS BY INSTITUTE

NA	Not associated with an institute	$10.9 million
NIGMS	General Medical Sciences	$8.3 million
NICHD	Child Health and Human Development	$7.3 million
NIDA	Drug Abuse	$5.5 million
NINDS	Neurological Disorders and Stroke	$4.0 million
OD	Office of the Director	$3.8 million
NHGRI	Human Genome Research	$3.8 million
NIMH	Mental Health	$3.3 million
NIA	Aging	$2.5 million
NHLBI	Heart, Lung, and Blood	$2.0 million
NIAMS	Arthritis, Musculoskeletal, Skin Diseases	$1.6 million
OTH	Other institutes	$5.0 million

NIH CENTERS OF EXCELLENCE AT THE UO

Leslie Leve, professor in the College of Education, and associate director of the Prevention Science Institute, is overseeing a seven-year, $12.5 million grant to lead the UO's involvement in the **NIH's Environmental influences on Child Health Outcomes Program (ECHO)**.

NIH's ECHO initiative, launched in 2016, involves more than 30 studies nationwide and combines data from more than 50,000 children from diverse racial, geographic and socioeconomic backgrounds. Data from this study is available to the public via a national data repository and is advancing knowledge around topics like childhood obesity, autism, and positive health.

For example, a $10.1 million NIH center grant is allowing researchers at the UO and Oregon Health & Science University to help address opioid abuse in Oregon and across the U.S. The grant comes from the NIH'S National Institute on Drug Abuse with a goal of better understanding and developing interventions that can lead to improvements in outcomes for mothers with a history of opioid or other substance use, as well as their children.

Dr. Leve leads this program alongside former UO faculty member Philip Fisher, now at Stanford University. The Center's research projects include the delivery of preventive interventions to provide parenting support across multiple counties in Oregon, including Lane, Douglas, Jackson, Josephine. This year, the Center expanded one of its parenting support programs to provide the opportunity to mothers in all Oregon counties to receive parenting support services. The Center also holds bimonthly webinars for community members where they can receive continuing education credits or continuing medical education free of charge. In the past year, the team has held free community events such as naloxone trainings, prescription drug takebacks, and a workshop on prevention of youth overdose, conducted in Spanish and English.

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UO LEADS NIH COLLABORATIONS

While the majority of NIH's investment in research at UO is in the form of individual investigator grants, UO faculty members are also engaged in collaborative projects and resource development.

ZEBRAFISH AS A MODEL ORGANISM

In the 1970's, UO researcher Dr. George Streisinger demonstrated that the zebrafish is a wonderful organism for studying vertebrate development and genetics. He and his UO colleagues described the similarities of zebrafish and human tissues, organs and genes, and showed that these properties, coupled with the transparency of zebrafish as they are developing, made this organism an ideal model for understanding human biology. From these humble beginnings, zebrafish has become a premiere, internationally recognized model organism studied by over a thousand laboratories around the world. UO zebrafish research is helping elucidate the underlying causes and impacts of a wide variety of human diseases, including COVID-19.

Two NIH-funded programs at the UO support zebrafish-related research throughout the world:

- **The Zebrafish International Resource Center (ZIRC)** is a centralized repository for zebrafish genetic stocks and research materials services that are available for distribution to the international research community. ZIRC is supported by an NIH grant from the Office of Research Infrastructure Programs (ORIP) in collaboration with the Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD).
- **The Zebrafish Information Network (ZFIN)** is the centralized, online database for zebrafish genetic and genomic data; ZFIN provides expertly curated, organized and cross-referenced information about zebrafish to the international research community.

TRAINING THE NEXT GENERATION

A productive research environment relies on robust programs to train the next generation of scientists. In addition to individual fellowships, UO has three T32-supported predoctoral training programs.

- Genetics: National Institute of General Medical Sciences (NIGMS); 45th year
- Developmental Biology: Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD); 33rd year
- Molecular Biology and Biophysics: NIGMS; 44th year

Over the last four decades, hundreds of UO graduate students have been trained in these programs. They include coursework, student research reports, student-organized research symposia and professional development activities to prepare trainees for careers in an evolving biomedical workforce.

With the help of an NICHD R25 award titled Navigating Educational Trajectories in Neuroscience, the UO facilitates the success of scholars at two critical training periods within career advancement and progression: mid-stage training for graduate students and late-stage training for postdoctoral scholars. The cohort-based model—a key feature of the program's design, given the integral nature of community to promote retention, resilience, and success among underrepresented trainees—integrates existing successful activities with new evidence-based practices in mentorship and core skill development.

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NIH AWARDS SUPPORT GROUNDBREAKING WORK OF KNIGHT CAMPUS FACULTY

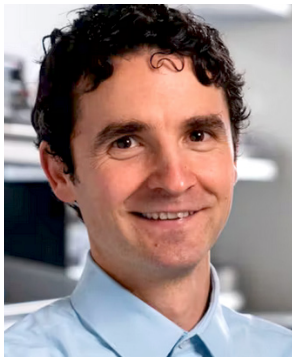
UO computational biochemist Parisa Hosseinzadeh, synthetic biologist Calin Plesa,and Bioengineer Marian Hettiaratchi are recipients of the prestigious NIH awards targeted toward innovative, early career investigators.

Hozzinzadeh and Plesa each received 3-year, $2.1 million grants through the NIH's Director's New Innovator Award program. Hettiaratchi was awarded a 3-year, $602,000 Trailblazer R21 Award. All three investigators serve as assistant professors at the University of Oregon's Phil and Penny Knight Campus for Accelerating Scientific Impact.

Hosseinzadeh's NIH project is focused on generating peptides – small chains of amino acids, the building blocks of proteins – as powerful, novel therapeutics Peptides can address some of the limitations of the most widely used therapeutic modalities, antibodies and small molecules, and could be the solution to fighting diseases such as cancer, new pandemics, and antibiotic-resistance.

Plesa's NIH project addresses the growing need for antibodies for both basic research and therapeutics. It promises to be an order-of-magnitude improvement over current high-throughput methods of generating antibodies, which are slow, laborious, require automation, and are dependent on antigen availability.

Marian Hettiaratchi



Calin Plesa

Parisa Hosseinzadeh

Hettiaratchi's NIH project addresses the issue of treating severe injuries that often result in impaired tissue regeneration. She is seeking to generate a biomaterial platform to enable the precise delivery of multiple proteins from a single material that will allow researchers to investigate the timing of protein delivery for healing. Because this biomaterial can be easily adapted to different types of proteins and tissue injuries, it has the potential to enhance repair in many different tissues.

The NIH Director's New Innovator Award program supports unusually innovative research from early career investigators. The awards are part of the High-Risk, High-Reward Research program, which supports exceptionally creative scientists pursuing highly innovative research with the potential for broad impact in biomedical, behavioral, or social sciences within the NIH mission.

The NIH Trailblazer R21 Award program provides an opportunity for new and early-stage investigators to pursue research programs of high interest to the National Institute of Biomedical Imaging and Bioengineering at the interface of the life sciences with engineering and the physical sciences.

UNIVERSITY OF OREGON

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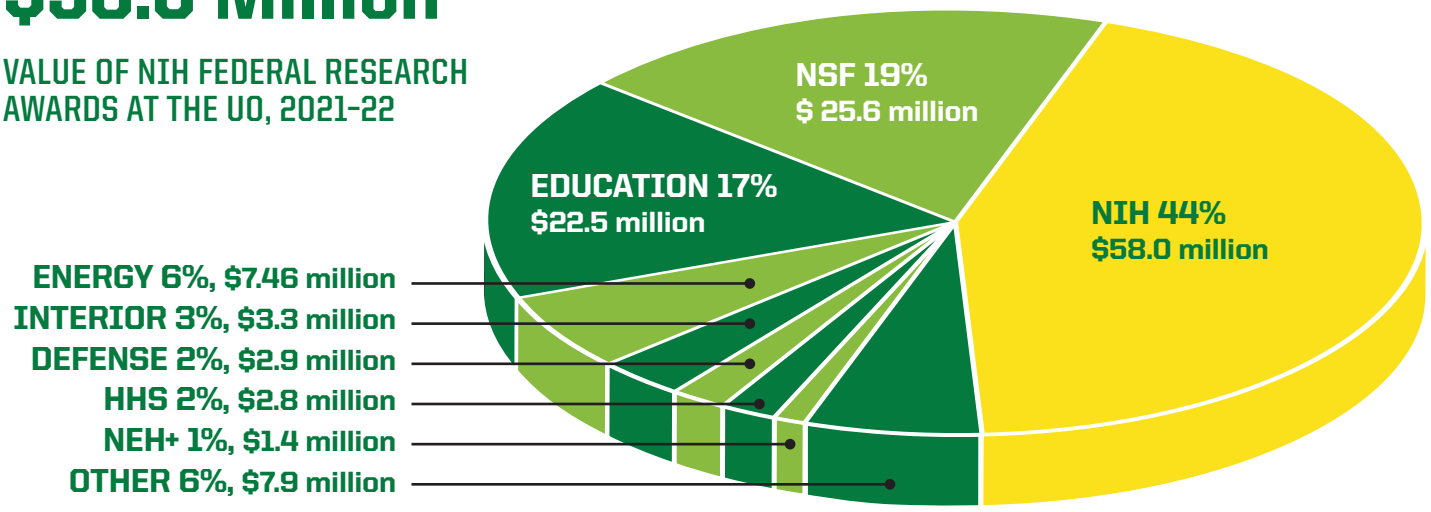
VALUE OF NATIONAL INSTITUTES OF HEALTH RESEARCH AWARDS AT THE UO, 2021-22

$58.0 Million

VALUE OF NIH FEDERAL RESEARCH AWARDS AT THE UO, 2021-22



UO RESEARCH BY THE NUMBERS FY22

$180 Million
TOTAL AWARDS, FEDERAL AND OTHER

$131.9 Million
73%
FEDERAL AWARDS

~1,000
STEM UNDERGRADUATE DEGREES CONFERRED

354
MCNAIR SCHOLARS SINCE 1999

$10.3 Million
IN LICENSING INCOME

54
LICENSE-BASED INVENTION DISCLOSURES

#1 • #5
NATIONALLY IN APPLIED PHYSICS, CHEMISTRY MS DEGREES

319
FULBRIGHT SCHOLARS SINCE 1950

Our legacy of
TRANSFORMATIVE RESEARCH
is built on nearly 150 years of inspired collaborations.

We've gathered our collective strengths to answer the call of tomorrow. Our research
ADVANCES SOCIETY
SERVES HUMANITY
DRIVES INNOVATION
and
BUILDS A BETTER FUTURE

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