

FAST FACTS FOR POLICYMAKERS

NATIONAL INSTITUTES OF HEALTH AND THE UO



\$399.7 Million
TOTAL NIH AWARDS TO RESEARCH
THROUGHOUT THE STATE OF OREGON



6,716
JOBS SUPPORTED



\$989 Million
ECONOMIC ACTIVITY SUPPORTED



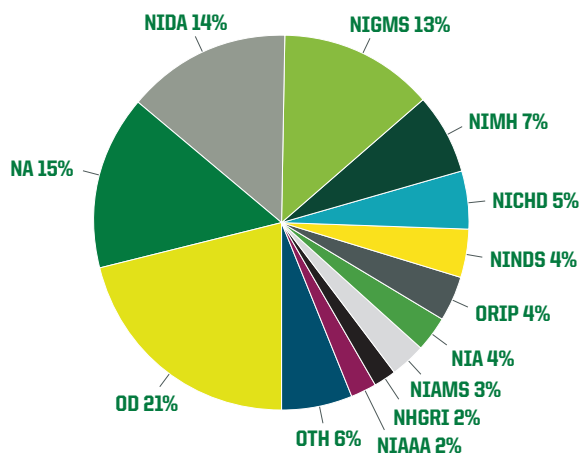
OHSU • UO • OSU • OSLC* • PSU
TOP NIH-FUNDED INSTITUTIONS IN OREGON
* OREGON SOCIAL LEARNING CENTER



\$55.1 Million
NIH AWARDS TO UO RESEARCHERS IN FY2023



251 NIH Grants
CURRENTLY ACTIVE AT THE UO



GRANTS BY INSTITUTE

| | | | |
|-------|---|----------------|-----|
| OD | Office of the Director | \$10.9 million | 21% |
| NA | Not associated with an institute | \$7.8 million | 15% |
| NIDA | Drug Abuse | \$7.3 million | 14% |
| NIGMS | General Medical Sciences | \$6.5 million | 13% |
| NIMH | Mental Health | \$3.5 million | 7% |
| NICHD | Child Health and Human Development | \$2.6 million | 5% |
| NINDS | Neurological Disorders and Stroke | \$2.3 million | 4% |
| ORIP | Research Infrastructure Programs | \$1.8 million | 4% |
| NIA | Aging | \$1.6 million | 3% |
| NIAMS | Arthritis, Musculoskeletal, Skin Diseases | \$1.4 million | 3% |
| NHGRI | Human Genome Research | \$1.3 million | 2% |
| NIAAA | Alcohol Abuse | \$1.1 million | 2% |
| OTH | Other institutes | \$3.0 million | 6% |

REPLACING SUSPENSIONS WITH SKILL BUILDING AND IMPROVING SCHOOL CULTURE



Rhonda Nese

A new approach to classroom behavior that avoids suspensions and expulsions could be the latest tool for helping youngsters avoid a whole list of short- and long-term problems, including drug abuse.

Pioneered by Associate Professor Rhonda Nese and her team in the UO's College of Education, the Inclusive Skill-Building Learning Approach (ISLA) provides an alternative to removing students from classrooms and schools. Nese and her team received a \$3.7 million NIH grant to test the model in 60 middle schools across six states (Oregon, Alabama, California, Georgia, Hawaii, and Texas).

The grant project evaluates the effectiveness of ISLA on improving both education access and quality and the social and community environment to prevent school exclusion and substance misuse.

The goal of ISLA is to make the relationship between students and teachers better by improving the way teachers and administrators interact with students and to provide equitable methods of improving students' social and behavioral problem-solving. Nese said ISLA leads to improved student behavior and reduces the need to exclude students from the classroom or school.

"We're moving away from the holding cell mentality of in-school suspensions where you just sit in a room and do nothing," she said. "That's not a teaching strategy, it does not lead to improvements in children's behaviors or academic performance, and in fact it only makes things worse."

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NATIONAL INSTITUTES OF HEALTH AND THE UO

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Nese said decades of research have shown that exclusionary discipline is inextricably linked to substance abuse, incarceration, academic failure, trouble with employment, and other negative predictors for kids.

ISLA “creates environments that are inclusive, supportive and built on the idea that we only succeed as a class when all of us succeed,” she said.



The development of ISLA was initially funded with a \$1.4 million grant from the Institute of Education Sciences. The NIH grant allows the approach to be tested on a variety of indicators of student success and student risk, such as student engagement, inclusive teaching practices, racial and ethnic disparities in school discipline, and opioid and other substance misuse.

TRAINING THE NEXT GENERATION

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

- Genetics: National Institute of General Medical Sciences (NIGMS); 46th year
- Developmental Biology: Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD); 34th year
- Molecular Biology and Biophysics: (NIGMS); 44th year

In FY23, 11 graduate students conducted research and received mentorship through individual F31 NRSA awards.

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.

In FY 2023 the UO received funding to establish the UO Program to Increase Resilience and Enhance Persistence in Biomedical Sciences (UO PREP Bio). The one-year postbaccalaureate program serves scholars from groups that are underrepresented in health-related sciences—including individuals from historically excluded groups, individuals with disabilities, and individuals from disadvantaged backgrounds—on their journey to advanced biomedical degree programs. UO PREP Bio emphasizes community building and uses evidence-based methods to support further development of technical skills, professional savvy, and persistence.

FAST FACTS FOR POLICYMAKERS

NATIONAL INSTITUTES OF HEALTH AND THE UO

UO LEADS NIH-FUNDED ZEBRAFISH MODEL ORGANISM RESEARCH



In the 1970s the UO's Professor George Streisinger demonstrated that the zebrafish is a useful 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. The zebrafish has become a premier, internationally recognized model organism studied by over 1,500 laboratories around the world. UO zebrafish research is helping uncover the underlying causes and impacts of a wide variety of human diseases.

Two NIH-funded resources at the UO support zebrafish-related research worldwide:

- **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.
- **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 in collaboration with the Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD).

Two renovation projects are improving the facilities where zebrafish research is conducted:

- A deferred maintenance project **renovating Huestis Hall**, a teaching and research hub for the UO's biological sciences, is nearing completion. The hall houses zebrafish research laboratories used by many UO scientists and students. The project is funded by \$54 million in state Article XI-G bonds approved by the Oregon Legislature.
- An \$8 million NIH grant, along with two smaller NIH grants and funding from the UO Office of Research and Innovation, is funding an **expansion of the ZIRC**. The project significantly increases the ability of researchers to import, maintain, and provide genetically designed lines of zebrafish to the international biomedical research community.

ADDRESSING HEALTHCARE EQUITY THROUGH INNOVATION

A timely innovation funded by NIH grants that improves health care equity and could reduce errors in medical decision making is the goal of a research project in Professor Keat Ghee Ong's lab at the Knight Campus for Accelerating Scientific Impact. The team seeks to develop a better pulse oximeter—a critical medical device that measures blood oxygen saturation.

The devices, which determine oxygen levels by shining visible and infrared lights through the finger,

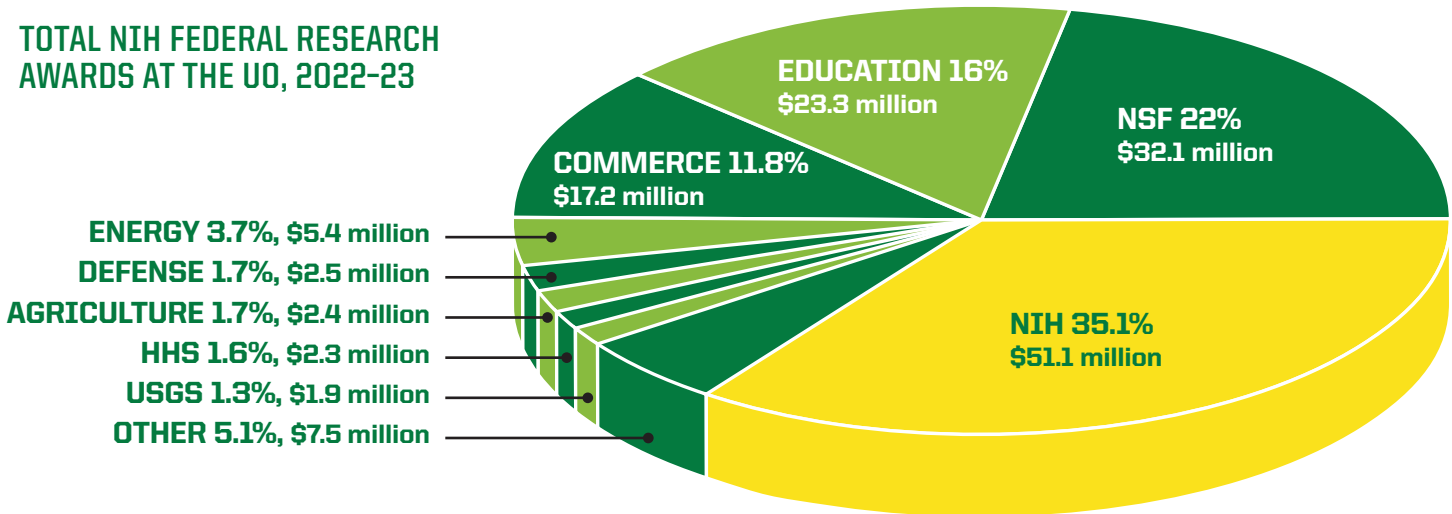
have a major flaw—they don't work very well for patients with darker skin tones. As a result, people of color may receive inaccurate diagnoses, leading to suboptimal medical care.

Researchers in the Ong Lab are addressing the challenge with a combination of innovative technology and computational approaches. They are developing a novel technology that uses a color imagery platform to create a digital representation of different skin tones, ensuring an accurate reading.

NATIONAL INSTITUTES OF HEALTH RESEARCH AWARDS AT THE UO, 2022-23

\$51.1 Million

TOTAL NIH FEDERAL RESEARCH
AWARDS AT THE UO, 2022-23



UO RESEARCH BY THE NUMBERS FY23

\$180.6 Million

TOTAL AWARDS, FEDERAL AND OTHER

\$145.8 Million

81%

FEDERAL AWARDS

~1,000

STEM UNDERGRADUATE
DEGREES CONFERRED

354

MCNAIR SCHOLARS, 1999-2023

\$8.3 Million

IN LICENSING INCOME

31

LICENSE-BASED INVENTION
DISCLOSURES

#1 • #5

NATIONALLY IN APPLIED
PHYSICS, CHEMISTRY
MS DEGREES

319

FULBRIGHT SCHOLARS, 1950-2023

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**