

# NATIONAL INSTITUTES OF HEALTH (NIH) AND THE UNIVERSITY OF OREGON

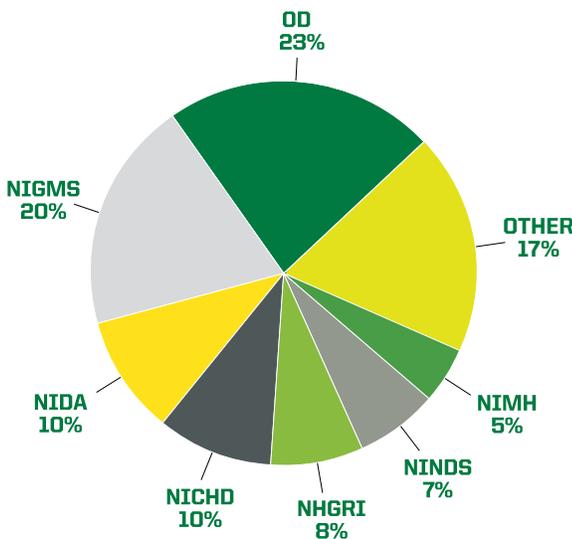
**\$53M**

ACTIVE NIH AWARDS TO UO  
RESEARCHERS IN FY20

**23**

ACTIVE NIH  
GRANTS AT THE UO

## NIH FUNDING BY INSTITUTE/CENTER



- OD** Office of the Director
- NIGMS** General Medical Sciences
- NIDA** Drug Abuse
- NICHD** Child Health and Human Development
- NHGRI** Human Genome Research
- NINDS** Neurological Disorders and Stroke
- NIMH** Mental Health

## NIH CENTERS OF EXCELLENCE AT THE UO

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

NIH’s ECHO initiative, which launched in 2016, involves more than 30 studies nationwide and will combine data from around 50,000 children from diverse racial, geographic and socioeconomic backgrounds.

**Improving Outcomes for mothers with opioid use history and their children** A \$10.1 million NIH grant is allowing researchers at the UO and Oregon Health & Science University to help address the opioid abuse epidemic 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 who have a history of opioid use, as well as their children.

Dr. Leve and psychology professor Philip Fisher are conducting nationwide outreach via a combination of direct services, communications, pilot and training activities, data sharing, and a strong virtual presence. The UO’s Data Science Initiative is also playing a key role.

The funding is also supporting three research projects, two of which are based at the UO and leverage the university’s research strengths in prevention, neuroscience and data science. Led by Fisher, director of the Center for Translational Neuroscience, and Beth Stormshak of the Prevention Science Institute, the two projects focus on supporting women so they are well-equipped to parent their young children.



UO professor Leslie Leve

# NATIONAL INSTITUTES OF HEALTH AND THE UO

## UO LEADS NIH COLLABORATIONS

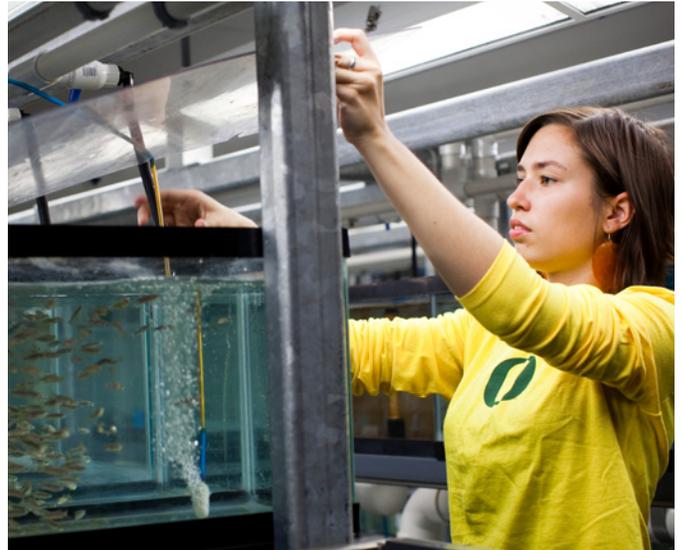
While the majority of NIH's investment in research at UO is in the form of individual investigator grants, we are also engaged in collaborative projects and resource development.

### ZEBRAFISH AS A MODEL ORGANISM

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.
- **The Zebrafish Information Network (ZFIN)** is the centralized, online database for zebrafish genetic and



genomic data; ZFIN provides a wide array of expertly curated, organized and cross-referenced information about zebrafish to the international research community.

### PSYCHOSIS RISK OUTCOMES NETWORK (PRONET)

UO researchers and mental health specialists at PeaceHealth are developing targeted treatments for high-risk adolescents and young adults with schizophrenia as part of a \$52 million grant from the NIH. UO scientists are working to understand how the brain changes for at-risk adolescents to better develop diagnostic and treatment strategies using magnetic resonance imaging at the UO's Lewis Center for NeuroImaging and an electroencephalogram in the UO's Department of Human Physiology.

## 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); 44th year
- Developmental Biology: Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD); 32nd year
- Molecular Biology and Biophysics: NIGMS; 43rd 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.

UO is also supporting national efforts to diversify the pool of highly trained biomedical researchers through programming for undergraduate students. With the help of an NICHD R25 award, the UO provides summer experiences for undergraduate students with limited access to research facilities and opportunities from across the nation.

# NIH RADx-UP: EXPANDING COVID-19 TESTING TO UNDERSERVED POPULATIONS

*A two-year, \$4.9 million grant from NIH's Rapid Acceleration of Diagnostics Underserved Populations program, also called RADx-UP, is expanding COVID-19 testing to underserved Latinx communities in nine Oregon counties using testing capacity created by the UO's COVID-19 Monitoring and Assessment Program (MAP).*

The UO is the only institution in Oregon to receive this NIH funding. Working in partnership with local health authorities and community leaders, members of the MAP team are focusing on Latinx communities in 39 communities in nine Oregon counties, including Douglas, Jackson, Jefferson, Josephine, Lane, Lincoln, Morrow, and Umatilla.

Along with professor Leslie Leve, the team of principal investigators includes UO biologist Bill Cresko and UO prevention scientist David DeGarmo. The co-investigative team includes more than a dozen UO experts in COVID-19 testing, Latinx community engagement, implementation science and data science.

A key component of the project is to deliver a culturally tailored approach to testing and community outreach that focuses on equity and applies lessons learned from comprehensive community assessment on the best modes of communication, health messages and testing protocols. The team includes faculty members and students who are bicultural and bilingual, some who have staffed multiple county-led testing sites serving Latinx communities.

The project is using a randomized waitlist control design to evaluate the effect of the intervention. As of August, more than 450 testing events have been conducted and more than 2500 COVID tests have been conducted through this project. The larger aims of the NIH RADx-UP initiative include:

- Supporting research to better understand COVID-19 testing patterns among underserved and vulnerable populations;
- Strengthening the data on disparities in infection rates, disease progression and outcomes; and

- Developing strategies to reduce the disparities in COVID-19 testing.

The team has received a Phase II award to continue this testing and also examine vaccine hesitancy.

## NIH MIRA EARLY STAGE INVESTIGATOR AWARDS

NIH's Maximizing Investigators' Research Awards (MIRA) are prestigious 5-year grants that provide UO researchers with greater stability and flexibility, thereby increasing scientific productivity and changes for important breakthroughs. Two UO faculty were recently awarded Early Stage Investigator (ESI) grants:

**David Garcia**, Assistant Professor in with the Department of Biology's Institute of Molecular Biology, was granted \$1.8 million to investigate how prion protein-based control of RNA-modifying enzymes affects RNA structure, gene, expression, and growth. The proposed work by Garcia's lab will uncover a new understanding how of RNA structure can be epigenetically controlled.

**Dan Grimes**, Assistant Professor in the Department of Biology's Institute of Molecular Biology, was granted \$1.8 million to determine fundamental mechanisms by which cells generate sense and interpret fluid flows using advanced genetic and imaging approaches. Grimes' lab will use tractable zebrafish as model organisms. The work promises new opportunities for improving human health.



## Government and Community Relations

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