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.
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.
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.

Hosseinzadeh 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. 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.

Plesa’s NIH project addresses the growing need for antibodies for both basic research and therapeutics. It 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.

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.
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

NIH 44%
$58.0 million

NSF 19%
$25.6 million

EDUCATION 17%
$22.5 million

OTHER 6%, $7.9 million

ENERGY 6%, $7.46 million

INTERIOR 3%, $3.3 million

DEFENSE 2%, $2.9 million

HHS 2%, $2.8 million

NEH+ 1%, $1.4 million

OTHER 6%, $7.9 million

UO RESEARCH BY THE NUMBERS FY22

$180 Million
TOTAL AWARDS, FEDERAL AND OTHER

$131.9 Million
73%
FEDERAL AWARDS

$10.3 Million
IN LICENSING INCOME

54
LICENSE-BASED INVENTION DISCLOSURES

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

354
MCGNAIR SCHOLARS SINCE 1999

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