

Oregon Institute Of Occupational Health Sciences

2022 ANNUAL REPORT



*Oregon Institute of
Occupational
Health Sciences*

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OUR MISSION

The Oregon Institute of Occupational Health Sciences promotes well-being and prevents disease and disability among working Oregonians through basic, clinical and applied research, outreach and education.

INTRODUCTION FROM DIRECTOR STEVEN A. SHEA, PhD



The Oregon Institute of Occupational Health Sciences is dedicated to health and safety in the workforce. Our mission is to promote health, and prevent disease and disability among working Oregonians. We do so through basic and applied research, outreach, and education. The Institute is comprised of more than 75 scientists, research staff, and outreach and administrative professionals committed to exploring a range of biomedical and applied research questions and practical solutions related to the promotion of health among workers in Oregon and beyond.

This year's Annual Report provides a snapshot of the many significant activities the Institute engaged in throughout 2022. The Institute receives essential base funding from the Division of Consumer and Business Services of the State of Oregon (ORS 656.630). In addition, the Institute currently has 31 active externally funded research projects related to its mission, mostly awarded via highly competitive investigator-initiated multi-year federal grants. This external funding includes 13 new projects that started in 2022. Our renowned faculty members continue to publish peer-reviewed papers at a significant pace and present their work at national and international conferences. Our Outreach team is actively engaging with workplaces throughout Oregon to promote healthy work practices through the implementation of Institute-developed tools and trainings. And our education and training events continue to attract occupational health and safety practitioners throughout the Pacific northwest.

I'm proud of the impact the Institute is having. Our research, outreach, and education is making a difference in the lives of working Oregonians and I'm delighted to highlight it in our 2022 Annual Report.

Steven A. Shea, Ph.D.
Director and Professor,
Oregon Institute of Occupational Health Sciences
Oregon Health & Science University

INSTITUTE BY THE NUMBERS

31

Active Research Projects in 2022

13

New Projects Funded in 2022

\$7.2M

Funding for Research Projects in 2022

[View the full list of active awards.](#)





FACULTY PUBLICATIONS

56

Faculty Authored/Co-Authored
Peer-reviewed Publications

**MOST CITED PAPER: “FTD-ASSOCIATED MUTATIONS IN
TAU RESULTS IN A COMBINATION OF DOMINANT AND
RECESSIVE PHENOTYPES”**

72 CITATIONS

Law, A. D., Cassar, M., Long, D. M., Chow, E. S., Giebultowicz, J. M., Venkataramanan, A., Strauss, R., & **Kretzschmar, D.** (2022). FTD-associated mutations in Tau result in a combination of dominant and recessive phenotypes. *Neurobiology of Disease*, 170*

About this paper: The protein Tau has been connected to several neurodegenerative diseases, such as Alzheimer’s, which can impact older workers. Dr. Alexander D. Law & colleagues investigated recessive & dominant effects of mutations in Tau on behavior, anatomy & molecular function of the protein.

*OccHealthSci researchers in bold.
[View the full list of faculty publications.](#)

BASIC RESEARCH HIGHLIGHTS



HYPERTENSION AND SLEEP - SAURABH THOSAR, PhD

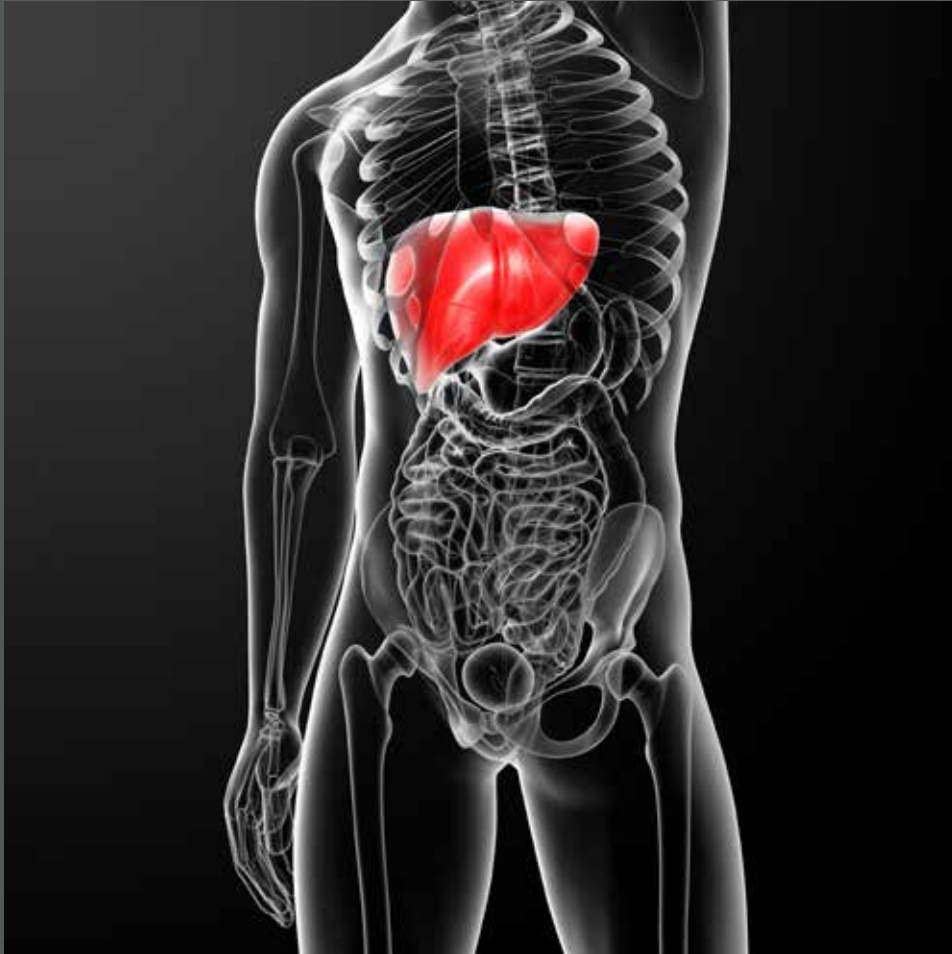
Hypertension is a public health epidemic, and in more than 30% of people with hypertension, blood pressure does not adequately decrease during the night compared to daytime values, a phenomenon called “non-dipping.” Individuals who do not experience a nighttime drop in blood pressure are at increased risk for cardiovascular disease and early death. **Dr. Saurabh Thosar** received a multi-year, multi-million dollar grant from the NIH to lead a team of researchers investigating the factors that contribute to this syndrome. This work could further behavioral and circadian time-based treatments, which could contribute to the health of the workforce.



UNDERSTANDING HOW INTERNAL CLOCKS WORK - MATTHEW BUTLER, PhD

How our internal clocks function biologically and synchronize with environmental cues impacts our overall health and well-being. **Dr. Matthew Butler** is wrapping up a multi-year, multi-million dollar grant from the NIH that explored how light-sensitive hormone receptors in the brain function to potentially compensate for differences in the circadian rhythms in males and females. Butler’s research could contribute to a better understanding of the mechanisms governing circadian rhythms, knowledge that may lead to improved interventions that support our internal clocks and promote general health and well-being, particularly for shift workers.

BASIC RESEARCH HIGHLIGHTS



BISPHENOL A AND LIVER CANCER - CAREN WEINHOUSE, PhD

Bisphenol A, or BPA, is a chemical compound found in many consumer products. Human exposure to BPA is widespread and has been linked to breast and prostate cancers. **Dr. Caren Weinhouse's** research shows that BPA is associated with a common and deadly form of liver cancer, hepatocellular carcinoma (HCC) in male and female mice even though HCC seldom occurs in females. Weinhouse received a prestigious Outstanding New Environmental Scientist R01 grant from the NIH to lead a study exploring whether there is a direct causal relationship between HCC and BPA. The study will further examine how BPA disrupts estrogen signaling, which may play a role in higher instances of HCC in females. This work will inform the conversation on further regulating BPA in the US, which could lead to additional protections for workers in the food processing industry and consumers.

APPLIED RESEARCH HIGHLIGHTS



WORKPLACE MENTAL HEALTH SUPPORT TRAINING FOR MANAGERS - LESLIE HAMMER, PhD, JENNIFER DIMOFF, PhD

Dr. Leslie Hammer, Associate Director of Applied Research and recipient of the 2022 OHSU Faculty Award for Outstanding Research, and **Dr. Jennifer Dimoff**, University of Ottawa, occupational health experts, developed a one-hour, computer-based training, [Workplace Mental Health Support Training for Managers](#). This research-to-practice training teaches managers to 1) support employees' mental health and 2) recognize and respond to warning signs of distress in ways that are appropriate and actionable in workplace settings. Initial funding from the Department of Defense served as the foundation for this customized version for the civilian population. A military version is also available. It has been piloted in a number of employment settings, including OHSU. Managers report the training is useful to them and demonstrated significant improvements in their knowledge of mental health and supportive leadership behaviors. The training will be available at the end of March 2023.

OREGON HEALTHY WORKFORCE CENTER



The [Oregon Healthy Workforce Center \(OHWC\)](#), a NIOSH Center of Excellence for Total Worker Health® co-directed by Drs. [Leslie Hammer](#) and [Ryan Olson](#), began the second year of the Center's current funding cycle (2021-2026). OHWC's current theme is Total Worker Health (TWH) intervention effectiveness, translation, and outreach to advance safe and healthy work design. Center highlights include:

OHWC RESEARCH

Four research projects are underway which are supported through NIOSH's funding from the American Rescue Plan. These projects are focused on addressing the needs of healthcare workers and first responders.

1. Work-life Check-ins to Reduce Burn-out in Health-care Settings, led by [Drs. David Hurtado](#) and [Abigail Lenhart](#)
2. Impact of Work Schedule on Cardiovascular Health and Safety in Firefighters, led by [Dr. Nicole Bowles](#)
3. Translating an Intervention to Address Chronic Pain Among Home Care Workers, led by [Dr. Ryan Olson](#)
4. Development and Validation of a TWH Climate Scale, led by [Dr. Emily Huang](#)

OHWC TOTAL WORKER HEALTH TRAINING

- Through our Oregon Total Worker Health Alliance (comprised of our Institute and the OHWC, Oregon OSHA, and SAIF), our practitioner focused trainings have reached over 400 participants since October 2021
- In partnership with the University of Washington, the OHWC will launch the Total Worker Health® Certificate Program in May 2023

OUTREACH & EDUCATION



Our outreach team brings cutting-edge research to practice in communities and organizations around the Northwest through our Institute website, blog, conference exhibits and presentations, a monthly newsletter, social media, a podcast, and spring and fall symposiums. We also train health and safety professionals, provide consultation, and offer the public information on occupational health and safety through our Total Worker Health® workshops. The outreach team conveys the messages of our research to the general public and key partners. Additionally, the outreach team equips practitioners and leaders to design and implement integrated solutions to health, safety and well-being of workers in the region. Our reach this year included:

- Conferences and Exhibitions: 1,200 + engagements
- Professional Development Events: Total registration: 399 individuals
- Websites & Social Media: Total Views & Listens: 54,799
- Monthly Newsletters: 5,000 subscribers

CONFERENCES

- Northwest Safety & Health Summit by Region X VPPPA Boise ID
- Blue Mountain Occupational Safety & Health Conference Pendleton, OR
- Central Oregon Occupational Safety & Health Conference Bend, OR
- Oregon Workers' Compensation Division Educational Conference, Virtual
- Oregon Public Health Association Annual Conference (OPHA), Corvallis, OR
- OSHA Spanish Language Conference, Salem, OR
- International Total Worker Health NIOSH conference in October, NIH in DC
- Northwest Occupational Health Conference, Kennewick WA
- AIHA in Nashville, TN
- PHRMA conference, Portland OR

2022 FINANCIALS

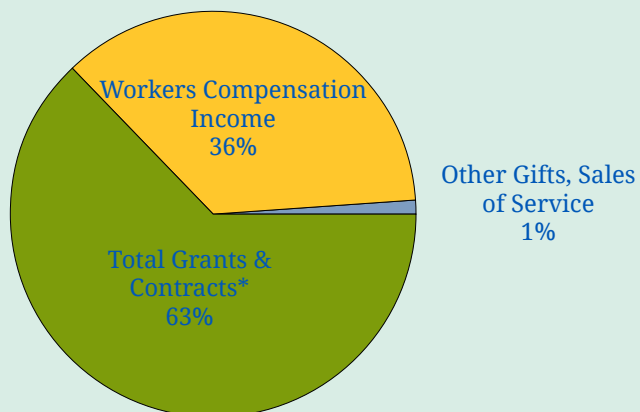
REVENUE

Workers Compensation Income	\$3,988,772
Total Grants & Contracts	\$7,097,260
Other Gifts, Sale of Service	\$113,733
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Total 2022 Income	\$11,199,765

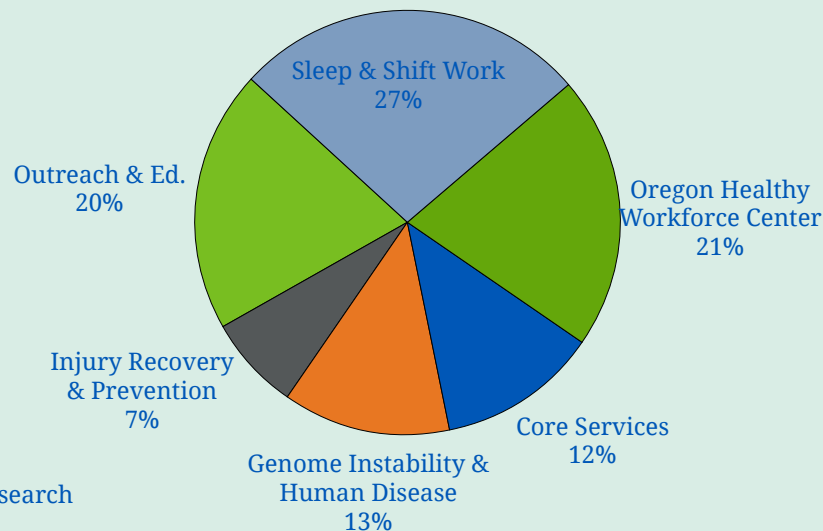
EXPENSES

Payroll	\$6,881,739
Services & Supplies	\$1,741,747
F&A Fees*	\$2,087,546
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Total 2022 Expenses	\$10,711,032

INCOME BY SOURCE



EXPENSES BY PROGRAM



*Facilities and Administrative (F&A) expenses are those that provide for research support systems such as infrastructure and operational expenses.



OHSU

Oregon Institute Of Occupational Health Sciences