



Oregon State University



Portland State UNIVERSITY



UNIVERSITY OF OREGON

Innovate Collaborate Oregon

2022 Impact Brief

ICOregon is a collaborative network of Oregon institutions that supports and encourages the growth of Oregon’s innovation infrastructure, which includes universities, an academic research hospital, regional incubators and a number of engaged entrepreneurial organizations. A cornerstone of this ecosystem is education and workforce development provided by Oregon universities, which deliver students with a high-quality education and specialized training to create a pipeline of new skilled talent. By bringing together resources across multiple academic institutions, ICOregon aims to educate new entrepreneurs, promote innovative discoveries, form new companies, and increase economic development in Oregon.

This brief highlights recent accomplishments within the ICOregon network, many of which were made possible by leveraging state funding programs.

...I always felt as though I was missing some key element in my career and I found that missing link with the [Oregon State University] Accelerator. After learning more about the industry and business aspects of starting a tech company, I’ve decided to go the MBA route on top of my engineering background.

Nikhil Wandhekar, Oregon State University student of mechanical, industrial and manufacturing engineering

Metrics	2021	2017-2021
Research Expenditures	\$885M	\$4.13B
Innovation Disclosures	237	1,369
New Licenses and Options	1,537	6,091
Startup Companies	11	65
Total based in Oregon	8	49

Research Expenditures - The total research expenditures include expenditures made by the institution in support of its research activities that are funded by all sources including the federal government, local government, industry, foundations, voluntary health organizations, and other non-profit organizations.

Innovation Disclosures - The disclosure of a technology, which is the embodiment of an idea that results from the creative work performed by faculty, students or staff during research or teaching.

License - A license agreement formalizes the transfer of technology between two parties, where the owner of the technology permits the other party to share the rights.

Options - An option agreement grants the potential licensee a time period during which it may evaluate the technology and negotiate the terms of a License agreement.

Startup Companies - New companies that were dependent on licensing an institution’s technology for their formation.

University Innovation Research Fund

The University Innovation Research Fund (UIRF) was established by the Oregon Legislature in 2019 to match federal funds that support innovation and commercialization of technologies developed at the ICOregon universities. The fund was established after Oregon universities lost major federal grants to other states with similar funds. The fund rapidly demonstrated its value and resulted in over \$45 million in federal funding to Oregon universities, which are highlighted here. In addition to promoting innovation, the fund is designed to support grants that have a direct or potential impact to drive economic development across the state.

NATIONAL MARINE RENEWABLE ENERGY CENTER

Federal Award: \$1,250,000
UIRF Match: \$250,000

A grant from the U.S. Department of Energy was awarded to Oregon State University to advance the ability and capacity of university-based centers and laboratories to support the entire product development pipeline for marine clean technology. Once established, this pipeline of marine energy developers can better support Oregon's shipyards, manufacturing companies, maritime vessel operators, and the entire marine energy supply chain. The project is expected **to boost economic development by attracting clean technology developers and project development firms to Oregon.**

IMPROVING CELL THERAPY MANUFACTURING

Federal Award: \$1,200,000
UIRF Match: \$600,000

The manufacturing sector around cell therapy is a rapidly growing biomedical market. University of Oregon researchers were awarded a grant from the U.S. Department of Defense to address one of the central challenges of this industry - the high cost and variability of using animal-based culture media. The standardized media being developed at University of Oregon could help accelerate the development and manufacturing of regenerative cell therapy products and **make Oregon a player in a sector that is projected to be worth \$8 - 10 billion within the next decade.**

BUILD BACK BETTER - OREGON MASS TIMBER COALITION

Federal Award: \$41,400,000
UIRF Match: \$6,250,000

The Oregon Mass Timber Coalition is a collaborative effort to support Oregon's mass timber ecosystem, which includes Oregon State University, University of Oregon, the Port of Portland, Business Oregon, the Oregon Department of Forestry, and the Department of Land Conservation and Development. **The University Innovation Research Fund provided 20% of the federal matching requirement of a \$41.4 million Build Back Better Regional Challenge grant** awarded to the coalition by the U.S. Department of Commerce's Economic Development Administration. The funding will allow both Oregon universities to be leaders in the industry, especially in affordable housing.

ALCOHOL - TO - JET FUEL TECHNOLOGY

Federal Award: \$1,950,000
UIRF Match: \$487,500

Oregon State University was awarded a U.S. Department of Energy Bioenergy Technologies grant to advance existing alcohol-to-jet fuel technology. The project is a collaboration with Pacific Northwest National Laboratory and LanzaTech and harnesses ethanol from biomass feedstocks **to produce jet fuel with a smaller carbon footprint.**

University Venture Development Fund

Established by the Oregon Legislature in 2005, the University Venture Development Fund gives a tax credit to donors who support the commercialization of promising university discoveries and campus-based entrepreneurial education. As of 2021, the fund has allowed Oregon universities to disperse over \$8 million in grants to promote innovation and entrepreneurship in the state. Recent achievements from these grants include the following success stories from Oregon startup companies.

NEURAMEDICA RECEIVES FDA CLEARANCE FOR SURGICAL CLIPS

Oregon Health & Science University

NeuraMedica is a medical device company based in Oregon City specializing in innovative products for neurosurgery. In 2022 **NeuraMedica received FDA clearance and launched their first product**, DuraFuse™ Dural Clips, which are bio-absorbable surgical clips for spinal surgery. NeuraMedica, an OHSU startup company, received a University Venture Development Fund award that allowed for early device prototyping. Read more in the [press release](#).

STARTUP COMPANY INPRIA SELLS FOR \$514M

Oregon State University

Oregon State University startup company Inpria produces photoresists that enable simpler manufacturing flows and novel semi-conductor chip architectures. Inpria utilized the University Venture Development Fund in 2009 to build an experienced team. **In 2021 Inpria sold to JSR Corp in 2021, with the company's headquarters remaining in Corvallis** and Oregon State University graduates making up more than 50% of Inpria employees. For more information read the Oregon Live [article](#).

LIQUID WIRE WORKS TO DEVELOP BIOLOGY-INSPIRED SENSORS

Portland State University

Portland State University startup company Liquid Wire, based out of Portland, is developing sensors with gel phase circuitry, which emulates the mechanics of the body's own musculoskeletal system. Liquid Wire received a University Venture Development Fund award in 2018 and the company **has raised over \$10 million** to date and is currently collaborating with Portland State University on projects related to monitoring advanced robotics. Read more on the [company website](#).



UNIVERSITY OF OREGON
WOMEN'S INNOVATION NETWORK

The University Venture Development Fund supports the Women's Innovation Network, a collaborative initiative that unites entrepreneurs, community members, and University of Oregon faculty and staff members to overcome gender-based barriers.

As an administrator with the University of Oregon's Innovation Partnership Services, Mandy Gettler understands the challenges women entrepreneurs face. These obstacles often involve complex issues. But they can also be as simple as what to wear or how to make sure you're heard.

"I've been fortunate to have amazing male mentors," says Gettler, who is the coleader of the Women's Innovation Network. "But they could not prepare me for all the challenges women face."

"We want to connect women with other women, so they can have conversations about entrepreneurship, help each other, and gain confidence. For example, when you're the only woman in a room, sometimes having a voice requires extra effort."

That barrier can be overcome with some preparation, Gettler adds. She points to research on gender and communication that demonstrates how women's voices are often ignored—and how certain words and strategies can help. By practicing proven verbal tactics and having a toolkit of useful phrases at the ready, women entrepreneurs can communicate clearly and effectively.

This is just one example of how the Women's Innovation Network, a University of Oregon network of faculty members, students, and women executives and business leaders helps women entrepreneurs. Last year, the inaugural cohort of 20 University of Oregon faculty members, graduate students, and Lane County entrepreneurs completed the nine-month program. The second group of 23 women started this October, and this year the University Venture Development Fund is helping fund the program.

Each participant is assigned a mentor. University of Oregon faculty members and students benefit greatly from perspectives beyond academia, Gettler says. All the participants learn about different career paths from seasoned professionals. Or, if the path doesn't exist yet, they can learn the tools to start their own businesses and blaze a trail.

Monthly Women's Innovation Network workshops include topics such as bringing research to market, risk tolerance, reframing failure, patents, forming a company, and how to make the most of community resources. Read more about the [WIN program](#).

**The data is clear about gender disparities
in patents, inventions, and copyrights.
We're grateful the University Venture
Development Fund is supporting this new
way of addressing those barriers.**

Mandy Gettler, Women's Innovation Network coleader

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UNIVERSITIES AND
DEPARTMENTS

- Oregon Health & Science University
 - Technology Transfer
 - Collaborations and Entrepreneurship
 - Oregon Clinical and Translational Research Institute
- Portland State University
 - Propel PSU
- Oregon State University
 - Research, Innovation & Economic Impact
 - Innovation & Entrepreneurship
 - Advantage Accelerator
- University of Oregon
 - Innovation Partners
 - Economic Development and Industry Engagement

Investing in Oregon's Innovation Ecosystem

The ICOregon network offers a range of existing services to help support innovation and entrepreneurship across the state including:

- Dedicated technology transfer and business development offices to support academic innovations and guide them to market.
- Established funding programs to advance promising academically-developed technologies and startup companies.
- Entrepreneurial education programming for students and faculty to drive workforce development.
- Accelerators that provide physical space and training to newly formed Oregon startup companies.

Support from the Oregon Legislature accelerates the success of these ongoing efforts and helps drive momentum in growing Oregon's innovation ecosystem. Programs like the University Venture Development Fund and the University Innovation Research Fund are critical in bridging gaps and removing barriers so that Oregon's innovative research has the best chance at reaching its potential and making a difference.

To date, the entire University Innovation Research Fund has been successfully deployed, highlighting the important need and high demand for these types of matching funds.

However, the exhaustion of this fund currently leaves Oregon universities shut-out from competing for federal grants with a matching requirement. **Without a renewal of the University Innovation Research Fund, or a similar fund-matching mechanism, Oregon will miss out on federal dollars and opportunities to drive economic development in the state.**