



March 18, 2025

Senator Aaron Woods, Co-Chair

Representative David Gomberg, Co-Chair

Joint Committee on Ways and Means Subcommittee on Transportation and Economic
Development

900 Court St. NE Salem, OR 97301

Dear Co-Chairs Woods and Gomberg and Members of the Committee:

OTRADI is one of Oregon's Centers of Innovation Excellence. OTRADI is a non-profit institute funded primarily by the State of Oregon, under the umbrella of Business Oregon and the Oregon Innovation Council. OTRADI's mission is to fuel the economic development of Oregon's bioscience industry by enabling the translation of innovative research into products and companies that benefit human health and create high-wage jobs for Oregon. My company, Caravel Bio, Inc. is a resident at the OTRADI Oregon Bioscience Incubator in Portland, OR. OTRADI has played an essential role in our ability to locate in Oregon by providing a landing pad (lab space, essential equipment, and programming) for our startup company.

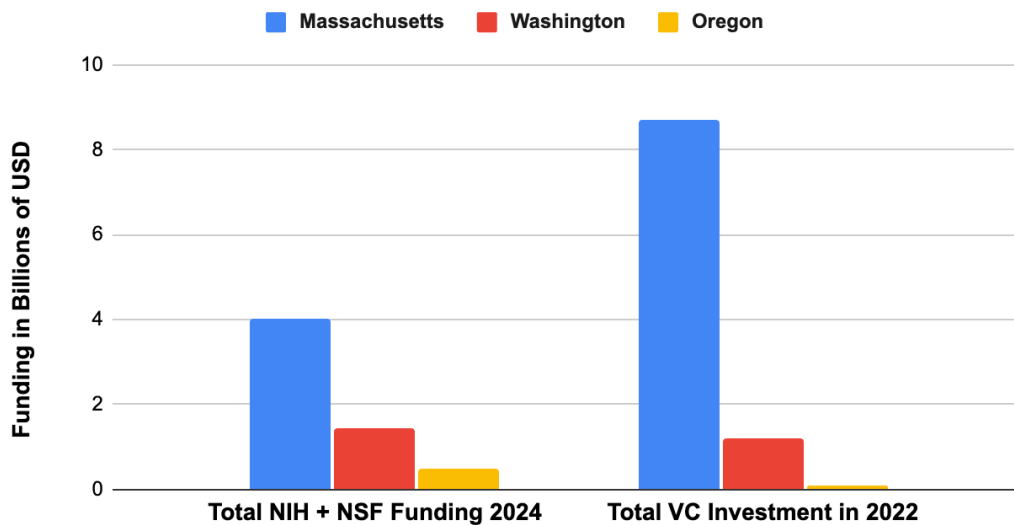
At Caravel Bio, Inc., we are developing a synthetic biology and protein engineering platform with early-stage products in non-pollutive chemical synthesis and animal health. Today, our most notable achievement is an early-stage research collaboration with a global energy company with which we are developing biocatalysts for post-combustion CO₂ capture and utilization. Our funding comes from a mixture of research contracts, private venture capital, and government grants. We received a highly competitive NSF SBIR Phase 1 Award in 2024 and have applied for additional Federal grants, for which we are still awaiting a decision, totaling over \$12M. These grants include collaborators from Oregon State University, CalTech, Rutgers University, and other private companies outside the state of Oregon. With these funds, we employ four individuals in Oregon with an average salary >\$100,000. We intend to continue growing our R&D operations, creating more high-paying jobs in the Portland metro area.

I'm writing in support of OTRADI's mission and recommend you continue to support the organization with state funds. Investment in OTRADI has the potential for significant positive impact on Oregon's economy by diversifying the workforce into additional industries and enabling early-stage companies to secure additional investment dollars that will be spent within the state of Oregon. By supporting OTRADI, you are supporting the growth of the biotech industry and entrepreneurial ecosystem in Oregon.



Additionally, I think it is important the committee understands that other states spend significantly more capital on OTRADI-like programs. These investments, made by states like Massachusetts, Washington, and others, fund programs that train and help scientists become entrepreneurs, secure expensive lab space and equipment, and train the local workforce, increasing the likelihood that inventions in local universities are turned into successful companies that employ thousands of individuals within these states. These programs – like the Massachusetts Life Sciences Center and the Washington Life Science Institute – ensure that Federal research dollars spent in these states lead to economic growth. OTRADI is doing its best to fill this niche within the state of Oregon, but it is poorly equipped to do so. This is evidenced by the fact that, compared to Oregon, the states of Massachusetts and Washington see significantly more investment dollars in private biotech and pharma companies relative to the amount of Federal funding they receive.

Total Federal Research Allocation & Private Investment for Oregon and Aspirational Peers in 2022



Massachusetts and Washington both receive more Federal research dollars than Oregon. It would be great if Oregon could secure more Federal dollars, but the real problem lies in that both states are better at turning the research dollars they receive into companies that see significant investment. In 2022, for every Federal dollar spent, Massachusetts saw \$2.14 in private investment, Washington - \$0.84, and Oregon - \$0.15. Source: Federal Funding, faseb.org. [MA Private Investment](#), [WA Private Investment](#), OR [Private Investment](#))

Why is it that Massachusetts and Washington see more investment per dollar spent? Is the research being done at their universities simply better and therefore more likely to be



commercialized? I don't think so. I'm familiar with several researchers in Oregon (my husband is an engineering professor at Oregon State University) and I have research collaborations with Prof. Ryan Mehl in the Department of Chemical & Biological Engineering at OSU. There is exceptional research being done at Oregon universities. However, states like Massachusetts and Washington spend more money ensuring that research leads to a viable company. Since 2007, the Massachusetts Life Sciences Center has deployed ~\$1.6B in state funds to support entrepreneurship and business creation within the state ([source](#)). The funding is used to provide resources to scientists and early stage companies; laboratory space, equipment, grant matching, educational programming, and even direct investment. This funding has created an entrepreneurial ecosystem in which researchers at every stage of their career (PhD candidates, post-docs, professors, and industry scientists) feel empowered to innovate and take risks by starting companies. My company is proof of that; Caravel was started while I was a PhD candidate at Tufts University in Boston. My company really only exists because of the ecosystem Massachusetts created. The point I'd like to make is that I think Oregon is missing out on several potential companies like mine by not committing more resources to the biotech ecosystem. There are researchers working on amazing innovations at OSU, UO, OHSU, and PSU. Oregon should do more to create an ecosystem in which these individuals feel entrepreneurship is a viable option. Doing so will grow Oregon's economy like it has that of Massachusetts and Washington.

In my opinion, supporting OTRADI/OBI is the minimum the state should consider in the effort to grow the life sciences and biotech sector in Oregon. If Oregon wants to have a serious biotech industry, the government needs to emulate aspirational peers like Massachusetts and Washington to increase the positive economic impact of federally funded research on the state's economy.

In the meantime, I and my team at Caravel look forward to a continued close partnership with OTRADI and the OBI. Should you have any questions, please feel free to contact me.

Sincerely,

Trevor Nicks, PhD

Caravel Bio, Inc. | Co-Founder & CTO