



Integrated Health and Biotechnology Target Area Task Force 2023-24

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One of the three goals in *Prosperity Widely Shared*, our new strategic plan, is to position OSU as a research university that is *especially distinctive* for its contributions to big discoveries that drive big solutions to the world's most vexing challenges, even as we continue conducting groundbreaking foundational research, scholarship, and creative activities. Under that goal, a key action over the 2024 to 2030 period is to build distinction in *four focus areas* where we believe we can establish lasting global competitive advantage: climate science and related solutions; clean energy and related solutions; robotics; and integrated health and biotechnology.

To advance this work, the provost is charging four task forces to develop action plans for each of the four focus areas. Irem Tumer, vice president for research, and Alix Gitelman, vice provost for academic affairs and senior vice provost, will work together to oversee the work of the task forces. They'll take the lead in receiving, evaluating, and sharing task force recommendations that will inform the larger university community about necessary tangible actions across the institution.

The first of the four task forces charged by the provost is for ***integrated health and biotechnology***,

Target Area Rationale: Good health is essential to individuals' well-being and to achieving widely shared prosperity that is holistic and environmentally sustainable. Yet, almost six in ten adults in the U.S. live with a chronic health condition and, in many countries, populations are aging fast as birth rates fall and life expectancy rates rise. Soon, older adults will outnumber children worldwide for the first time in human history. Rates of heart disease, cancer, diabetes, neurodegenerative diseases and dementia, and more are projected to skyrocket, overwhelming health care systems. Transdisciplinary approaches that integrate health determinants (i.e., biological, social, lifestyle, environmental, economic), biotechnologies, and research on effective personal and public health interventions are key to finding solutions to these global health challenges.

Developing integrated health and biotechnology-based solutions to prevent disease and optimize health across individuals' lifespans is a challenge that OSU is uniquely positioned to tackle. First,

necessary and promising contributions bridge existing and potential research and teaching expertise in OSU's colleges, schools, and departments. Second, finding and testing solutions will depend on maximizing and building new external partnerships and engaging diverse communities skillfully, an OSU strength. Third, there are valuable linkages to the other three focus areas identified in *Prosperity Widely Shared* (robotics, climate science and related solutions, and clean energy and related solutions). OSU is fully capable of being a global leader in blending biomedicine, social and behavioral science, organizational behavior, environmental science, biotechnology, nanomedicine, robotics, and data science into cohesive interventions tailored to optimizing health and well-being for all and driving high impact solutions.

Approach. Building international competitive advantage in each of the four focus areas will require a well-aligned mix of integrated actions across the mission elements of research, teaching, and public engagement. Of paramount importance are the strength of our faculty, strong departments and schools as homes for those faculty, related high quality undergraduate and graduate degree offerings, programs and resources that facilitate interdisciplinary and transdisciplinary research and teaching, and strong research and innovation infrastructure. As we seek to recruit and support faculty and invest in other support for this area, this comprehensive approach is essential to achieving true and lasting advantage relative to competing institutions.

Tasks: The task force will develop an action plan in *two phases* with a mid-process university-wide *ignite session* to provide a forum for OSU faculty and staff input. This particular task force will build on previous work conducted by an Integrated Health Task Force initially formed in 2019 and led by Dean Susan Tornquist since 2020.

Phase I—Strategic Opportunities will focus on the following questions:

- In what areas does Oregon State have the greatest opportunity to positively impact integrated health and biotechnology through research, education, and engagement across a diversity of disciplines?
- What opportunities and challenges do we face in health- and biotechnology-related research and education over the next five to ten years? What transdisciplinary research and innovation will be required to drive fundamental research toward solutions?
- What is the current faculty talent level and unique capabilities at OSU, and how can each contribute to accelerate breakthroughs and impact? Where do we have gaps in the faculty expertise needed to achieve our goals?
- What is the status of graduate and undergraduate degree programs related to this area and where are there opportunities to build additional strength?
- What can be learned from the findings of the initial Integrated Health Task Force and research exemplar work by the Office of Research Advancement and associate deans for research, particularly with respect to existing or potential intersection with the other three target areas?

Faculty Input—Ignite Session to provide a forum for OSU faculty and staff to propose future research goals and projects and/or academic programs in the focus area of Integrated Health

and Biotechnology. The specific topics and ignite program will be based on strategic opportunities and recommendations provided in the **Phase I Report**.

Phase II—Action Plan will answer the following questions, distinguishing between short (2 years) and longer (3-5 years) time horizons. This part of the charge may be updated given the outcomes of the **Phase I Report** and **Ignite Session**.

- What specific actions would be most effective in building strength in health and biotechnology education, research, and engagement? What are the implications for the hiring of new faculty? What new investments in infrastructure, research computing, and other programs will be necessary to implement those actions?
- What are the most effective and innovative ways to leverage research and teaching in this domain? What are the opportunities to advance the enrollment goals articulated in *Prosperity Widely Shared*?
- How best can we engage our local and statewide communities to advance our goals in this target area?
- How do we build an enterprise approach to fostering innovations, research translation, and partnerships inside and outside the University? Who are our most promising potential external partners in academia and industry?

In developing the initial report and the final action plan, the task force should engage key internal and external stakeholders and draw on expertise across the university.

The task force should submit a **Phase I Report** no later than 31 January 2024. The **Ignite Session** will be organized in the week of 11 March 2024, preferably on a Tue-Wed-Thu afternoon followed by a reception. The task force should submit a **Phase II Report** no later than 31 May 2024.