

Date: November 21, 2022

To: Board of Trustees

cc: Mitchell E. Daniels, President  
Jay T. Akridge, Provost and Executive VP for Academic Affairs and Diversity  
Christopher A. Ruhl, Treasurer and Chief Financial Officer  
Steven R. Schultz, General Counsel  
Matt Folk, President and CEO, Purdue For Life Foundation

From: Theresa Mayer, Executive VP for Research and Partnerships

Re: Purdue Institutes for Biomedical and Health Sciences

Date: November 21, 2022

**Purpose.** This memo is to request Board approval of the introduction of an integrated framework for interdisciplinary research and training in biomedical and health sciences, which will be referred to as the Purdue Institutes for Biomedical and Health Sciences, to further enhance Purdue's reputation and impact by catalyzing and accelerating basic, clinical and translation programs across our thematic pillars of excellence.

**Background.** Over the last 20 years, Purdue leadership has assembled several task forces to evaluate our reputation and impact in life sciences, including biological and biomedical sciences, health sciences, bioengineering, and biomedical engineering. The 2014 Task Force report noted that Purdue was underperforming relative to peers in most research metrics including external research and training grants, scholarly works and citations. Purdue's graduate rankings across these disciplines are mixed: Pharmacy (#7), Veterinary Medicine (#13), Chemistry (#30), Biomedical Engineering (#33), Biological Sciences (#50). The report noted negative consequences from poor connections between biomedical and health science researchers across colleges and departments, misalignment of Purdue's organizational structure with ranking categories, deficiencies in research instruments and infrastructure, and inadequate cross-cutting marketing of our programs.

Based on the 2014 Task Force recommendations, Purdue Moves 1.0 invested in the creation of three new university interdisciplinary institutes in Drug Discovery, Integrative Neuroscience, and Infectious Diseases along with strategic faculty hires across these areas of focus. These Purdue Institutes added to existing Discovery Park Centers – Bindley Bioscience Center, Regenstrief Center for Healthcare Engineering, NCI-supported Purdue Center for Cancer Research, NIH-supported Indiana Clinical and Translational Sciences Institute (CTSI), and the Eli Lilly strategic research collaboration. The focused priorities and investment have resulted in positive outcomes, including more than a doubling in the annual expenditures from DHHS/NIH (\$42.8M in FY16 to \$78.7M in FY22), doubling the number of NIH T32 training grants, and developing substantial multi-year partnerships with Indiana biopharma companies, e.g., Eli Lilly.

Building on this success, the Board of Trustees approved the creation of the William D. Young Institute for Advanced Manufacturing of Pharmaceuticals, the launch of a Health Equity Initiative, and the development of a joint Purdue-Indiana University Institute for Biosciences Engineering.

**Discussion:** The new biomedical and health science framework that is being introduced will address several additional recommendations from the 2014 Task Force as outlined below:

- Retire use of very broad term ‘life sciences’ to describe our portfolio. Harmonize and focus our marketing and branding efforts using contemporary biomedical and health terminology aligned with sponsors, partners, ranking organizations, and the general public;
- Formalize an overarching unit –called the Purdue Institutes for Biomedical and Health Sciences– to elevate, coordinate, and communicate across our thematic pillars of excellence;
- Integrate smaller Discovery Park Centers and initiatives for greater visibility and return on investment, rebrand these as university-wide Purdue Institutes that align with current and future investment across West Lafayette and Indianapolis, and sunset less productive units;
- Centralize the shared services for health data, computational and experimental core facilities, research development, and clinical partnerships under the Purdue Institutes for Biomedical and Health Sciences umbrella to enhance campus-wide capabilities, internal/external access, and to reduce administrative duplication.

The initial actions will include:

- The overarching “Purdue Institutes for Biomedical and Health Sciences” unit will report to the Office of the Executive Vice President for Research, and will be responsible for overseeing the thematic institutes and shared services. Internal and external advisory boards will provide input on strategic direction, investments, and evaluate performance against metrics. It will also oversee cross-cutting externally funded programs for translation, including the NIH-funded CTSI, BARDA DRIVE Accelerator, and others.
- The role of the Bindley Bioscience Center has evolved considerably since it was established in 2003 as the interdisciplinary center for life sciences research in Discovery Park, which included support for thematic research areas as well as oversight of core experimental facilities. The Purdue Moves 1.0 investment established three new Purdue Institutes with increased support for these thematic research areas, leaving Bindley to oversee the majority of the core experimental laboratories that support the community. In this framework, the role and structure of the Bindley Center as the provider of professionally managed centralized shared experimental resources to the Purdue community will be clarified.
- The Purdue Center for Cancer Research, one of only seven NCI-designated basic research cancer centers in the U.S., will be elevated to the “Purdue Institute for Cancer Research.” This name change will place it on par with the four other Purdue Moves thematic institutes, formalizing its position as the campus-wide unit for interdisciplinary cancer research and training. The new structure will allow the institute to house smaller centers focused on particular types of cancer studies, therapeutics or technologies. This will increase fundraising opportunities by enabling naming opportunities for the institute and the smaller centers of excellence. To this end, the Walther Foundation has already committed up to \$15M to match a future \$30M naming gift for the Institute. Finalists for the directorship are visiting campus over the next two weeks, and this elevation to Purdue Institute will improve our ability to recruit a world-class leader into this important role.
- The Discovery Park centers and programs that support population health, systems and technology, which currently include the Regenstrief Center for Healthcare Engineering

(RCHE), Community Health and Equity research initiatives, and the Eli Lilly research partnership, will be integrated and elevated into a Purdue Institute for Population Health. This will build on Purdue’s strengths as a technology-focused, community engaged research university without a medical school by catalyzing and delivering programs to reinvent the way healthcare is delivered. It will combine our leading cross-cutting work to improve quality, accessibility, equity and affordability of health outcomes within communities. The director of RCHE and the Eli Lilly partnership will lead the transition.

- The April 2022 press release announcing the separation of IUPUI into IU and Purdue governed programs included a collaboration to build on each university’s strengths to expand research activity in Indianapolis and enhance funding for joint initiatives by creating a joint biosciences engineering institute. The institute will harness the power of the collective academic and research strengths and collaboration between Purdue’s Weldon School of Biomedical Engineering, IU’s School of Medicine, and other health-related disciplines to create transformational change in Indianapolis. A joint task force has been assembled to develop a phased approach to launch and grow the joint institute.

A simplified schematic diagram of the new integrated biomedical and health sciences framework that shows the cross-cutting resources and the thematic pillars of excellence is provided below.

## PURDUE INSTITUTES for BIOMEDICAL and HEALTH SCIENCES<sup>1</sup>

### Cross-Cutting Resources

- Shared Experimental Research Infrastructure - Bindley Bioscience Center, DP 2003
- HIPAA-Protected Health Data Resources
- Computational Research Infrastructure
- Clinical Partnerships and Research Development
- NIH Indiana Clinical and Translational Institute (CTSI), BARDA Innovation Accelerator

### Thematic Pillars of Excellence

- Purdue Institute for Cancer Research<sup>2</sup> - PCCR, established 1978, name change, 2022
- Purdue Institute for Drug Discovery - Purdue Moves, 2013
- Purdue Institute for Integrative Neurosciences - Purdue Moves, 2016
- Purdue Institute for Inflammation, Immunology, and Infectious Diseases - Purdue Moves, 2016
- William D. Young Institute for Advanced Manufacturing of Pharmaceuticals - 2022
- Purdue Institute for Population Health<sup>1</sup> - Regenstrief Center integration and name change, 2022
- Purdue-IU Joint Institute for Biosciences Engineering<sup>1,3</sup> - Indy, under development, 2022

*1 - titles undergoing final vetting by stakeholders, 2- reports to EVPRP by NCI requirement, 3- reporting at Purdue/IU TBD*

**Requested Action:** We respectfully request that the Board approve the organizational changes described above.