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The Discovery Park and Drug Development

PURDUE'S DISCOVERY PARK AND DRUG DEVELOPMENT

Launched in 2001, [Discovery Park](#) is a \$1.15 billion research enterprise based on funding received through sponsored research, private gifts and endowments. Large-scale interdisciplinary research is carried out in Discovery Park with an emphasis on driving innovations to the marketplace. Faculty, students and staff at Discovery Park are focused on solving complex, 'wicked' challenges at the nexus of energy, food, water and the environment, and in global health and global security.



The [Birck Nanotechnology Center](#), [Bindley Bioscience Center](#), and the Purdue Policy Research Institute enable foundational, cross-cutting research while the Burton D. Morgan Center for Entrepreneurship is the gateway to commercialize new innovations to benefit society. Drug discovery has been a critical focus for Purdue's Discovery Park and, in recent years, Purdue has been at the forefront of its field.

Since 2014, Discovery Park has opened two more research facilities: the \$28.7 million, three-story [Purdue Institute for Drug Discovery](#) and the \$15.9 million, 29,000-square-foot [Bindley Multidisciplinary Cancer Research Facility](#). The Purdue Institute for Drug Discovery supports more than 100 faculty in six colleges with research focused on several major disease categories, including: cancer; diabetes, obesity and cardiovascular; immune and infectious disease; and neurological disorders and trauma.

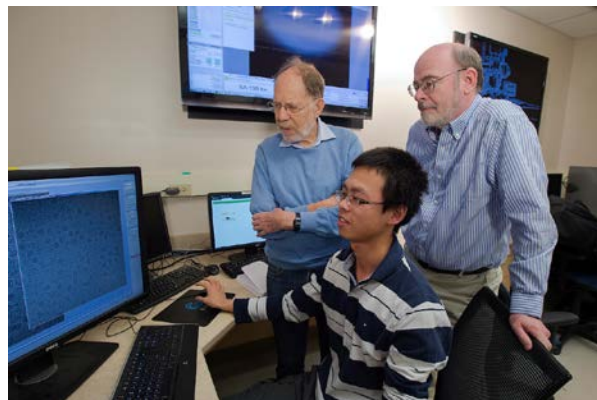
The Bindley Multidisciplinary Cancer Research Facility, which is a two-story expansion of the Bindley Bioscience Center, is designed to advance Purdue's efforts to work on innovative animal models of disease, development of new therapeutics, and in-vivo animal imaging. These facilities are already generating significant benefits. Our researchers are developing compounds, often in collaboration with federal agencies and pharmaceutical companies, to treat chronic and acute illness. Currently, researchers in the Purdue Institute for Drug Discovery are working on several classes of compounds and novel approaches to drug design. With 17 drugs in clinical trials right now, Purdue is among the top institutions in the United States for drug discovery. In April 2016, the Purdue Institute for Drug Discovery was conducting a total of 4,350 clinical trials at 1,612 unique clinical trial sites worldwide. In June 2016, the Institute was conducting a total of 2,275 clinical trials at 673 sites within the U.S.

Both of these facilities strengthen many research initiatives, such as the Purdue University Center for Cancer Research. The National Cancer Institute (NCI) first designated the Center as a basic science cancer center in 1978, and Purdue has maintained that status continuously since then. In spring 2015, the NCI renewed the Purdue University Center for Cancer Research's designation, awarding the center \$8 million in funding over the next five years. Purdue's work in this field is so widely respected that a perspective piece prepared by several faculty members was featured in the National Cancer Institute's Cancer Nanotechnology Plan 2015, a 10-year roadmap concerning the use of nanotechnology to attack cancer.

In addition, a team led by Purdue University researchers became the [first to determine the structure of the Zika virus](#). The team's work, published in the journal *Science*, revealed insights critical to the development of effective antiviral treatments and vaccines. It also has the potential to explain differences in how a virus is transmitted and how it manifests as a disease, according to Richard Kuhn, director of [Discovery Park's Purdue Institute for Inflammation, Immunology and](#)

Infectious Diseases (PI4D). To advance this and other critical work, the university is investing \$60 million into the Institute for Inflammation, Immunology and Infectious Diseases as well as the Institute for Integrative Neurosciences as part of its \$250 million investment into the life sciences sector. The **Purdue Institute for Integrative Neuroscience (PIIN)** spans 25 departments across six colleges and includes approximately 100 faculty with ongoing neuroscience-related research activities or interests.

Discovery Park has a highly comprehensive and well established technology transfer infrastructure to support the translation of drug discoveries and therapeutic innovations. As of 2016, the economic impact of Discovery Park includes:



- \$969 million in research expenditures through major centers since Discovery Park was launched, including 16 funded research projects exceeding \$5 million each and ten multiyear proposals each exceeding \$10 million.
- More than 1,000 affiliated faculty members, working with 430 funded graduate and undergraduate students each year, are engaged in the park, helping generate more than \$83 million in funded research for fiscal year 2015-16, or 20% of Purdue's entire annual research portfolio.
- More than 100 new start-up companies have been seeded / assisted by Discovery Park. In the past five years alone, 17 start-ups have been initiated by Discovery Park researchers.
- More than 500 disclosures, patents, licenses/options on intellectual property facilitated within the park, linking it to business startup activities at the nearby Purdue Research Park.
- More than 5,000 students have participated in entrepreneurial activities since the inception of Discovery Park.
- 1,500 students have received the Certificate in Entrepreneurship and Innovation, a nationally renowned academic program for entrepreneurship education based at the Burton D. Morgan Center for Entrepreneurship. Certificate recipients have come from every college and have an average cumulative GPA of 3.0 or higher.
- Nearly 650 students have honed their skills at more than 200 Indiana-based start-up companies through the Interns for Indiana program.
- Forty strategic global partnerships have been signed, and Discovery Park maintains research partnerships with more than 100 companies.

Discovery Park simultaneously advances forward-thinking research and serves as a gateway for new innovations into the marketplace. By streamlining these two key priorities, the work conducted within Discovery Park has a critical and direct benefit upon society.