

PanCystPro™: A Breakthrough Test For Early Detection Of Pancreatic Cancer Risk

Amplified Sciences
Purdue University



Pancreatic cancer is one of the deadliest cancers in the United States. The lack of early and accurate detection methods contributes significantly to an extremely low five-year survival rate and high mortality. Amplified Sciences' PanCystPro™ is addressing this critical and longstanding challenge.

Specifically, PanCystPro™ focuses on risk stratification for patients who have pancreatic cystic lesions — known precursors to pancreatic cancer. These cysts are often discovered incidentally during imaging for other conditions, and their malignant potential is difficult to determine with current diagnostic tools.



PanCystPro™ leverages a tri-analyte panel which includes a protease turnover assay—a test that detects the presence and activity of an enzyme that appears in the pancreas when malignancy is more likely. This enzyme activity offers

biological insight into the nature of the cyst and its potential to progress into cancer.

The test PanCystPro™ is powered by BioMatra™, an ultrasensitive optical reporter platform developed by Amplified Sciences and based on advanced chemistry, licensed from the Purdue Research Foundation. BioMatra™ deploys a novel molecular sensing technology that can precisely detect biomarkers in complex biological samples, making it ideal for identifying subtle signals associated with early-stage diseases such as pancreatic cancer.

PanCystPro™ is a game-changer for early intervention in pancreatic disease care:

- **Improved Clinical Decision-Making:** By providing clearer insights into which cysts are benign vs. at risk for malignancy, PanCystPro™ helps clinicians determine appropriate surveillance strategies or whether surgical intervention is warranted.
- **Earlier Detection:** Detecting malignancy risk earlier can significantly improve patient outcomes, given the aggressive nature of pancreatic cancer.
- **Reduced Unnecessary Surgeries:** Many patients undergo surgery for benign cysts due to diagnostic uncertainty. This test may help avoid such interventions, thereby improving patient quality of life and reducing healthcare costs.

The Purdue Innovates Office of Technology Commercialization (OTC) played a pivotal role in transforming this innovation from university research into a market-ready product. The underlying reagent technology for BioMatra™ and PanCystPro™ was disclosed by Dr. V. Jo Davisson, a Purdue professor. The tech transfer office protected the invention through a global patent portfolio and an exclusive license with Amplified Sciences, granting the company full commercial rights to develop and market the technology.

Amplified Sciences was launched as a Purdue-affiliated startup. It became part of Purdue Strategic Ventures' portfolio, signaling strong institutional support. Purdue Ventures participated in the company's \$2.6 million Series Seed Preferred round in 2023, providing critical early-stage funding to support regulatory clearance, product development, and market readiness. Through strategic guidance, networking, and branding, the tech transfer office helped connect Amplified Sciences with the broader diagnostics and investor communities.

The impact of PanCystPro™ reaches far beyond a single lab or clinic.

Amplified Sciences is headquartered in West Lafayette, Indiana, and the technology emerged from Purdue University. The innovation contributes to Indiana's growing life sciences ecosystem, showcasing the success of regional entrepreneurship and academic-industry collaboration.

Pancreatic cancer affects tens of thousands of Americans annually. With its CAP-accredited and CLIA-certified lab in Irvine, California, and plans for a pivotal clinical utility trial and early access program in 2026, the test is positioned for nationwide adoption across U.S. healthcare systems.

Given that pancreatic cancer is the third deadliest in the U.S. and seventh worldwide, PanCystPro™ has the potential for global deployment, particularly in countries without advanced diagnostic infrastructure and growing demand for early cancer detection tools.

PanCystPro™ illustrates what is possible when university research, clinical need, and entrepreneurial drive come

together with purpose. By translating a scientific insight from Purdue University into a practical diagnostic tool, the technology offers physicians clearer guidance and patients a better chance at earlier, more informed care.

Image 1: Inventor holding samples in hand. Copyright Purdue Research Foundation/Vince Walter.

Image 2: Amplified Sciences Chief Scientific Officer V. Jo Davisson and CEO Diana Caldwell standing in the lab. Copyright Indiana Economic Development Corp./Jennifer Wilson-Bibbs.

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