Each year in the United States, more than 1.6 million people are diagnosed with cancer, and more than half a million die from it. And each year, our researchers spend thousands of hours in their laboratories looking for cures.

The fight against cancer doesn’t start in the doctor’s office. It begins in places like the Purdue University Center for Cancer Research, where world-renowned scientists search for the origins of cancer inside cells.

Using the combined expertise of scientists from disciplines as varied as engineering and veterinary medicine, biology and chemistry, the Center for Cancer Research promotes discovery into how cancers develop, progress and respond to treatment. Our work leads to the advancement of new medicines, early detection and diagnostic methods, more effective treatments and highly efficient drug delivery systems — all with the hope of seeing fewer cases and more survivors each year.

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EA/EOU
Elite scientists collaborating with experts worldwide to make discoveries. 9 researchers with discoveries patented last year. 14 clinical trials active based on Purdue’s basic cancer research. 37 years of cancer research. 5 discovery groups with an expansive focus on various types of cancer. 19 departments on campus, driving research further than one could alone.
CLAUDIO AGUILAR

“My father died of pancreatic cancer, so this is very special to me. It’s one of the most terrible cancers, and this is our opportunity to try to do something.”

studying the role of protein trafficking and membrane transport in cancer development

JIM FLEET

“The hope for my research — and the reason I keep going everyday into the lab — is that I want to give people information that they can trust and that they can use to live happier lives.”

studying the molecular actions of vitamin D in cancer prevention
MARK HALL

“I hope to one day be able to say that I made an important contribution to our understanding of cancer, either through the discoveries in my lab or indirectly through the students that I mentored.”

discovering how basic principles of cell division control go awry in cancer development

JENNIFER FREEMAN

“There is a great lack of knowledge on if and how the large number of environmental chemicals in which we are exposed everyday may influence cancer and other diseases.”

investigating how everyday environmental exposure influences cancer risk
JOSEPH IRUDAYARAJ

“If we can alter epigenetic modifications, we will have the ability to control the expression of genes. This is the next generation of genomics.”

devoping multifunctional nanomaterials and single molecule technologies to understand cancer development

XIAOQI LIU

“You try to do something good for society. Cancer biology is one way. I can use my expertise to understand how cells modify, or their signals change, in response to different drugs.”

studying the molecular mechanisms of cancer and using findings to develop new therapies
PHILIP LOW

“So much of science is serendipity. You begin work with one specific goal in mind and then have an accidental finding or unexpected result that takes your work in a new, previously unimagined direction.”

designing, synthesizing and testing targeted therapies that deliver drugs only to cancerous cells

STEPHEN KONIECZNY

“All of us have a single goal in studying cancer biology — to eventually make a difference.”

identifying the earliest genetic changes that occur in cancer development and developing strategies to combat them
“What we are studying is a fundamental process. This is the importance of doing research in basic sciences — to find these underlying mechanisms that may be important in a variety of cancers.”

understanding the structure and function of enzymes in cancer development

ANDREW MESECAR

“Finding more and more drug targets is a step toward personalized therapy. Cancer is not the same; it’s very unique to each patient. The more tools you have, the more you can eliminate human suffering.”

studying the role of kinase proteins in cancer development

KAVITA SHAH
DAVID THOMPSON

“I would be thrilled if we could extend the life and improve the quality of life of people with cancer.”

developing drug delivery systems that efficiently reach cancerous cells without damaging healthy tissue

TIMOTHY RATLIFF

“My family has been hit hard by cancer. The losses I’ve experienced have motivated me to focus my energy and passion on cancer research.”

using prostate and bladder cancer models to investigate antitumor responses, effector mechanisms and immunity
VIKKI WEAKE

“I believe that by understanding the fundamental mechanisms of how cells copy their DNA and express their genes, we will be able to design new drugs that are more effective at treating cancer — without some of the terrible side effects.”

studying chromatin modifying complexes in cancer development

YOON YEO

“A number of promising compounds can kill cancer cells in a Petri dish, but they are not drugs until they are packaged in a way that brings them to the right part of the body at the right time. We develop packages that will make a compound behave, protect patients from toxic side effects, and help them get the most out of the drug.”

developing new drug delivery systems and biomaterials that are safe, efficient and clinically viable