LUNG CANCER RESEARCH FOUNDATION®

INVESTING IN THE FUTURE OF RESEARCH

LCRF's mission: to improve lung cancer outcomes by funding research for the **prevention, diagnosis, treatment,** and **cure** of lung cancer.

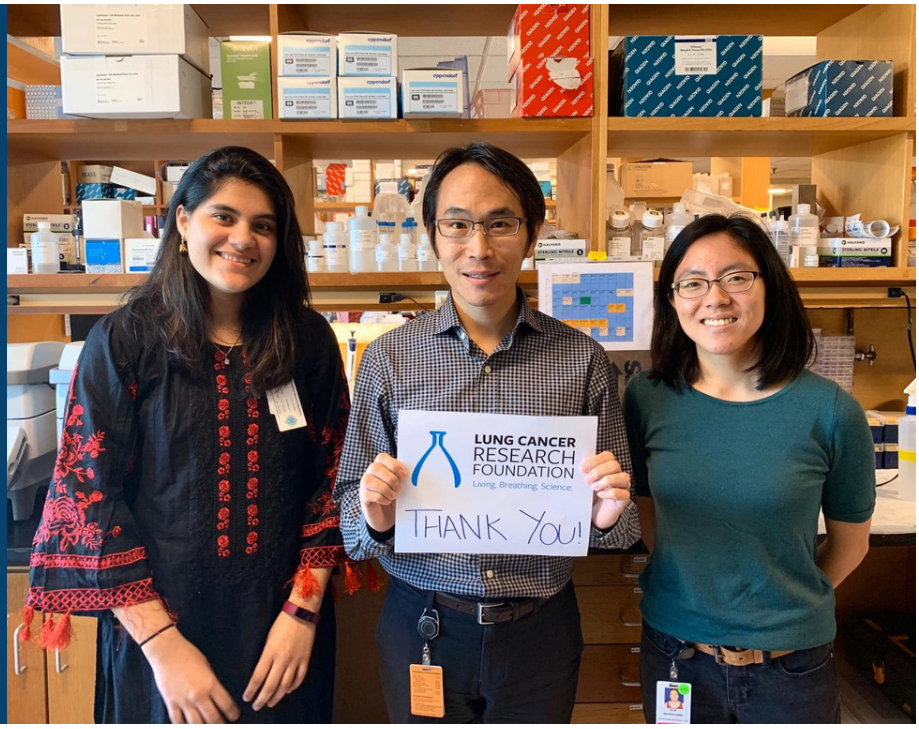


Photo: Satoshi Yoda, PhD, 2018 LCRF grantee, Massachusetts General Hospital

Published manuscript in Nature Cancer, June 2022: Analysis of lorlatinib analogs reveals a roadmap for targeting diverse compound resistance mutations in ALK-positive lung cancer

The Lung Cancer Research Foundation (LCRF) is the leading nonprofit organization focused on funding innovative, high-reward research with the potential to extend survival and improve quality of life for people with lung cancer. We are committed to backing novel lung cancer research that might otherwise go unfunded. To date, LCRF has funded 409 research grants, totaling over $42 million.

Through its Scientific Grant Program, LCRF funds projects across the spectrum of basic, clinical and translational research, including work that addresses disparities, early detection, novel treatments, resistance, and more.

Our philosophy is simple: scientific discoveries lead to improved outcomes.

LCRF provides critical seed funding to the best and brightest investigators, helping establish proof of concept evidence to pave the way for follow-on funding. When it comes to research, we can accomplish more together than we can alone. Every grant our efforts make possible is an investment in the future.

Learn more about the research LCRF is currently funding: LCRF.org/currentgrants

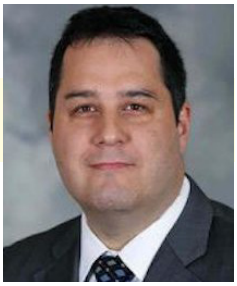
EARLY DETECTION & PRE-NEOPLASIA RESEARCH

MOHAMMAD SHAHROKH ESFAHANI, PhD
Stanford University

Noninvasive prediction of local recurrence in localized NSCLCs after CRT

Circulating tumor DNA in patients being treated for NSCLC will be analyzed to look for biomarkers in the blood to identify markers of recurrence. The goal is to one day predict recurrence and strategize therapy based upon that prediction.

TIM LAUTENSCHLAEGER, MD
Indiana University

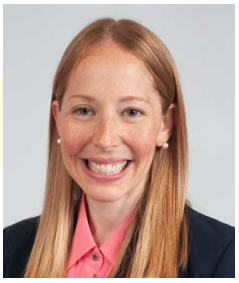


24-hour urine based ctDNA analysis for early stage NSCLC detection

The goal of this research is to evaluate urine as a better alternative to plasma in detecting circulating DNA from NSCLC. This could be valuable for diagnosing cancers as well as detecting recurrence.

ALK RESEARCH

JAIME SCHNEIDER, MD, PhD
Massachusetts General Hospital



Metabolic reprogramming as a driver of resistance in ALK+ lung cancer

This research aims to discover new ways to overcome resistance to ALK+ lung cancer therapy by targeting the metabolism. By identifying unique metabolic abnormalities that drive resistance, new treatments can be developed.

ÁLVARO QUINTANAL VILLALONGA, PhD
Memorial Sloan-Kettering Cancer Center

Identifying epigenomic mechanisms of ALK TKI resistance

This project will study ALK+ lung cancer therapy resistance, particularly those that are epigenetic – not mutations, but rather major shifts in the activity of genes in the cancer cell.

"Getting the support I received from LCRF was a form of 'life-support' for an exciting new direction in my laboratory. Without that support, the project may have ended since I wouldn't have had the resources to hire qualified scientists to do the work. With this support I eventually landed my first large NIH grant, and the research it supported is now published in a prominent cancer journal. I'm also very excited that several clinical trials will be launched based on the foundation of this project."

Chad Pecot, MD
UNC Lineberger Comprehensive Cancer Center
2016 LCRF grantee

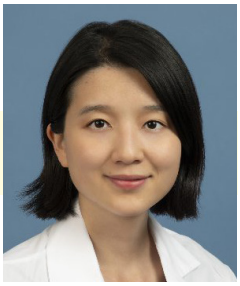
SMALL CELL LUNG CANCER RESEARCH

HUANHUAN CHEN, PhD
The University of Chicago

A human pluripotent stem cell-based approach to metastasis of small cell lung cancer

This project plans to study primary small cell lung cancer and metastases. Understanding the process of SCLC metastases, and the cellular and molecular pathways involved, could generate ideas about better therapy for this type of cancer.

BINGNAN ZHANG, MD
University of Texas MD Anderson Cancer Center

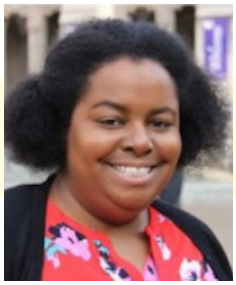


Harnessing DLL3 as a CAR T target in small cell lung cancer

Dr. Zhang's lab is studying a new immunotherapy approach for SCLC to overcome resistance. Laboratory tumor models will be used and the eventual goal is to bring this treatment into clinical trials.

MINORITY CAREER DEVELOPMENT AWARDEES

AMANDA IRIS BRADLEY, PHD
Fred Hutchinson Cancer Center



Discovering genetic factors of MET Exon skipping and drug resistance in lung cancer

This project is taking a deeper dive into the different MET Exon 14 alterations to better understand how variants of MET cause drug resistance.

CARLA CONCEPCION, PHD
Columbia University Irving Medical Center

Targeting SMARCA4-deficient lung cancers

The SMARC4 gene is an indication of a poor prognosis in NSCLC. There is no treatment directed at SMARC4; however, SMARC2, which can also be present in SMARC4 deficient cancers, may be a target for treatment. The goal is to understand the interaction of SMARC4/2.

KRAS RESEARCH

MATTHEW GUMBLETON, MD, PhD
Massachusetts General Hospital

KRAS inhibitors for the treatment of invasive mucinous adenocarcinoma

Invasive mucinous adenocarcinoma (IMA) of the lung is an aggressive subtype of lung cancer. Since IMA is primarily KRAS+, this research will study the role of KRAS inhibitors to improve treatment for IMA of the lung.

> *"LCRF funding was instrumental in allowing me to complete and publish the project I was working on at the time. The project has fostered cross-institutional collaborations and a clinical trial. It provided support at a critical juncture so I can continue doing research. Now it serves as a springboard for me to compete for Federal funding with the results and publications I generated."*

Victoria Wang, MD, PhD
University of California, San Francisco
Two-time LCRF grantee

MET RESEARCH

TIMOTHY BURNS, MD, PhD

University of Pittsburgh

Targeting glycolysis in MET altered lung cancer brain metastases

This project will study the metabolic pathways in MET-altered lung cancer, especially in brain metastases (BM). The abnormalities in metabolism will be defined and metabolic inhibitors will be used to target these abnormalities. This could lead to new therapies for patients with MET-altered lung cancer.

EMILIANO COCCO, PhD

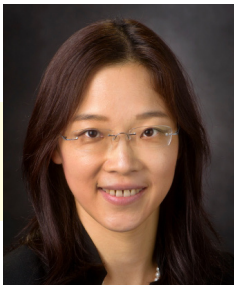
Miller School of Medicine,
University of Miami

Exploring novel therapeutic options to target MET-driven lung cancers

2022 William C. Rippe Award for Distinguished Research in Lung Cancer

This project has two goals. The first one is to study a new antibody-drug conjugate in MET-altered lung cancer models. The researcher also plans to evaluate MET mutations that occur as a resistance mechanism. Knowing which mutations are driving resistance could potentially direct treatment.

XIUNING LE, MD, PhD



University of Texas MD Anderson Cancer Center

Optimization of MET-CAR-T/NK cell-based therapies for MET Exon 14 skipping NSCLC

This project plans to engineer novel immunotherapeutic approaches to target MET-altered lung cancer. The researcher will use a combination of cell therapy and other MET inhibitors to enhance their effect.

EGFR RESEARCH

SWARNALI ACHARYYA, PhD

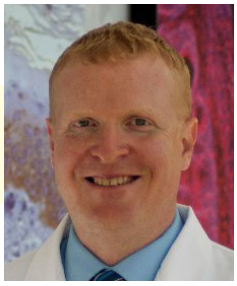
Columbia University Medical Center

Drugging the S100A9-Retinoic acid pathway: companion biomarker and therapy

2022 James B. Dougherty, MD Award for Scientific Merit

This research will study a new pathway as a new target that when inhibited could prevent and/or treat brain metastases. The potential benefit could also extend to patients with leptomeningeal disease.

LUKE HOEPPNER, PhD



University of Minnesota, Twin Cities

Predictive biomarkers and new therapeutic strategies to prevent EGFR TKI-refractory lung cancer progression

This project is attempting to understand how lung cancer cells evade EGFR targeted therapy and aims to develop new innovative therapies to predict and prevent the emergence of resistance and disease progression.

JONATHAN OSTREM, MD, PhD

University of California, San Francisco

Enhancing the precision of targeted therapies for EGFR-mutant lung cancer

The goal of this research is to develop a new therapy for EGFR positive lung cancer that would enhance effective cancer killing activity while limiting toxicity to healthy tissue in the body. The initial focus will be on EGFR Exon 20 tumors but eventually could be applied to other targeted therapies.

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