MOMENTUM REPORT

MAY 2019

Texans Conquer Cancer

Our mission is to expedite discoveries and innovations across Texas to reduce the burden of cancer.

CANCER PREVENTION & RESEARCH INSTITUTE OF TEXAS

The Immunotherapy Frontier

Dr. Jim Allison,
MD Anderson Cancer Center

Between 1982 and 1996, Dr. Jim Allison and his colleagues hunted for, and succeeded in discovering, a protein in the human body, CTLA-4. They proved it behaves like a brake on the immune system, contrary to the view most researchers held at the time. The discovery led to the development of the drug Yervoy.

In November 2011, Dr. Allison was recruited from Memorial Sloan-Kettering to MD Anderson with the help of a $10M CPRIT grant to advance his groundbreaking checkpoint inhibitor research and translate the discovery into drugs capable of unleashing the body's immune system to attack cancer cells.

Today, Dr. Allison leads the Immunology Department at MD Anderson Cancer Center and has a combination of talented research associates and laboratory infrastructure working together to translate cancer immunotherapies to the bedside. Dr. Allison is the recipient of the 2018 Nobel Prize in Physiology or Medicine along with Tasuku Honjo.

Karlee Steele,
Cancer Survivor

In 2011 Karlee Steele was diagnosed with stage 1 melanoma on her skin. It was treated through a simple procedure.

In 2015, Karlee faced a second melanoma diagnosis that had spread to the lymph node under her right arm. At MD Anderson, Karlee learned the cancer had developed into a stage 3B melanoma tumor.

Karlee was treated by the immunotherapy pioneered by Dr. Allison and today, is cancer free.

"As I learned more about immunotherapy and the advancements of Dr. Allison and what he has done, I was blessed to hear that he was obviously back in Texas doing the work that all cancer patients need"

— Karlee Steele
Cancer Survivor

Innovation in the State's Capital

The University of Texas at Austin could be the epicenter for a game-changing cancer-detection technology—the MasSpec Pen—a device that can rapidly identify breast, thyroid, lung, ovarian and brain cancers with more than 96 percent accuracy.

A team of scientists led by Dr. Livia Schiavinato Eberlin is using CPRIT grants totaling $2.2 million to date to push the development of the MasSpec pen forward. The pen enables a controlled and automated delivery of a discrete water droplet to a tissue surface for efficient extraction of biomolecules, which are then delivered to a mass spectrometer for molecular analysis.

In 2016, Dr. Eberlin came to Austin to be an assistant professor in the chemistry department at the University of Texas and is a 2018 MacArthur Foundation "Genius" Awardee.

photo credit: Wyatt McSpadden

photo credit: MacArthur Foundation

photo credit: Vivian Abagu

The University of Texas at Austin

PRODUCT DEVELOPMENT RESEARCH PROGRAM

40
Product Development Research Grants

22
Product Development Research Grantees Established Connections to Texas Academic Institutions

$411,198,243
Amount of Product Development Research Grants

17
Companies Conducting Clinical Trials

$2,896,603,989
Follow-On Funding

THE UNIVERSITY OF TEXAS
MD Anderson
Cancer Center

photo credit: MD Anderson Cancer Center

ACADEMIC RESEARCH PROGRAM

1,124
Academic Research Grants

$1,639,295,210
Amount of Academic Research Grants

175
CPRIT Scholars Recruited to Texas

$520,073,604
Amount of Recruitment Grants

Building Bridges Between the Private Sector & Academic Institutions

Harpreet Singh, President and CEO, Immatics US Inc.

immatics

2015

German immunotherapy company Immatics Biotechnologies, one of 34 CPRIT Product Development grant recipients, opened a US office in Houston after receiving a grant from CPRIT for $19.7 million. Immatics has matched the award with $40 million in private equity follow-on funding.

2017

Immatics US Inc. President and CEO Harpreet Singh struck up a strategic partnership with MD Anderson Cancer Center's Division Head of Cancer Medicine Patrick Hwu, who is a recipient of over $4 million in CPRIT Academic Research grants, and CPRIT Scholar Cassian Yee, Director of Solid Tumor Cell Therapy, who was recruited to Texas from the Fred Hutchison Cancer Research Center in Seattle, Washington. Through this collaboration, Immatics US initiated cutting-edge immunotherapy clinical trials in 2017, working to further develop and potentially commercialize immunotherapy research at MD Anderson.

TODAY

The company has established a state-of-the-art research and development and GMP manufacturing facility at the Life Science Plaza in Houston that currently employs 50 full-time staff. This collaboration contributed to a new partnership with biopharmaceutical giant Amgen, yielding $30 million in additional funding.

109 clinical studies in Texas

13,418 patients enrolled through CPRIT programs

TEXAS TECH UNIVERSITY
HEALTH SCIENCES CENTER.

CREATING ACCESS TO BREAST AND CERVICAL CANCER SCREENINGS IN WEST TEXAS

The Texas Panhandle is largely comprised of rural, medically underserved communities facing socio-economic and geographical barriers that limit access to health care. In 2010, more women on a percentile basis died from breast cancer in the Texas Panhandle than the rest of the state. The 26-county region also has the highest cervical cancer mortality rate in the state.

CPRIT awarded a prevention grant to Dr. Rakhshanda Rahman of the Amarillo Breast Center of Excellence at Texas Tech University Health Sciences Center to deliver breast and cervical cancer services in the Texas Panhandle.

The program—Access to Breast and Cervical Care for West Texas—has increased the number of screening mammograms year-over-year by 26 percent since 2009, reducing the percentage of late stage breast cancers from 21.2% to 4.5% in the 26-county region. The annual number of Pap tests increased by 21% since 2013, with the number of HPV vaccinations increasing by an incredible 94%. These efforts are significantly reducing the emotional and economic burden of cancer in the Texas Panhandle.

Martha, *patient*

Dr. Rahman

"I was told about the breast cancer screening funded by the CPRIT project, available for women just like me with no job and no insurance. I was so thankful my cancer was spotted early.

Thank you for allowing this true blessing to be available to the patients of the Texas Panhandle and surrounding areas."

— Martha, patient of Dr. Rahman

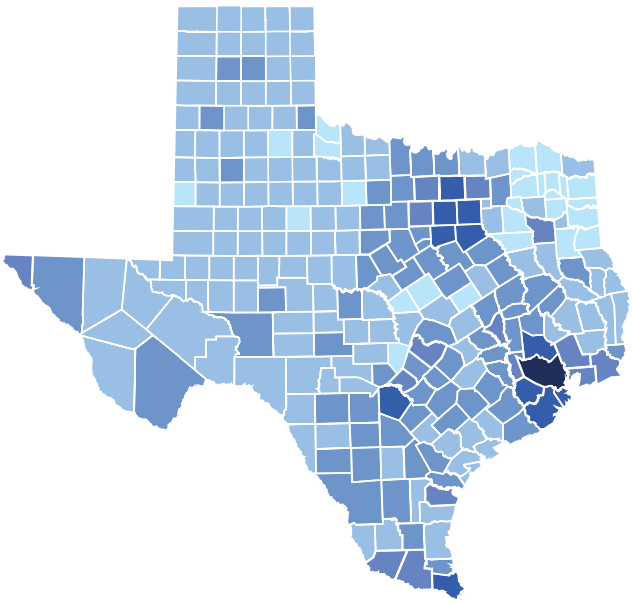
PREVENTION PROGRAM

216
Prevention Grants

$235,469,167
Amount of Prevention Grants

2,774,637
Education and Training Services Provided

2,715,694
Clinical Services Provided. Includes **1,296,890** screening and diagnostics, with **16,274** cancer precursors and **3,640** cancers detected



Delivered **5.5 million** prevention services to Texans from all **254 counties**

- 0 Projects
- 2-6 Projects
- 7-11 Projects
- 12-16 Projects
- 17-23 Projects
- 24-34 Projects
- 35-53 Projects
- Statewide/ Dissemination Projects: 40