

## CANCER PREVENTION & RESEARCH INSTITUTE OF TEXAS

#### **MEMORANDUM**

**TO:** OVERSIGHT COMMITTEE MEMBERS

**FROM:** WAYNE ROBERTS, CHIEF EXECUTIVE OFFICER

SUBJECT: TEXAS HEALTH & SAFETY CODE SECTION 102.260(C) REPORT ON

THE MERIT AND CONTINUED PROGRESS OF CPRIT'S PROGRAMS

IN FY 2023

**DATE:** FEBRUARY 21, 2024

### **Summary**

Texas Health and Safety Code § 102.260(c) requires the Chief Executive Officer to report at least annually to the Oversight Committee on the progress and continued merit of each research program. I am pleased to report FY 2023 marked another year of progress for CPRIT and its Academic Research, Prevention, and Product Development Research programs. In FY 2023 CPRIT approved 109 grants totaling \$269.04 million to 29 organizations throughout the state. Key metrics continue to indicate that CPRIT is affecting Texas' national standing in both cancer research and the biomedical industry. CPRIT's investment is attracting, creating, and expanding the research capabilities of our institutions of higher education and the state's life science industry, expediting innovation, and increasing the likelihood of breakthroughs in cancer prevention and cures.

This report provides an overview illustrating the progress made in advancing CPRIT's mission to create and expedite innovation in cancer research and cancer prevention. Aligning program activities with the program priorities adopted by the Oversight Committee is a good gauge of progress and merit; this report highlights each program's implementation of the FY 2023 program priorities. CPRIT's 2023 Annual Report, which is available to read at <a href="https://2023annualreport.cprit.texas.gov/">https://2023annualreport.cprit.texas.gov/</a>, provides more information on CPRIT program priorities and awards, including a summary of research findings reported by grantees in FY 2023 and notable grantee highlights.

Regarding progress made by individual grant projects within each of CPRIT's three programs, Texas Administrative Code § 703.21 requires all CPRIT grantees to submit progress reports at least annually. Outside experts evaluate these progress reports to ensure that the grantee has made appropriate progress and should continue work under the grant. To the extent that an expert reviewer determines that a grant project is not making progress towards the project goals and objectives, CPRIT has several options, including contract termination.

#### **ARPA-H** Comes to Texas

A notable milestone, which demonstrates the continued merit of all three of CPRIT's programs, occurred when the Advanced Research Projects Agency for Health (ARPA-H) competitively selected Texas to serve as one of its three region hubs for ARPANET-H, which is a nationwide health innovation network. The <u>ARPA-H Customer Experience</u> hub, headquartered in Pegasus Park in Dallas, "will take a human-centered approach to design products and services" and will incorporate "end-user considerations at all stages of research and development." ARPA-H's selection of Texas demonstrates Texas' strong leadership reputation in healthcare research, development, and technological innovation that is due in no small part to grantees across CPRIT's three programs.

Notably, one of ARPA-H's first awards was to a CPRIT Scholar Dr. Omid Veiseh who is a bioengineer at Rice University. Dr. Veiseh leads a team of engineers, physicians, and multidisciplinary specialists under the \$45 million cooperative agreement grant from ARPA-H. The project, which includes CPRIT grantee institutions The University of Texas MD Anderson Cancer Center and the University of Houston, will develop sense-and-respond implant technology (Hybrid Advanced Molecular Manufacturing Regulator) that could slash U.S. cancer-related deaths by more than 50%.

## **Academic Research Program**

CPRIT's Academic Research Program supports innovative and meritorious projects that are discovering new information about cancer that can lead to prevention, early detection, and cures; translating new and existing discoveries into practical advances in cancer diagnosis and treatment; and increasing the prominence and stature of Texas in the fight against cancer. In FY 2023, CPRIT's Oversight Committee approved 85 Academic Research and Recruitment Awards totaling \$166.88 million. Notably in FY 2023, the Academic Research program awarded its 300<sup>th</sup> CPRIT scholar recruitment grant.

### <u>Academic Research Program Priorities</u>

The Oversight Committee adopted the following FY 2023 program priorities for the Academic Research Program:

- Recruit of outstanding cancer researchers to Texas;
- Support a broad range of innovative initiated research projects;
- Invest in core facilities:
- Implementation research to accelerate adoption and deployment of evidence-based prevention and screening interventions;
- Computational biology and analytic methods;
- Childhood and adolescent cancers;
- Hepatocellular cancer; and
- Expanding access to innovative clinical trials

CPRIT Scholars continue to serve as a shining example of CPRIT's positive impact on cancer research in Texas. As mentioned above, CPRIT awarded its 300<sup>th</sup> CPRIT Scholar award in FY2023. As of August 31, 2023, CPRIT has invested \$865.6 million to recruit 302 CPRIT Scholars to 20 universities and research institutions across the state, adding the equivalent of 8,000+ years of productive research to Texas.

In addition to the success of the recruitment program, the Academic Research Program fulfilled other program priorities during FY2023. The Texas National Cancer Institute Connect Study (RP230426) addresses the priority to implement research to accelerate adoption and deployment of evidence-based prevention and screening interventions. The goal of this grant is to better understand causes of cancer and better prevention by collecting information for study participants who range from 40 to 65 years old with no cancer history. RP230426 will fund the Texas Connect for Cancer Prevention Study and develop a statewide cohort within the National Cancer Institute (NCI) Connect for Cancer Prevention Study. Due to the size and varied population within the state of Texas, information gathered though this grant will be critical to building a distinctive database to better understand the causes of cancer.

### **Prevention Program**

CPRIT's Prevention Program continues to support effective, evidence-based prevention programs available to underserved populations in the state. Prevention Program grants help Texans reduce the risk of cancer, identify cancers earlier, and assist people in finding cancer treatment. As of August 31, 2023, prevention grants have provided 9 million prevention services, including 3.6 million clinical services. Through CPRIT-funded screenings, 39,154 cancers and cancer precursors have been discovered. In FY2023, the Oversight Committee approved 17 prevention grants totaling \$26.9 million. Notably, the prevention program reached an impressive milestone in FY2023 by providing the 400,000th Texan with their first cancer screening.

## **Prevention Program Priorities**

The Oversight Committee adopted the following FY 2023 Prevention Program priorities:

- Populations disproportionately affected by cancer incidence, mortality, or cancer risk prevalence;
- Geographic areas of the state disproportionately affected by cancer incidence, mortality, or cancer risk prevalence;
- Underserved populations; and
- Program assessment to identify best practices, use a quality improvement tool, and guide future program direction.

The Active Living After Cancer Program (ALAC), which received its first CPRIT grant in 2013, is an example of how the Prevention Program reaches populations disproportionately affected by cancer incidence, mortality, or cancer risk prevalence. The program provides training and education to cancer survivors about how they can maintain a physically active lifestyle. ALAC is

a partnership between M.D. Anderson and community organizations in Houston, El Paso, Tyler, and Beaumont, that develop relationships with local healthcare organizations. These relationships allow the program to reach survivors who are medically underserved, Spanish-speaking, or live in rural areas. More than 1,750 cancer survivors enrolled in ALAC program over the past nine years, and approximately 75% complete the program. CPRIT recently approved grant awards PP230074 and PP230069 to enable ALAC to continue providing the program through community partners. The dissemination grant, PP230069, will allow the program to reach even more cancer survivors in the state by developing an online toolkit to help other community cancer centers provide ALAC to their patients.

# **Product Development Research Program**

CPRIT's Product Development Research Program funds innovative and scientifically meritorious product development projects with the potential of translating research discoveries into commercial products to benefit cancer patients. During FY 2023, the Oversight Committee approved seven Product Development Research awards totaling \$75.2 million. Through August 31, 2023, CPRIT has cumulatively approved 68 product development research awards to 56 companies totaling a commitment of \$639.3 million.

The Product Development Research program continues to be a vital component in building the life sciences infrastructure and community in Texas. Through August 31, 2023, CPRIT companies raised \$6.6 billion in additional investments after their CPRIT awards (a 10:1 funding ratio). These additional investments and activities testify to the quality of the CPRIT-funded projects and CPRIT's review process. CPRIT-funded companies continue to help not only the life sciences ecosystem, but also the Texas economy with a \$630.8 million increase in business activity in CPRIT programs and employment of 1,482 Texans at CPRIT-funded companies.

#### Product Development Research Program Priorities

The Oversight Committee adopted the following 2023 Product Development Research Program Priorities:

- Funding novel projects that offer therapeutic or diagnostic benefits not currently available, i.e., disruptive technologies;
- Funding projects addressing large or challenging unmet medical needs;
- Investing in early-stage projects when private capital is least available;
- Stimulating commercialization of technologies developed at Texas institutions;
- Supporting new company formation in Texas or attracting promising companies to Texas that will recruit staff with life sciences expertise, especially experienced C-level staff to lead to seed clusters of life science expertise at various Texas locations; and
- Providing appropriate return on Texas taxpayer investment.

CPRIT grantee, Invectys USA, Inc. serves as an example of a company developing novel projects that address large or challenging unmet medical needs. After receiving a Product Development Research Company Relocation grant (DP200034) in 2020, Invectys established a U.S. headquarters in Houston to continue its work on developing novel immune-therapeutic solutions for advanced cancers. Specifically, the goals of DP200034 are to advance the company's chimeric antigen receptor (CAR) T platform and to enable Invectys to conduct clinical trials in Texas. In July 2023, Invectys received Fast Track designation from the U.S. Food and Drug Administration based on compelling data from the company's Investigational New Drug submission and the potential for addressing the unmet need for patients with HLA-G positive advanced or metastatic renal cell carcinoma (RCC) who have failed other RCC therapies. Invectys initiated a Phase I/2a clinical trial (NCT05672459) at The University of Texas MD Anderson Cancer Center in June 2023 for HLA-G-positive solid tumor patients, particularly those with kidney and ovarian cancers.

#### Conclusion

CPRIT's three programs show merit and progress and should continue operations. The work conducted under the purview of CPRIT's programs is part of an iterative cycle with observations emerging from the laboratory making their way to the public and back again to the laboratory. Essential players in this cycle are basic scientists, physician scientists, clinical researchers, product development entrepreneurs, public health professionals, health care providers, patients, community organizations, early-stage companies, and research institutions across Texas.

Through CPRIT's programs the state is investing in intellectual and research support infrastructure that is attracting, creating and expanding research capabilities of Texas institutions of higher education and the Texas life science industry, expediting innovation, and increasing the likelihood of breakthroughs in cancer prevention and cures.