



CANCER PREVENTION & RESEARCH
INSTITUTE OF TEXAS

Awards and Prestigious Appointments

CPRIT grantees receiving recognition for accelerating innovative cancer prevention strategies, treatments and cures in Fiscal Year 2024

For Fiscal Year 2024

1. The National Academy of Medicine (NAM) announced September 1, 2023, that it selected CPRIT-grantee Swathi Arur, Ph.D., professor and Deputy Chair of Genetics at The University of Texas MD Anderson Cancer Center, as one of its 2022 Emerging Leaders in Health and Medicine (ELHM) Scholars. Dr. Arur is the first MD Anderson faculty member selected for this prestigious group. NAM initiated the ELHM program in 2016 to increase the academy's engagement with exceptional, interdisciplinary early-mid career professionals in biomedical sciences, population health, health care, health policy, and other related fields. ELHM Scholars serve three-year terms, creating a network that encourages collaboration and innovation as well as contributing to shaping the priorities of NAM by focusing on pressing medical challenges and improving health policies and health equity. Dr. Arur and The University of Texas MD Anderson Cancer Center received a \$900,000 CPRIT research award (RP160023) in November 2015 to research the impact of female nutrition on fertility and how it affects the onset and progression of metastatic cancers.
2. On September 7, 2023, Baylor University announced that CPRIT Scholar John L. Wood, Ph.D., The Robert A. Welch Distinguished Professor of Chemistry, chair of the Department of Chemistry and Biochemistry and co-director of the Baylor Synthesis and Drug-Lead Discovery Lab, has received the Ernest Guenther Award in the Chemistry of Natural Products from the American Chemical Society. The prestigious award recognizes Dr. Wood for outstanding achievements in the analysis, structure elucidation and chemical synthesis of natural products. He co-directs the Baylor Synthesis and Drug-Lead Discovery Laboratory, which focuses on the development and application of chemo- and site-selective methods for the derivatization of biologically and pharmacologically important natural products and other bioactive small molecules. The laboratory's high-throughput capabilities drive collaboration and discovery among an interdisciplinary group of researchers extending beyond Baylor to both the national and international levels. Baylor University recruited Dr. Wood in December 2012 with the support of a \$4.2 million CPRIT Recruitment of Established Investigators grant (R1309).
3. The National Institute on Aging, part of the National Institutes of Health, announced on September 8, 2023, that a three-year, \$3.4 million has been awarded to CPRIT Scholar Xiaoqian Jiang, Ph.D., principal investigator and professor and chair in the Department of Health Data Science and Artificial Intelligence, and to fellow researchers at McWilliams School of Biomedical Informatics at The University of Texas Health Science Center at Houston. The team will investigate how Alzheimer's disease is connected to multiple chronic diseases. Specifically, they will develop electronic health records with an application interface pathway that allows different data systems to communicate the exchange of health data across hospitals and clinics. "Our focus is on prevention. If we have a better grasp of the patients' conditions, then we can map their risk to visualize if they are following a certain cognitive degradation pathway. Intervention and prevention efforts can start earlier for the patient," said Dr. Jiang. The University of Texas Health Science Center at Houston recruited Dr. Jiang from the University of California San Diego in 2018 with the support of a \$4 million CPRIT Recruitment of Rising Stars grant (RR180012).
4. Rice University President Reginald DesRoches and Texas Medical Center President and CEO Bill McKeon joined other university leaders at a ceremony on September 12, 2023, at Rice's Bioscience Research Collaborative. The event simultaneously kicked off the Rice Biotech Launch Pad - the first in a series of 'moonshot' programs that Rice will unveil in 2023 - and celebrated the 61st anniversary of President John F. Kennedy's 1962 speech at Rice Stadium announcing what became the Apollo program. The Rice Biotech Launch Pad is the university's first large-scale initiative designed to help advance internally discovered platform technologies from concept to clinical studies and commercialization. It represents the vision of Rice bioengineer CPRIT Scholar Omid Veisheh, Ph.D., associate professor of bioengineering, and Paul Wotton, who co-founded Avenge Bio and other companies with technology discovered in Veisheh's lab and other labs in Rice's Department of Bioengineering. Dr. Veisheh, who will serve as the accelerator's faculty director, said, "We have the infrastructure, financial backing and talent in Houston to do more in creating new medicines to cure disease...we will create short-term pathways for licensing revenue for the university and we will help other entrepreneurs form companies based on innovative work at Rice. This is a thriving environment that warrants more attention and dedication to bring forward Houston's medical discoveries. I am proud to help make this happen."

Rice University recruited Dr. Veiseh from Massachusetts Institute of Technology in May 2016 with the support of a \$2 million CPRIT Recruitment of First-Time, Tenure-Track Faculty Members grant (RR160047).

5. Rice University announced on September 26, 2023, that The Advanced Research Projects Agency for Health (ARPA-H) has awarded \$45 million to rapidly develop sense-and-respond implant technology that could reduce U.S. cancer-related deaths by more than 50%. The award to a Rice University-led team of researchers from seven states, including PI and CPRIT Scholar Omid Veiseh, Ph.D., associate professor of bioengineering, will fast-track development and testing of a new approach to cancer treatment that aims to dramatically improve immunotherapy outcomes for patients with ovarian, pancreatic, and other difficult-to-treat cancers. "Instead of tethering patients to hospital beds, IV bags and external monitors, we'll use a minimally invasive procedure to implant a small device that continuously monitors their cancer and adjusts their immunotherapy dose in real time," said Dr. Veiseh on the ARPA-H cooperative agreement. "This kind of 'closed-loop therapy' has been used for managing diabetes, where you have a glucose monitor that continuously talks to an insulin pump. But for cancer immunotherapy, it's revolutionary." Rice University recruited Dr. Veiseh in May 2016 with the support of a \$2 million CPRIT Recruitment of First-Time, Tenure-Track Faculty Members grant (RR160047).

6. On October 3, 2023, Rice University announced that CPRIT Scholar Julea Vlassakis, Ph.D., assistant professor of bioengineering received the National Institutes of Health (NIH) Director's New Innovator Award (NIA). Part of the High-Risk, High-Reward Research program, NIA awards support early-career investigators with ambitious, unconventional project proposals in any area of biomedical, behavioral, or social science research relevant to the NIH mission. Dr. Vlassakis' work focuses on Ewing sarcoma, the second most common pediatric bone cancer. She will use the grant to study how cancerous cells and immune cells interact, looking to shed light on the mechanisms that allow tumor cells to evade or repel immune defenses. Her. Rice University recruited Dr. Vlassakis in May 2021 with the support of a \$2 million CPRIT Recruitment of First-Time, Tenure-Track Faculty Members grant (RR210028).

7. On September 20, 2023, The University of Texas Southwestern Medical Center announced that five-time CPRIT principal investigator Zhijian "James" Chen, Ph.D., professor in the Department of Molecular Biology, has been awarded the 2023 Louisa Gross Horwitz Prize in recognition of his groundbreaking work on innate immunity. Dr. Chen is one of the world's top researchers on innate immunity – the body's response to pathogens that quickly identifies and destroys cells and tissues that have been attacked. His discoveries include MAVS, the first mitochondrial protein known to be involved in immunity against infections. More recently, he identified cGAS (cyclic GMP-AMP synthase), which triggers the innate immune system when it detects foreign DNA inside a cell. The University of Texas Southwestern Medical Center received five CPRIT Academic Research grants, including the most recent (RP180725) \$6 million award to investigate how DNA damage leads to anti-tumor immune responses.

8. Baylor College of Medicine announced on September 20, 2023, that six faculty members were selected as recipients of the 2023 Michael E. DeBaakey Excellence in Research Award. CPRIT Scholar Daisuke Nakada, Ph.D., professor in the Department of Molecular and Human Genetics, was one of the six honored on September 18th. Dr. Nakada's research focuses on the molecular and cellular mechanisms that regulate the biology of hematopoietic stem cells (HSCs), the parent cells of blood cells, and leukemia. Dr. Nakada developed an efficient method to edit the genomes of HSCs. This method was used to develop new mouse models of hematological malignancies and to investigate the genetic interactions in both mouse and human acute myeloid leukemia (AML) models, setting the research conducted by the Nakada lab at the forefront of HSC leukemia stem cell biology. Baylor College of Medicine recruited Dr. Nakada in November 2011 with the support of a \$2 million CPRIT Recruitment of First-Time, Tenure-Track Faculty Members grant (R1201).

9. On September 26, 2023, the University of Houston (UH) announced that The Advanced Research Projects Agency for Health (ARPA-H) awarded \$45 million to a team of researchers from seven states, including \$2.1 million to co-principal investigator Weiyi Peng, M.D., Ph.D., assistant professor of biology and biochemistry at UH. The researchers have been tasked

to fast-track development and testing of a novel approach to cancer treatment that aims to dramatically improve immunotherapy outcomes for patients with ovarian, pancreatic and other difficult-to-treat cancers. Dr. Peng will provide expertise in tumor immunology and lead preclinical testing of the targeted hybrid oncotherapeutic regulation or THOR technology, along with discovery of biomarkers associated with efficacy. This small device, which is implanted through a minimally invasive procedure, continuously monitors a patient's cancer and adjusts their dose in real time. Dr. Peng collaborated with CPRIT Scholar Omid Veisheh Ph.D., Rice University, and his team on the cytokine "drug factory" technology that was published in *Science Advances* last year. University of Houston received a \$250,000 CPRIT High Impact/High Risk grant (RP200520) in 2020 with Dr. Peng as the principal investigator to develop a new genetic screen platform by integrating the functional immune screen system established in their previous studies with single cell RNA sequencing technology.

10. Gail Tomlinson, M.D., Ph.D., division director of pediatric hematology-oncology at The University of Texas Health Science Center at San Antonio, received a \$400,000 Hyundai Hope Scholar Grant Award to study new mechanisms for treating liver tumors including those resistant to conventional therapies according to a UT Health on September 26, 2023. A \$100,000 Hyundai Impact Grant Award was also presented to Tomlinson's genetics team in the division of pediatric oncology to expand the availability of genetic testing at University Hospital's pediatric clinic. CPRIT Scholar Patrick Sung, DPhil, director of the Greehey Institute said, "Research grants from Hyundai Hope on Wheels® offer hope for children and their parents. This opportunity fuels our community of scientists and health care providers who continue this much-needed work. With these grants, Hyundai Hope on Wheels® support for research has exceeded \$2.1 million at UT Health San Antonio." Dr. Sung was recruited to The University of Texas Health Science Center at San Antonio in 2018 with the support of a \$6 million CPRIT Recruitment of Established Investigators grant (RR180029). Dr. Tomlinson has been the principal investigator on three CPRIT Academic Research grants (RP101195-C1, RP120715-AC, RP220137) and two Prevention grants (PP120089, PP160011) since 2010.

11. The University of Texas Southwestern Medical Center announced on September 25, 2023, that Michael Buszczak, Ph.D., professor of Molecular Biology, and Vishal Patel, M.D., professor of Internal Medicine, will share a \$100,000 UTSW Biotech+ at Pegasus Park Commercialization Milestone Award. Dr. Buszczak is developing a method to track the creation of ribosomes – the cellular machinery responsible for making proteins – in cells. Such a tool would be beneficial since drugs that inhibit ribosome creation are extremely effective against cancer cells. Dr. Buszczak has been a principal investigator for a \$721,209 CPRIT Individual Investigator grant (RP100516) awarded in 2010.

12. The University of Texas Southwestern Medical Center announced on October 3, 2023, that CPRIT Scholar Ravikanth Maddipati, M.D., assistant professor of Internal Medicine and in Children's Medical Center Research Institute at UT Southwestern, has been awarded The National Institutes of Health (NIH) Director's New Innovator Award. This \$1.5 million award from the NIH supports research investigating positional heterogeneity in cancer. Dr. Maddipati specializes in disorders of the pancreas and management of patients at high risk for developing pancreatic cancer. Building on optogenetic tools used for basic neurobiology, Dr. Maddipati plans to use the funding to design mouse models in which genes can be preferentially activated by targeted laser beams to turn on cancer driver genes and turn off tumor suppressor genes, spurring cancers to develop in specific places within organs. The researchers then can study how location affects the behavior of these tumors through genetic sequencing and other means. The University of Texas Southwestern Medical Center recruited Dr. Maddipati in 2019 with the support of a \$2 million CPRIT Recruitment of First-Time, Tenure-Track Faculty Members grant (RR190029).

13. Rice University announced on October 3, 2023, that CPRIT Scholar Julea Vlassakis, Ph.D., assistant professor of bioengineering, received the National Institutes of Health (NIH) Director's New Innovator Award (NIA) for creative research projects demonstrating broad impact potential. Dr. Vlassakis' work will focus specifically on Ewing sarcoma, and she will use the grant to seek a better understanding of the mechanisms that allow tumor cells to evade or repel immune defenses. "We care about measuring single cells because there's some variation from cell to cell that can be meaningful in terms of which cells are the ones aggressively invading the environment and driving the cancer to spread versus the less migratory cells," Dr. Vlassakis said. Rice recruited Dr. Vlassakis in 2021 with the support of a \$2 million CPRIT Recruitment of First-Time, Tenure-Track Faculty

Members grant (RR210028).

14. The University of Texas MD Anderson Cancer Center announced on October 6, 2023, that Jennifer Wargo, M.D., professor of Surgical Oncology and Genomic Medicine, was elected to the National Academy of Medicine (NAM) for her contributions to the understanding of melanoma treatment response and resistance to cancer therapies, including groundbreaking discoveries that reveal how the gut microbiome influences responses to immunotherapy. Each year, members are elected to the NAM by their peers in recognition of outstanding professional achievement and commitment to service. She has authored and co-authored more than 200 articles in peer-reviewed journals and serves in several leadership roles at MD Anderson and in professional societies. She has mentored many young scientists in the field, including those who are part of a *Woman in Cancer in Immunotherapy* group. Dr. Wargo is the PI in two CPRIT Academic Research grants (RP150030, RP200574) awarded to MD Anderson Cancer Center totaling \$1.15 million.

15. The Texas Therapeutics Institute at The University of Texas Health Science Center at Houston, led by director Zhiqiang An, Ph.D., is expanding into the Texas Medical Center's newly completed TMC³ Collaborative Building. The institute, part of The Brown Foundation Institute of Molecular Medicine for the Prevention of Human Diseases with McGovern Medical School at UTHealth Houston, focuses on antibody drug resistance mechanisms, biomarkers for therapeutic antibodies, and antibody drug discovery targeting human diseases. "It's an honor to be one of the first labs in the building," said Dr. An, professor of molecular medicine and vice president of drug discovery at UTHealth Houston. "The Texas Medical Center recognizes the benefit of collaborative work, so the beauty of TMC³ is that it will allow us to work closely with other members in the medical center." The institute is, in part, supported by grants from the National Institutes of Health, the U.S. Department of Defense, and CPRIT, which includes two CPRIT Core Facility grants (RP150551, RP190561) for antibody drug development totaling \$11.2 million. The institute also has support from the biotechnology and pharmaceutical industry and has established collaborations with numerous state and national leaders in drug discovery in both academia and industry. Dr. An has been a principal investigator in a \$900,000 CPRIT Academic Research grant (RP150230).

16. The University of Texas Health Science Center at Houston has named Zhiqiang An, Ph.D., as the first vice president of drug discovery. In this new role, Dr. An will work in close collaboration with researchers across campus, as well as the Office of Technology Management, Academic and Faculty Affairs, and the Office of the President to promote drug discovery and therapeutic innovation. Dr. An, a professor of molecular medicine and the Robert A. Welch Distinguished University Chair in Chemistry, is a trailblazer in the development of antibody-based biologicals to treat various cancers, spinal cord injury, and Alzheimer's disease, with multiple drug candidates currently in clinical trials. He also serves as the director of the Texas Therapeutics Institute and the director of the Antibody Drug Discovery Lab, an academic drug discovery program at McGovern Medical School. During the last 10 years, more than 12 novel antibody drug leads discovered in his laboratory were licensed to eight different biotechnology companies, and six have advanced to clinical trials for acute myeloid leukemia, breast cancer bone metastasis, solid tumor, spinal cord injury, COVID-19, and other diseases. Dr. An has been a principal investigator in a \$900,000 CPRIT Academic Research grant (RP150230).

17. Equitable access to life saving cell therapies for cancer treatment remains a challenge, particularly within public safety-net healthcare systems that serve minority and socioeconomically disadvantaged populations. The Dan L Duncan Comprehensive Cancer Center at Baylor College of Medicine announced in October 2023 that it is launching a pilot program to open cell therapy clinical trials at Harris Health through Harris Health Ben Taub Hospital and Harris Health Smith Clinic to address cancer care disparities. "The Duncan Cancer Center is a cancer center for the entire community, including the uninsured community," said CPRIT Scholar Pavan Reddy, M.D., professor and director of the Duncan Cancer Center. "We will leverage the strength of Baylor's Center for Cell and Gene Therapy to offer life-saving treatments to our patients in the Harris Health." The pilot program at Harris Health will begin with phase I and II cell therapy clinical trials currently open at Baylor's other affiliate

hospitals, taking advantage of existing cutting-edge cell therapy facilities and resources. The first study planned to open will use a cell therapy developed at Baylor's Center for Cell and Gene Therapy to treat multiple myeloma. "This first trial has minimal risk and will apply to the most patients," said Martha Pritchett Mims, M.D., Ph.D., professor of medicine and section chief of hematology and oncology at Baylor, associate director of clinical research at the Duncan Cancer Center and hematologist at Ben Taub Hospital. "Over the course of the next few years, we hope to address the entire spectrum of diseases that can be treated with cell therapy." Baylor College of Medicine recruited Dr. Reddy in 2022 with the support of a \$6 million CPRIT Recruitment of Established Investigators grant (RR220033). Dr. Mims is the principal investigator in a \$1.5 million CPRIT Texas Clinical Trials Participation Program Award grant (RP210143) in August 2021.

18. The Colorectal Cancer Alliance (Alliance) announced the establishment of Project Cure CRC on October 31, 2023. The initiative reflects the Alliance's renewed effort to fund tens of millions of dollars in expedited, novel colorectal cancer research over the next two years. The first \$1.6 million of the investment will fund innovative work by CPRIT Scholar Raghu Kalluri, M.D., Ph.D. at The University of Texas MD Anderson Cancer Center, which aims to rapidly develop urgently needed therapeutic options for the 96% of colorectal cancer patients with microsatellite stable (MSS) disease who currently have few options. "Our strategy includes attacking the cancer cells that are in the colon but also attack the environment around those cancer cells that we think are sometimes helping the cancer cells become more aggressive," said Dr. Kalluri. "By combining the two strategies, we think we can come up with better therapies for patients with CRC." The second phase of this strategy is to control the disease from becoming malignant in the first place with cancer vaccination strategies.

The Alliance will host its first-ever Cure CRC Summit from December 13-15, 2023, convening the nation's top colorectal cancer scientists in Miami. Summit co-chairs include Scott Kopetz, M.D. from MD Anderson, Christopher Lieu, M.D. from the University of Colorado Medicine, and John Marshall, M.D. from the Ruesch Center at Georgetown University, as well as Alliance board member Yekaterina Chudnovsky and Alliance CEO Michael Sapienza. The University of Texas MD Anderson Cancer Center recruited Dr. Kalluri from Harvard Medical School in 2012 with the support of a \$3.5 million CPRIT Recruitment of Established Investigators grant (R1227). Dr. Kalluri has been the principal investigator on two additional Academic Research grants (RP150231, RP200612) totaling \$1.15 million. Dr. Kopetz has been the principal investigator in an \$830,000 CPRIT Academic Research grant (RP110584).

19. The University of Texas at Arlington is adding a new piece of cutting-edge equipment to its already impressive research instruments—a type of super-resolution microscope (SRM) that allows biologists to see structures within a cell in even greater detail. This grant of nearly \$250,000 from the National Institutes of Health (NIH) will fund the purchase of the SRM for the lab of CPRIT Scholar Piya Ghose, assistant professor in the Department of Biology. This award supplements Ghose's existing NIH/National Institute of General Medical Sciences (NIGMS) Maximizing Investigators' Research Award/Outstanding Investigator Award. The Ghose lab studies the programmed death and clearance of cells of complex structure in the living animal. They are focusing on a specific cell in the nematode called the tail-spike cell and are studying tail-spike cell death with the hope of learning more about the cell biology and genetics behind neurodegeneration, cancer and basic developmental cell death. Dr. Ghose was recruited by The University of Texas at Arlington with the support of a \$2 million CPRIT Recruitment of First-Time, Tenure-Track Faculty Members grant (RR100091).

20. LUNGeVity Foundation, the nation's leading lung cancer-focused nonprofit organization, announced the recipients of the EGFR Resisters/LUNGeVity Research Award for EGFR-Positive Lung Cancer on November 1, 2023. EGFR Resisters has partnered with LUNGeVity for the second time to support high-impact research focused on EGFR-positive lung cancer. Reuben Alexandre, Ph.D., assistant professor, Department of Thoracic-Head & Neck Medical Oncology at The University of Texas MD Anderson Cancer Center is one of two recipients of the 2023 EGFR Resisters/LUNGeVity Research Award for EGFR-Positive Lung Cancer. Dr. Reuben and his team have identified several antigens, or protein fragments on the cell surface, that are

unique to drug-tolerant persister cells (DTPCs) following treatment with EGFR TKIs. The team then developed a library of receptors that can be engineered into immune cells to allow the immune cells to recognize and destroy tumor cells that remain after TKI treatment. If successful, this work lays the foundation for using a new approach to block DTPCs and possibly prevent the development of drug resistance in the majority of patients who are living with EGFR-positive lung cancer. Dr. Alexandre has been the principal investigator on a CPRIT High Impact/High Risk grant (RP210137) awarded to The University of Texas MD Anderson Cancer Center in August 2021.

21. On November 9, 2023, The University of Texas MD Anderson Cancer Center announced the launch of its Institute for Data Science in Oncology (IDSO), uniting MD Anderson's clinical and research communities in transformative data efforts, offering new opportunities for collaborations across the institution and externally. Located in the Texas Medical Center's Helix Park and housed in the TMC³ Collaborative Building, IDSO brings top data scientists together with cancer researchers and clinicians and integrates the most advanced approaches to significantly improve patient's lives. Co-leader, CPRIT Scholar Bissan Al-Lazikani, Ph.D., is the director of Therapeutics Data Science and professor in the Department of Genomic Medicine. Dr. Al-Lazikani applies data science approaches to integrate multi-disciplinary and multi-modal data to inform all aspects of cancer translational research and to develop novel machine learning algorithms that learn from these integrated data. The University of Texas MD Anderson Cancer Center recruited Dr. Al-Lazikani from the London Institute of Cancer Research in November 2020 with the support of a \$6 million CPRIT Recruitment of Established Investigators grant (RR210007) to establish an Artificial Intelligence (AI)-enabled Rapid Reverse-Translation Engine.

22. The implantable electrocatalytic on-site oxygenator (ecO₂) is a device in development at the Rice University's Biotech Launch Pad with the goal to autonomously administer and regulate therapeutics within an individual. A team of researchers, including CPRIT Scholar Omid Veisheh, Ph.D., associate professor of bioengineering and faculty director of the Rice Biotech Launch Pad, published a study entitled, "Electrocatalytic on-site oxygenation for transplanted cell-based-therapies," in *Nature Communications* on November 9, 2023. The article details the development of a novel and rechargeable device, ecO₂, that produces oxygen to keep cells alive inside an implantable "living pharmacy." Cell-based therapies have potential to treat many different types of diseases including endocrine disorders, autoimmune syndromes, cancers and neurological degeneration, but the survival of these cells for extended periods are necessary to produce effective treatments. The current treatment options to deliver oxygen to cells, however, require bulky equipment and have limited oxygen production and regulation.

"Oxygen generation is achieved here through basic water splitting and precisely regulated using a battery powered and wirelessly controllable electronic system; however, the next iterations of this device will have wireless charging, which means that this could potentially last the full life of the patient," said Dr. Veisheh. "This breakthrough technology has the potential to reshape the landscape of disease treatment and the future of research and development in the field of cell-based therapies. We are working toward advancing this technology into the clinic to bring it one step closer to those in need." Rice University recruited Dr. Veisheh from Massachusetts Institute of Technology in May 2016 with the support of a \$2 million CPRIT Recruitment of First-Time, Tenure-Track Faculty Members grant (RR160047) to synthesize a nanoparticle that can carry a gene-therapy product across the blood-brain barrier.

23. On November 14, 2023, The University of Texas Southwestern Medical Center reported that a multicenter study for breast cancer patients whose HER2 gene is mutated, revealed that targeted therapy using three different drugs significantly hindered progression and extended survival. The findings were published in *Annals of Oncology* in October 2023. Seeking a way to slow or stop progression of tumors with HER2 mutations, CPRIT Scholar Carlos Arteaga, M.D., director of the Harold C. Simmons Comprehensive Cancer Center and associate dean of Oncology, and his colleagues tested a variety of combinations of three different drugs among 71 breast cancer patients being treated at 23 medical centers around the world. All of the patients were positive for mutations in their HER2 gene as well as hormone receptors, which can fuel cell growth and frequently occur with HER2 overactivity. Fifty-seven patients received a combination of neratinib, a HER2 tyrosine kinase inhibitor; fulves-

trant, which inhibits estrogen receptors; and trastuzumab, a HER2 blocking antibody. Approximately 39% of those taking the triple combination showed a partial or complete response.

"This novel combination therapy showed very encouraging results, even in patients who failed several other lines of treatment," said Dr. Arteaga. Based on the positive results, the National Comprehensive Cancer Network has added this three-drug combination to its treatment guidelines. The researchers are using the results of this study with the aim to initiate a first-in-class multi-institutional neoadjuvant trial of neratinib and the aromatase inhibitor letrozole in patients with newly diagnosed invasive lobular breast cancer harboring HER2 mutations. The University of Texas Southwestern Medical Center recruited Dr. Arteaga in August 2017 from the Vanderbilt University School of Medicine with the support of a \$6 million CPRIT Recruitment of Established Investigators grant (RR170061).

24. The James P. Allison Institute at The University of Texas MD Anderson Cancer Center hosted its inaugural scientific symposium on November 10, 2023, at the TMC³ Collaborative Building in the Texas Medical Center's Helix Park. The event drew more than 400 leading scientists, including three Nobel laureates, from multiple disciplines to share groundbreaking immunotherapy and immunobiology research. The Allison Institute was created to advance exceptional discovery, translational and clinical research that will integrate immunobiology across all disciplines. By gaining a comprehensive understanding of the immune system, the institute aims to lead groundbreaking research that will bring the benefits of immunotherapy to all patients.

"Our inaugural symposium is an important milestone representing significant progress for the Allison Institute since we launched last year, and we're energized by the exceptional science shared by our members and colleagues," said Nobel laureate and CPRIT Scholar James P. Allison, Ph.D., director of the Allison Institute and regental professor and chair of Immunology at MD Anderson. "With an incredible environment and amazing collaborators, I look forward to our continued work to advance immunotherapy cures." The University of Texas MD Anderson Cancer Center recruited Dr. Allison from the Memorial Sloan-Kettering Cancer Center in November 2011 with the support of a \$10 million CPRIT Recruitment of Established Investigators grant (R1203).

25. On November 22, 2023, The University of Texas Southwestern Medical Center announced that more than a dozen UT Southwestern scientists were included on the 2023 Highly Cited Researchers list, which recognizes the top 1% of researchers from around the world who have demonstrated significant and broad influence in their chosen field or fields of research. This year's list includes 6,849 researchers from institutions in 67 countries who represent 0.1% of the world's population of scientists and social scientists. This honor recognized eight UT Southwestern scientists who have received CPRIT funding as principal investigators: Zhijian Chen, Ph.D.; Ralph DeBerardinis, M.D., Ph.D.; Joseph Hill, M.D., Ph.D.; John Minna, M.D., Eric Olson, Ph.D.; Philipp Scherer, Ph.D.; Lijun Sun, Ph.D.; and CPRIT Scholar Sean Morrison, Ph.D. The Highly Cited Researchers list is produced each year by the Institute for Scientific Information at Clarivate, a British analytics company. It highlights scientists who have published multiple highly cited papers over the last decade and rank in the top 1% of citations for a field or fields.

26. On December 7, 2023, the National Institutes of Health announced a four-year, \$4 million cooperative research agreement grant to Texas A&M University Health Science Center to create the Gulf Coast Consortium Research Evaluation and Commercialization Hub (GCC-Reach). Led by CPRIT grantee Peter Davies, M.D., Ph.D., professor and director of the Center for Translational Cancer Research at the Texas A&M Health Institute of Bioscience and Technology, this multi-institutional commercialization hub will support the development and commercialization of transformative health care treatments based on research discoveries. "The creation of the GCC-Reach will help increase the translation of medical discoveries into products and services that will directly benefit the health and welfare of patients with many different types of diseases," said Dr. Davies. In addition to Texas A&M Health, other GCC-Reach partners are the Gulf Coast Consortia members as well as colleagues from Texas Southern University, The University of Texas Medical Branch, and TMC Innovation. Participating primary and co-investigators include CPRIT grantee Suzanne Tomlinson, Ph.D., director of research programs for the Gulf Coast Consortia, and CPRIT grantee Veronica Ajewole, Pharm.D., associate professor in the Department of Pharmacy Practice and Administration at Texas

Southern University.

Over the next four years, the GCC-Reach will train academic entrepreneurs and scientists within GCC member institutions, Texas Southern University, and regional research institutions to navigate the process of successfully commercializing their novel discoveries. The consortium aims to launch 60 early-stage biomedical companies to attract venture investments and additional grant funding. CPRIT has long recognized the need to support the translation and commercialization of transformative health care treatments based on research discoveries in the laboratories of Texas investigators, and supports this process through multiple mechanisms, including the \$5.4 million award to TMC Innovation and Dr. Thomas Luby for the “Accelerator for Cancer Therapeutics” at TMC (RP190674). Dr. Davies is the principal investigator of two CPRIT Core Facility Support Awards (RP150578, RP200668), totaling nearly \$10 million, that provide specialized resources to support cancer-related drug discovery research, as well as a \$3.1 million research training award focused on equipping scientists with the essential skills and knowledge to translate cancer discoveries into commercially viable cancer therapeutics (RP210043).

27. The University of Texas Southwestern Medical Center announced on December 12, 2023, that Jinming Gao, Ph.D., professor of Biomedical Engineering, Cell Biology, Otolaryngology – Head and Neck Surgery, and Pharmacology, has been selected as a fellow of the National Academy of Inventors (NAI) in recognition of his efforts to develop innovative nanotechnology platforms to improve cancer diagnosis and treatment. Dr. Gao holds 16 U.S. patents and 72 foreign patents in the fields of polymer biomaterials, nanoparticle drug delivery, tumor surgical imaging, and cancer immunotherapy. Thirteen of the patents have been licensed to biotech companies. With the support of five CPRIT Academic Research grants since 2012, Dr. Gao and his colleagues in the Gao Lab have developed synthetic polymer nanoparticles that release their payload after entering an acidic environment. This technology was licensed by OncoNano Medicine Inc., a startup co-founded by Dr. Gao and Baran Sumer, M.D., Professor of Otolaryngology – Head and Neck Surgery at UTSW. Pegsitacianine, OncoNano’s lead clinical development candidate, is an intraoperative fluorescence imaging agent for the detection of cancerous tissue in patients undergoing removal of their solid tumor. A phase two clinical trial was completed recently and has received a breakthrough therapy designation from the U.S. Food and Drug Administration, a status designed to expedite development and regulatory review of medicines. The University of Texas Southwestern Medical Center received five CPRIT Academic Research grants (RP120094, RP120897, RP140140, RP180343, RP220150) totaling \$5.7 million.

28. Vaccines have saved countless lives. During the SARS-CoV-2 pandemic, scientists have been forced to evaluate multiple platforms for vaccines. mRNA vaccines emerged as the safe, versatile, most effective choice because of their lower risk profile. However, there are challenges with mRNA vaccines due to quick degradation and high cost. With the support of a CPRIT Core Facility grant, John Cooke, M.D., Ph.D., Chief Translational Sciences Officer, medical director, Center for RNA Therapeutics, and chair, Department of Cardiovascular Sciences, founded the Center for RNA Therapeutics at Houston Methodist, which performs rigorous research that reveals foundational biological mechanisms in RNA biology and translates this knowledge into novel RNA-based products. Faculty within the Center for RNA Therapeutics have developed novel methods for generation of more efficient and effective RNA therapeutics that are moving toward clinical applications. The Center has secured an international award from The Coalition for Epidemic Preparedness Innovation (CEPI) is also the recipient of new funding from The Biomedical Advanced Research and Development Authority (BARDA). With these awards, the Center is prepared to provide leadership in pandemic preparedness and accelerate development of vaccines and medical countermeasures against emerging infectious diseases. The Methodist Hospital Research Institute has received two Core Facility Support Awards grants (RP150611, RP200619) totaling \$8.8 million.

29. Livia Schiavinato Eberlin, Ph.D., associate professor of surgery at Baylor College of Medicine, was named the 2024 recipient of the Norman Hackerman Award in Chemical Research in December 2023. The award was established by the Houston-based Welch Foundation and recognizes the accomplishments of chemical scientists in Texas who are early in their careers. Dr. Eberlin will be granted \$100,000 for this honor. Dr. Eberlin runs the Eberlin Lab for Medical Mass Spectrometry at BCM and is known for her groundbreaking work in the appli-

cation of mass spectrometry technologies, which are changing how physicians treat cancer and analyze tissues. In the same week, Baylor College of Medicine announced that the Eberlin Lab received \$3 million in funding from The Marcus Foundation to further develop the MasSpec Pen technology in breast cancer surgeries. Eberlin developed the tool in 2016 while she was serving as an assistant professor at the University of Texas at Austin. The MasSpec Pen is a device for detecting cancer directly on tissues. The University of Texas at Austin received two Academic Research grants (RP160776, RP170427) and Baylor College of Medicine received an Academic Research grant (RP180381) totaling \$1.4 million to support Dr. Eberlin's research using mass spectrometry imaging to directly analyze fine needle aspiration biopsies and provide real time diagnostic molecular information of lung cancers.

30. The University of Texas MD Anderson Cancer Center and Rigel Pharmaceuticals, Inc. announced a multi-year strategic development collaboration to expand the evaluation of olutasidenib in acute myeloid leukemia (AML) and other hematologic cancers on December 8, 2023. The alliance brings together MD Anderson's clinical research expertise with Rigel's differentiated targeted molecule. Under the strategic collaboration, Rigel and MD Anderson will evaluate the potential of olutasidenib to treat newly diagnosed and relapsed or refractory (R/R) patients with AML, higher-risk myelodysplastic syndromes (MDS) and advanced myeloproliferative neoplasms (MPN), in combination with other agents. The collaboration also will support the evaluation of olutasidenib as monotherapy in lower-risk MDS and as maintenance therapy in post-hematopoietic stem cell transplant patients.

Olutasidenib is approved by the Food and Drug Administration (FDA) for the treatment of adult patients with R/R AML with a susceptible isocitrate dehydrogenase-1 (IDH1) mutation as detected by an FDA-approved test. "Based on its differentiated profile and compelling clinical data to date, olutasidenib has the potential, beyond its currently approved indication, to benefit patients with various cancers where mutant IDH1 is thought to play a role," said Courtney DiNardo, M.D., professor, Department of Leukemia. "We look forward to collaborating with Rigel to conduct in-depth studies that will determine the broader potential of olutasidenib in these patient populations." The University of Texas MD Anderson Cancer Center received a \$1.9 million CPRIT Individual Investigator Research Awards for Clinical Translation grant (RP220299) in February 2022 to support Dr. DiNardo's research to further detail the patterns of leukemia response and resistance to measurable residual disease-directed therapy.

31. Texas Academy of Medicine, Engineering, Science and Technology (TAMEST) announced on December 18, 2023, CPRIT Scholar Nidhi Sahni, Ph.D., The University of Texas MD Anderson Cancer Center, as the recipient of the 2024 Mary Beth Maddox Award and Lectureship in cancer research. She was chosen for her role in identifying novel biomarkers and drug targets, which are expected to have a significant impact on cancer by translating into more effective prognosis and therapy for the disease. She pioneered "functional variomics" as an approach to identify mechanisms by which DNA sequence variation impacts diseases, establishing a new field with major impact on precision oncology, early detection and therapeutics in cancer. The Mary Beth Maddox Award and Lectureship recognizes women scientists in Texas bringing new ideas and innovations to the fight against cancer. It was established in 2022 in honor of Mary Beth Maddox, former Executive Director of TAMEST, who passed away after a valiant battle with pancreatic cancer. The University of Texas MD Anderson Cancer Center recruited Dr. Sahni from the Dana-Farber Cancer Institute in 2015 with the support of a \$2 million CPRIT Recruitment of First-Time, Tenure-Track Faculty Members grant (RR160021).

32. ChromaCode, Inc., a pioneering genomics multiplexing platform company developing accessible and affordable laboratory-based solutions, announced the appointment of Michele Park, Ph.D., Partner at NEA, to the Board on January 10, 2024. Dr. Park has extensive experience in venture capital and life sciences investment. Before joining NEA, she worked as an investor at Clarus Ventures (now Blackstone Life Sciences) and served as a biotechnology research analyst at Credit Suisse and Piper Jaffray. Currently, Dr. Park serves as vice chair of CPRIT's Product Development Advisory Committee.

33. The Texas Academy of Medicine, Engineering, Science and Technology (TAMEST) announced on January 10, 2024, that CPRIT Scholar Vincent Tagliabracci, Ph.D., associate professor, Department of Molecular Biology at The University of Texas Southwestern Medical Center, will receive the 2024 Edith and Peter O'Donnell Award in Biological Sciences. Dr. Tagliabracci earned this award for broadening the understanding of pseudokinases, a family of enzymes that play key roles in many physio-

logical and pathological processes.

“Dr. Tagliabracchi’s discoveries of unexpected activities of atypical kinases in diverse clades of life have expanded the boundaries of the kinome and unveiled new biology with a broad range of therapeutic applications,” said Eric Olson, Ph.D., chair and professor, Department of Molecular Biology at UTSW, who nominated Dr. Tagliabracchi for the O’Donnell Award. This year’s recipients will be honored at the 2024 Edith and Peter O’Donnell Awards Ceremony on February 6 and will present their research preceding the awards ceremony at the TAMEST 2024 Annual Conference: Artificial Intelligence and Machine Learning in Austin. The University of Texas Southwestern Medical Center recruited Dr. Tagliabracchi in February 2015 with the support of a \$2 million CPRIT Recruitment of First-Time, Tenure-Track Faculty Members grant (RR150033).

34. Rice University announced on January 10, 2024, that it has launched the Rice Synthetic Biology Institute, which aims to improve collaborative research in synthetic biology and its translation into technologies to improve lives in Texas and beyond. The institute will also facilitate the growth of a shared, cutting-edge infrastructure with the long-term goal of establishing a world-renowned building that can become the home of the faculty, institute, and research. The institute is led by CPRIT Scholar Caroline Ajo-Franklin, Ph.D., professor of biosciences, bioengineering, and chemical and biomolecular engineering, with the support of an interdisciplinary faculty steering committee. “At Rice, we have such deep expertise in synthetic biology,” said Dr. Ajo-Franklin. “Connecting that deep expertise through this institute will lead to better science and more innovation.” Rice University recruited Dr. Ajo-Franklin from the Ernest Orlando Lawrence Berkeley National Laboratory in November 2019 with the support of a \$6 million CPRIT Recruitment of Established Investigators grant (RR190063).

35. The Texas Academy of Medicine, Engineering, Science and Technology (TAMEST) announced on January 10, 2024, that Benjamin Deneen, Ph.D., professor and chair in Neurosurgery and director of the Center for Cancer Neuroscience at Baylor College of Medicine, is the recipient of the 2024 Edith and Peter O’Donnell Award in Medicine from TAMEST (The Texas Academy of Medicine, Engineering, Science and Technology). Dr. Deneen earned this award for his groundbreaking research that has opened an entirely new field of study set to impact brain tumor patients and give potential insights into a wide range of developmental diseases. Although neurological research has focused on one cell in the brain, the neuron, for many years, Dr. Deneen and his team focused instead on the most abundant brain cell: the astrocyte. His research has revealed that astrocytes influence brain circuits and animal behavior by communicating with neurons. If these lines of communication get disrupted, diseases and neurological disorders follow. This year’s recipients will be honored at the 2024 Edith and Peter O’Donnell Awards Ceremony on February 6 and will present their research preceding the awards ceremony at the TAMEST 2024 Annual Conference: Artificial Intelligence and Machine Learning in Austin. Dr. Deneen has been the PI on two CPRIT Academic Research grants (RP150334, RP160192) totaling \$2.7 million to define the cellular constituency of malignant glioma and understand how these diverse populations promote tumorigenesis.

36. The American Association of Immunologists announced the 2024 recipients of the AAI Awards for outstanding research and career achievements in January 2024. CPRIT Scholar Zhenyu Zhong, Ph.D., assistant professor, Department of Immunology at The University of Texas Southwestern Medical Center, is one of six recipients of the AAI ASPIRE Awards For early-career research accomplishments and professional promise in the field of immunology. In the Zhong’s Lab, Dr. Zhong and fellow scientists study inflammation, mitochondrial stress responses, tumor immunology, and obesity-associated liver disorders. The 2024 AAI Award winners will be recognized at IMMUNOLOGY2024™, May 3–7, in Chicago, Illinois. The University of Texas Southwestern Medical Center recruited Dr. Zhong in 2018 from the University of California, San Diego, with the support of a \$2 million CPRIT Recruitment of First-Time, Tenure-Track Faculty Members grant (RR180014).

37. Each year the National Inventors Hall of Fame welcomes a new class of Inductees who have made exceptional contributions to society. CPRIT Scholar James Allison, Ph.D., has been named a 2024 National Inventors Hall of Fame Inductee for inventing immune checkpoint blockade therapy (U.S. Patent No. 5,811,097). His pioneering work brought immunotherapy into mainstream medicine as an effective treatment for cancer. In 2018, Allison was awarded the Nobel Prize in Physiology or Medicine. He holds 12 U.S. patents and serves as director of the James P. Allison Institute at The University of Texas MD Anderson.

The University of Texas MD Anderson Cancer Center recruited Dr. Allison from the Memorial Sloan-Kettering Cancer Center in November 2011 with the support of a \$10 million CPRIT Recruitment of Established Investigators grant (R1203).

38. On February 6, 2024, The Vilcek Foundation announced CPRIT Scholar Gerta Hoxhaj, Ph.D., assistant professor with the Children's Research Institute and the Department of Biochemistry at The University of Texas Southwestern Medical Center as a recipient of the 2024 Vilcek Prize for Creative Promise in Biomedical Science. The Vilcek Prizes for Creative Promise in Biomedical Science are \$50,000 prizes given to immigrant scientists and researchers under the age of 40 whose work represents a significant contribution to their field and opens new avenues for further research and discovery. Dr. Hoxhaj was honored with this award for mapping the molecular links between signaling pathways and metabolic networks of cancer cells with a focus on identifying vulnerabilities that could be used to develop cancer targeted therapies. The University of Texas Southwestern Medical Center recruited Dr. Hoxhaj in August 2019 with the support of a \$2 million CPRIT Recruitment of First-Time, Tenure-Track Faculty Members grant (RR190087). CPRIT awarded UT Southwestern and Dr. Hoxhaj a \$1 million Individual Investigator award in 2024 (RP240035) to research therapeutic strategies for lung cancer by harnessing the metabolic dependencies of mitochondrial NADK2.

39. The European Society for Medical Oncology (ESMO) announced on February 6, 2024, that Funda Meric-Bernstam, M.D., medical director of the Institute for Personalized Cancer Therapy (IPCT), and The Nellie B. Connally Chair in Breast Cancer at The University of Texas MD Anderson Cancer Center, was named the recipient of the 2024 TAT (Targeted Anticancer Therapies) Honorary Award. The TAT Honorary Award acknowledges distinguished cancer drug development experts who have devoted a major part of their careers to the discovery and development of more effective anticancer medicines. Dr. Meric-Bernstam is recognized for her remarkable contributions to precision oncology. Her clinical research is focused on Phase I /II trials with focus on novel mechanisms of action, novel combination therapies, and biomarkers to predict and monitor drug response. Dr. Meric-Bernstam is the PI on a \$6 Million Core Facility Support Awards grant (RP150535) awarded to The University of Texas MD Anderson Cancer Center in May 2015.

40. The Society for Developmental Biology (SDB) announced on February 8, 2024, that CPRIT Scholar Dan Dickinson, Ph.D., assistant professor, Department of Molecular Biosciences at The University of Texas at Austin, was awarded the 2024 Elizabeth D. Hay New Investigator Award. Established in 2017 by the SDB Board of Directors in honor of Dr. Elizabeth D. Hay, this award recognizes new investigators who have performed outstanding research in developmental biology during the early stages of their independent career. Nominees are evaluated on their independence from mentors, as well as the originality, significance, and impact of their research on the broader field of developmental biology. The University of Texas at Austin recruited Dr. Dickinson from The University of North Carolina at Chapel Hill in August 2017 with the support of a \$2 million CPRIT Recruitment of First-Time, Tenure-Track Faculty Members grant (RR170054).

41. On February 13, 2024, President Giuseppe N. Colasurdo, M.D., at The University of Texas Health Science Center at Houston, announced the 2023 President's Scholar Award for Excellence in Research. Zhongming Zhao, Ph.D., founding director at the CPRIT-funded Biomedical Informatics, Genomics, and Translational Cancer Research Training Program (BIG-TCR), and founding director at UTHealth Houston Cancer Genomics Core, was nominated for his longstanding excellence in research. Dr. Zhao's leadership led to the development and deployment of a robust precision medicine program, the Center for Precision Health at McWilliams School of Biomedical Informatics at UTHealth Houston, where he serves as professor, chair, and director. This award, given to deserving individuals nominated by their peers, carries with it the honorary title of President's Scholar and a cash prize. The University of Texas Health Science Center at Houston received a \$4 million CPRIT Research Training grant (RP210045) in 2021 and a CPRIT Core Facility Support Awards grant (RP180734) in 2018.

42. The University of Texas MD Anderson Cancer Center and C-Biomex Ltd. announced a strategic research collaboration agreement to co-develop CBT-001, a radioligand targeting the CA9 cancer biomarker on February 7, 2024. This partnership brings together MD Anderson's expertise in translational radiopharmaceutical research with C-Biomex's differentiated radioli-

gand. CPRIT Scholar H. Charles Manning, Ph.D., professor of Cancer Systems Imaging and director of the Cyclotron Radiochemistry Facility, is the primary investigator on this project. The team plans to conduct preclinical studies of CBT-001 to evaluate its potential for translation into early-phase clinical studies and to support an anticipated Investigational New Drug (IND) application with the Food and Drug Administration (FDA).

"We are pleased to align our broadly engaged theranostics research team at MD Anderson with our colleagues at C-Biomex to advance the development of CBT-001," Dr. Manning said. "We have seen encouraging early data with this radioligand, and we look forward to collaborative work as we seek to bring impactful new treatment options to our patients in need." The University of Texas MD Anderson Cancer Center recruited Dr. Manning in May 2020 from the Vanderbilt University Medical Center with the support of a \$5 million CPRIT Recruitment of Established Investigators grant (RR200046).

43. OncoNano announced on March 1, 2024, the appointment of Kartik Krishnan, M.D., Ph.D., to Chief Executive Officer (CEO) and member of the Board of Directors. Dr. Krishnan joined OncoNano as Chief Medical Officer in 2022 and ascended to the role of President and Head of Research and Development in November 2023. He succeeds Martin Driscoll, who served as CEO since January 2021, and helped advance the company's therapeutic pipeline into the clinic. Dr. Melissa Paoloni has now been promoted to Executive Vice President and Chief Operating Officer. Dr. Paoloni joined OncoNano in December of 2023 to lead both corporate and strategic development and will work alongside Dr. Krishnan to oversee the management team. OncoNano received a \$6 million CPRIT New Company Product Development Research grant (DP140072) in 2014. The development of Pegsitacianine and ONM-501 have been supported by two CPRIT Product Development Research grants (DP200081, DP190066) awarded in 2020 and 2019 totaling \$25.4 million to develop technology to image and stage metastatic cancer as well as to develop a nano-vaccine for human papilloma virus (HPV) associated cancers.

44. On March 7, 2024, The American Cancer Society National Colorectal Cancer Roundtable (ACS NCCRT) honored The Southwest Coalition for Colorectal Cancer Screening (SuCCCeS) program at Texas Tech University Health Sciences Center at El Paso with the Grand Prize for the 2024 "80% In Every Community National Achievement Award." This program is designed to recognize individuals and organizations who are dedicating their time, talent, and expertise to advancing needed initiatives that support the shared goal to reach colorectal screening rates of 80% and higher in communities across the nation.

Funded by two CPRIT Prevention grants, SuCCCeS focuses on sustainably engaging health care systems and community organizations to address barriers to reducing colorectal cancer (CRC) disparities and funding screening. To date, SuCCCeS has distributed over 31,000 fecal immunochemical test (FIT) kits, with a return rate of 71%. From the results of FIT tests, almost 500 screening colonoscopies have been scheduled with a 78% completion rate. The program serves a population of 2.56 million people who are primarily medically underserved, ethnically diverse, and located in a 27-county area spanning El Paso, Huds-peth, and West Texas.

Texas Tech University Health Sciences Center at El Paso received two CPRIT Prevention grants (PP170068, PP210005) totaling \$6.18 million in support of the SuCCCeS program.

45. The University of Texas at Dallas announced on March 6, 2024, that Zhenpeng Qin, Ph.D., associate professor in the Department of Mechanical Engineering, has been selected to receive the Dr. Horace Furumoto Innovations Professional Development Young Investigator Award from the American Society for Laser Medicine & Surgery (ASLMS) Inc. The ASLMS is dedicated to the development and application of lasers and related technology for health care applications and this award recognizes and encourages the development of future technology innovators and leaders. Dr. Qin develops nanotechnology-based approaches to understand the brain better, to deliver and release medicine in the brain, and to diagnose infectious diseases. He has been the primary investigator of five CPRIT Academic Research awards since 2016, the most recent grant for "Modulation of blood-spinal cord barrier for tumor treatment," was awarded in February 2024. The University of Texas at Dallas received five CPRIT Academic grants (RP160770, RP180846, RP190278, RP210236, RP240133) to support Dr. Qin's work on the blood-brain barrier for brain tumor drug delivery.

46. The University of Texas Health Science Center at San Antonio announced on March 14, 2024, that CPRIT Scholar David Gius, M.D., Ph.D., assistant dean for Translational Research at the Joe R. & Teresa Lozano Long School of Medicine, and the Associate Cancer Center Director Mays Cancer Center at UT Health San Antonio MD Anderson, has been accepted into the prestigious Association of American Physicians (AAP) for the advancement of scientific and practical medicine. AAP is an honorary medical society founded in 1885 by the Canadian physician Sir William Osler and six other esteemed physicians for “the advancement of scientific and practical medicine.” Election to the AAP is limited to only 70 persons per year and is extended to physicians with outstanding credentials in basic or translational biomedical research. The University of Texas Health Science Center at San Antonio recruited Dr. Gius in August 2020 from the Robert H. Lurie Comprehensive Cancer Center at Northwestern University with the support of a \$6 million CPRIT Recruitment of Established Investigators grant (RR200112).

47. The University of Texas at El Paso announced on March 19, 2024, that Marc Cox, Ph.D., chair of pharmaceutical sciences at The University of Texas at El Paso’s School of Pharmacy, and a two-time CPRIT grant PI, become a senior member of the National Academy of Inventors’ (NAI) Class of 2024. Dr. Cox is well-known for his research on prostate and breast cancer and holds multiple patents related to the treatment of these cancers. and. Previously named Texas Inventor of the Year, Dr. Cox joins a class comprised of 124 academic inventors worldwide “who have demonstrated remarkable innovation producing technologies that have brought, or aspire to bring, real impact on the welfare of society,” according to an announcement by the NAI.

“This recognition demonstrates UTEP’s commitment to advancing discovery of public value and brings national attention to the many technologies being developed at UTEP with the potential to impact the health, culture, education, and economy in the region,” said Dr. Cox. “I am honored to be named to the 2024 Class of NAI Senior Members, and I am looking forward to using this platform to continue to advocate for intellectual property protection and entrepreneurship on campus and in the region.” The University of Texas at El Paso received a \$5.88 million CPRIT Texas Regional Excellence in Cancer Award grant (RP210153) in August 2021, and a \$1 million Multi Investigator grant (RP110444-P2) in March 2011.

48. The Institute for Data Science in Oncology (IDSO) at The University of Texas MD Anderson Cancer Center announced on March 22, 2024, the appointment of its inaugural cohort of IDSO Affiliates. These scientists, clinicians and staff will help IDSO leadership and focus area co-leads advance collaborative data science projects and align the institute’s efforts with MD Anderson’s mission to end cancer. Those appointed include three CPRIT Scholars: Christopher Flowers, M.D. (RR190079), Andy Futreal, Ph.D. (R1205), Kenneth Hu, Ph.D. (RR230012). Also included are nine CPRIT Principal Investigators: Laurence Court, Ph.D. (RP220366, RP2000395), Han Liang, Ph.D. (RP140462), Lorna McNeill, Ph.D. (PP120191), Nicholas Navin, Ph.D. (RP180684), Wang Linghua, M.D., Ph.D. (RP200385), Wenyi Wang, Ph.D. (RP130090), John Weinstein, Ph.D. (RP130397), Scott Woodman, Ph.D. (RP170317), and Jia Wu, Ph.D. (RP240117).

IDSO was launched in November 2023 to integrate the most advanced computational and data science approaches with MD Anderson’s leading scientific and clinical enterprise, significantly improving patients’ lives by transforming cancer care and research. “We are proud to welcome these exceptional individuals to the growing IDSO community, and we look forward to the collaborative work ahead of us,” said David Jaffray, Ph.D., director of IDSO and chief technology and digital officer at MD Anderson. “By engaging diverse expertise across all of our mission areas, we will enhance the rich and productive data science ecosystem at MD Anderson to deliver transformational impact for patients.”

49. The Hagler Institute for Advanced Study at Texas A&M University inducted 14 Hagler Fellows and two Distinguished Lecturers — the largest class in its 13-year history — during its annual gala on March 1, 2024. Among those inducted was George Georgiou, Ph.D., a five-time CPRIT principal investigator. Dr. Georgiou is a professor at the Cockrell School of Engineering and holds the Dula D. Cockrell Centennial Chair in Engineering #2 at The University of Texas at Austin and conducts

research that centers on analyzing adaptive immune response and improving enzyme and antibody therapeutics for cancer and inborn errors of metabolism. The University of Texas at Austin received four CPRIT Academic research grants (RP100612, RP100890, RP120314, RP140664) and one CPRIT Product Development grant (DP150061).

50. On February 27, 2024, The National Academy of Inventors (NAI) announced the 2024 class of Senior Members, comprised of 124 emerging academic inventors from NAI's Member Institutions. Zhenpeng Qin, Ph.D., associate professor of mechanical engineering and bioengineering at The University of Texas at Dallas, is one of the newly named senior members of the NAI. NAI Senior Members are active faculty, scientists, and administrators from NAI Member Institutions who have demonstrated remarkable innovation producing technologies that have brought, or aspire to bring, real impact on the welfare of society. They also have growing success in patents, licensing, and commercialization, while educating and mentoring the next generation of inventors. Dr. Qin has been the primary investigator of five CPRIT Academic Research awards since 2016, the most recent grant for "Modulation of blood-spinal cord barrier for tumor treatment," was awarded in February 2024. The University of Texas at Dallas received five CPRIT Academic grants (RP160770, RP180846, RP190278, RP210236, RP240133) to support Dr. Qin's work on the blood-brain barrier for brain tumor drug delivery.

51. ASCO and Conquer Cancer, the ASCO Foundation, announced on April 2, 2024, that it will recognize researchers, patient advocates, philanthropists, teachers, and global oncology leaders who have reshaped cancer care around the world with the Society's highest honors at the 2024 ASCO Annual Meeting. Richard Gorlick, MD, division head and department chair of pediatrics at The University of Texas MD Anderson Cancer Center, has been named as the Pediatric Oncology Award recipient. Dr. Gorlick is also director of the Pediatric Sarcoma Research Laboratory, which focuses on advancing targeted therapies for childhood cancers and understanding the development and progression of osteosarcoma. He supports many organizations, including the NCI's Pediatric Preclinical in Vivo Testing (PIVOT) Program, the Sarcoma Alliance for Research through the Collaboration Consortium, and the Children's Oncology Group (COG). Dr. Gorlick's early involvement with the COG led his laboratory to establish a bone tumor bank, which now is considered the world's largest osteosarcoma tissue bank. He is current chair of the CPRIT Advisory Committee on Childhood Cancers. The University of Texas MD Anderson Cancer Center received a \$5 million CPRIT Core Facility Support Award grant (RP180819) in August 2018 to develop a bio-bank to systematically collect samples from patients from the time of initial diagnoses through treatments and either survival, recurrence, or metastasis.

52. The University of Texas MD Anderson Cancer Center announced on April 3, 2024, that Padmanee Sharma, M.D., Ph.D., associate vice president of Immunobiology, professor of Genitourinary Medical Oncology and Immunology, and director of scientific programs for the James P. Allison Institute, has been elected to the 2024 class of Fellows of the American Association for Cancer Research (AACR) Academy in recognition of her work to establish and advance immune checkpoint therapies as effective treatments for patients with a variety of cancers. Dr. Sharma's research is focused on investigating mechanisms and pathways within the immune system that facilitate tumor rejection or elicit resistance to immune checkpoint therapy. The mission of the AACR Academy is to honor distinguished scientists whose contributions have propelled significant progress and breakthroughs against cancer.

"Dr. Sharma is being honored for her significant contributions to advancing cancer immunotherapy, including some of the earliest trials that shaped our current clinical practice," said Peter WT Pisters, M.D., president of MD Anderson. "Her innovative work continues to advance our understanding of immunobiology, and we are proud of her important contributions to the field." The University of Texas MD Anderson Cancer Center received a \$1.38 million CPRIT Individual Investigator grant (RP120108) in November 2011 to test combination treatment with anti-CTLA-4 and agents that target another T cell specific molecule known as inducible costimulator (ICOS) and to generate data that can be used to potentially improve the clinical efficacy of anti-CTLA-4 therapy.

53. The American Association for Cancer Research (AACR) announced its newest class of grant recipients on April 3, 2024. Since 1993, the AACR has allocated \$138 million to support hundreds of scientists devoted to advancing the understanding,

prevention, diagnosis, and treatment of cancer. Alexandre Reuben, Ph.D., assistant professor, Department of Thoracic/Head and Neck Medical Oncology at The University of Texas MD Anderson Cancer Center, was awarded the 2023 AACR Career Development Award in Lung Cancer Research for his study of "T-cell receptor engineering for the treatment of lung cancer." The AACR Career Development Award in Lung Cancer Research was established to encourage and support early-career investigators to conduct lung cancer research and establish successful careers in this field. Dr. Reuben's work has highlighted the potential of engineering a specific T cell receptor into recipient T cells for therapeutic purposes in a variety of solid tumors. He hypothesizes that epitopes of FOXM1 give rise to immunogenic tumor antigens, which can be effectively targeted by T cell engineering. He intends to develop a library of T-cell receptors targeting FOXM1 epitopes presented on the 10 most prevalent HLA alleles, which could be used to treat most lung cancer patients. The University of Texas MD Anderson Cancer Center received a \$250,000 CPRIT High Impact/High Risk grant (RP210137) in August 2021 to develop TCR-based immunotherapies targeting hotspot EGFR mutations for the treatment of non-small cell lung cancer.

54. The University of Texas MD Anderson Cancer Center announced on April 4, 2024, that Scott Kopetz, M.D., Ph.D., professor, Department of Gastrointestinal Medical Oncology, and associate vice president for Translational Integration, has been honored with the American Association for Cancer Research (AACR)-Waun Ki Hong Award for Outstanding Achievement in Translational and Clinical Cancer Research. Dr. Kopetz is honored for exceptional translational and clinical research and for leading efforts to establish new standards of care for BRAF-mutated metastatic colorectal cancer, which previously had a poor prognosis. Using molecular profiling and patient-derived xenografts, Dr. Kopetz discovered resistance mechanisms and approaches to overcome these pathways. He led clinical studies evaluating vemurafenib, cetuximab and irinotecan, including the Phase III BEACON study that resulted in additions to the National Comprehensive Cancer Network (NCCN) guidelines and Food and Drug Administration (FDA) approval of encorafenib plus cetuximab. The University of Texas MD Anderson Cancer Center received a \$1.04 million CPRIT Individual Investigator grant (RP240288) in February 2024 to understand the mechanistic insights into the molecular and cellular states of the immune and tumor cells that associate with response/resistance to BRAFi/anti-EGFR treatment.

55. The American Cancer Society's (ACS) latest initiative, the Clinical Champions Corps, is aimed at revolutionizing cancer prevention and screening efforts across the nation. The Clinical Champions Corps identifies subject matter experts in cancer prevention and screening from diverse geographic regions. These experts form a corps dedicated to providing training to health care professionals nationwide and to share evidence-based methodologies that will enhance cancer screening practices within communities, clinics, and organizations. On April 5, 2024, Texas Tech University Health Sciences Center El Paso announced that Jennifer Molokwu, M.D., M.P.H., director of Cancer Prevention and Control in the Department of Family and Community Medicine, has been named as one of five primary care clinicians who are part of this national program. Dr. Molokwu supports the South region which includes California, Hawaii, Guam, Nevada, Utah, Arizona, New Mexico, Colorado, Texas, Oklahoma, Arkansas, Louisiana, Mississippi, and Alabama.

"This new program signifies a pivotal step in our ongoing battle against cancer," said Dr. Molokwu. "By leveraging the expertise of health care professionals and empowering them with the latest evidence-based strategies, we can elevate cancer screening initiatives to unprecedented levels of effectiveness. Through our programs, we aim to break down barriers to screening and ensure every individual has the opportunity to receive life-saving preventive care." Dr. Molokwu noted that the program will also have an impact on the Borderplex, which will complement Texas Tech Health El Paso's existing cancer prevention initiatives, which include the Breast Cancer Education, Screening and Navigation Program, Southwest Coalition for Colorectal Cancer Screening, De Casa En Casa, and Tiempo de Vacunarte. Texas Tech University Health Sciences Center El Paso received four CPRIT Prevention grants (PP190058, PP200006, PP230059, PP240014) totaling almost \$9 million to assist Dr. Molokwu's cancer prevention programs for rural and medically underserved populations.

56. Plus Therapeutics announced on April 9, 2024, that Andrew Brenner, M.D., Ph.D., professor, Department of Medicine, Neurology, and Neurosurgery, and S & B Koltitz/CTRC-Zachry Endowed Chair Neuro-Oncology Research, Mays Cancer Center at

The University of Texas Health San Antonio, has joined the Company in a part-time capacity. Dr. Brenner will provide substantial input on the Company's central nervous system cancer development programs while continuing to maintain his academic practice and laboratory. "I am excited to be working more closely with the Plus team to accelerate the development of its radiopharmaceutical pipeline," said Dr. Brenner. "Rhenium (186Re) obisbameda has the potential to transform the treatment of CNS cancers, and I am pleased to be able to increase my commitment to Plus with the goal of accelerating the late-stage clinical development of the company's existing trials in recurrent glioblastoma, leptomeningeal disease and pediatric brain cancer." Dr. Brenner has been a PI for a \$755,718 CPRIT Individual Investigator grant (RP130548) at The University of Texas Health San Antonio for glioblastoma research and the program manager of a \$2 million CPRIT New Company Product Development Award grant (DP150021) to help fund a clinical trial, as well as the supporting technology and infrastructure that is critical to the development of 186RNL.

The University of Texas MD Anderson Cancer Center recruited Dr. Kalluri from Harvard Medical School in 2012 with the support of a \$3.5 million CPRIT Recruitment of Established Investigators grant (R1227). Dr. Kalluri has been the principal investigator on two additional Academic Research grants (RP150231, RP200612) totaling \$1.15 million.

57. On April 18, 2024, The University of Texas MD Anderson Cancer Center announced that Boyi Gan, Ph.D., CPRIT Scholar Li Ma, Ph.D., and Sattva Neelapu, M.D., were elected fellows of the American Association for the Advancement of Science (AAAS). This prestigious distinction stands as one of the highest accolades within the scientific research community. With these newest additions, 68 MD Anderson faculty members have been elected AAAS Fellows.

Dr. Gan, professor of Experimental Radiation Oncology, was elected for his contributions to understanding and targeting ferroptosis in cancer and to discovering disulfidptosis as a new form of regulated cell death. He is also recognized for the development of novel cancer therapies targeting these pathways. Dr. Gan currently serves as director of the Radiation and Cancer Metabolism Research Program in Division of Radiation Oncology and leads Acquired Resistance to Therapy and Iron (ARTI) Center at MD Anderson.

Dr. Ma, professor of Experimental Radiation Oncology, was elected for her fundamental discoveries of cancer spread and resistance to treatment that have transformed the field, including pioneering work on the role of long non-coding RNAs in metastasis. She has reached numerous significant research milestones and has authored more than 65 papers in leading peer-reviewed journals.

Dr. Neelapu, professor of Lymphoma and Myeloma, was selected for his clinical and translational research, focusing on developing novel immunotherapeutic strategies for patients with lymphoma. He has earned recognition nationally and internationally in the field of chimeric antigen receptor (CAR) T cell therapy. As a physician-scientist, his contributions to clinical and translational research have resulted in at least two Food and Drug Administration approvals and multiple patent filings of novel immune and cell therapy approaches that soon will be evaluated in clinic.

The University of Texas MD Anderson Cancer Center has received numerous CPRIT Academic Research grants (RP150316-Neelapu) (R1004, RP150319, RP190029-Ma) (RP130020, RP220258, RP230072-Gan).

58. The University of Texas at Austin announced on April 18, 2024, that 11 faculty members, including CPRIT Scholar Daniel Leahy, Ph.D., and Tanya Paull, Ph.D., were elected fellows of the American Association for the Advancement of Science (AAAS), the world's largest general scientific society. The new fellows join more than 53 colleagues at UT Austin who have earned the lifetime distinction. The honor recognizes important contributions to the fields of science, technology, engineering, and mathematics — including pioneering research, leadership within a given field, fostering collaborations, and advancing public understanding of science.

Dr. Leahy is the Nancy Lee and Perry R. Bass Regents Chair in Molecular Biology and a professor in the Department of Molecular Biosciences. His research focuses on molecular mechanisms of cell signaling, examining the processes by which proteins and other molecules behave within living systems, including molecular mechanisms that regulate growth in normal and malignant cells. Dr. Leahy's work on one family of signaling molecules—the epidermal growth factor receptor (EGFR) and human epidermal growth factor receptor 2 (HER2)—has demonstrated how these molecules function in healthy people and in people with cancer. This research has influenced medical professionals' strategies to treat cancers of the lung, breast, colon, and gastric system.

Dr. Paull is the Burl and Lorene Rogers Chair in Human Health and a professor in the Department of Molecular Biosciences and the Department of Oncology. Her research is focused on understanding the mechanisms of DNA double-strand break repair in eukaryotes, as well as the intersection between DNA damage, oxidative stress signaling, and protein homeostasis in human cells. She also studies how cells respond to oxidative stress. This work is relevant to human cancer and neurodegeneration.

The University of Texas at Austin recruited Dr. Leahy from Johns Hopkins University School of Medicine in February 2016 with the support of a \$6 million Recruitment of Established Investigators grant (RR160023). The University of Texas at Austin received three CPRIT Academic Research grants (RP100670, RP110465-P4, RP200254) totaling \$2.35 million.

59. On May 1, 2024, The University of Texas MD Anderson Cancer Center announced the election of Sharon Dent, Ph.D., professor in the Department of Epigenetics and Molecular Carcinogenesis, to the National Academy of Sciences (NAS). Dr. Dent is a global leader in the field of chromatin research whose foundational work has helped define the role of chromatin in cancer growth and development. Her work is in the field of epigenetics, which studies how human behaviors and the environment can cause changes that affect genes and lead to inherited traits without changing the DNA sequence. Unlike genetic mutations, epigenetic changes, which alter how the body reads a particular DNA sequence, are reversible.

"This is an enormous honor," Dr. Dent said. "It highlights the impact of the discoveries made by all of the hard-working and brilliant members of my lab over the past 31 years, and I am truly grateful for this distinction." Dr. Dent has been the primary investigator for four CPRIT Academic Research grants (RP101230, RP100429, RP110471-AC, RP110471-P1).

60. The University of Texas at Arlington honored Yuze (Alice) Sun, Ph.D., associate professor of electrical engineering, as one of two 2024 recipients of the University Award for Outstanding Research Achievement or Creative Accomplishment on April 30, 2024. This award recognizes faculty members for achieving significant research or creative accomplishments during the past three years. Her colleagues in the College of Engineering nominated Dr. Sun for her contributions to the research and development of lasers and sensors, particularly those used in medical applications. Over the past three years, she has produced innovative work in optofluidic lasers, photonic crystal sensors, wearable gas analyzers, micro-gas chromatography, novel bio/chemical sensing and nanophotonic scintillators. Dr. Sun is the PI for a \$200,000 CPRIT Academic Research grant (RP170747) to develop a portable gas analysis point-of-care device to rapidly analyze and detect volatile organic compounds with parts-per-billion (ppb) sensitivity in real-time for early lung cancer detection.

61. Dallas Innovates, in partnership with the Dallas Regional Chamber (DRC) and Dallas AI, announced the first-ever AI 75 list of the most innovative people in artificial intelligence in Dallas-Fort Worth on May 2. This list spotlights the visionaries, creators, and influencers making waves in AI in seven categories and consists of academics, entrepreneurs, researchers, consultants, investors, lawmakers, thought leaders, and corporate leaders.

In the category of AI Academics, Guanghua Xiao, Ph.D., chair in medical science, School of Public Health at The University of Texas Southwestern Medical Center, was honored with the Biomedical Bard distinction. He has earned this distinction due to his significant contributions to the field of medical AI, especially in the application of artificial intelligence to pathology and cancer research. Dr. Xiao's research has focused on AI models that enhance cancer understanding and treatment through ad-

vanced image analysis and bioinformatics tools. His key contributions have included developing an AI model called Ceograph, which mimics how pathologists read tissue slides to predict cancer outcomes, and helping develop the ConvPath software tool which uses AI to identify cancer cells from lung cancer pathology images. The AI 75 is supported in part by the City of Plano, the University of Texas at Dallas, and Amazechn. The University of Texas Southwestern Medical Center and Dr. Xiao received two CPRIT Individual Investigator Research Awards (RP190107, RP230330) in 2019 and 2023 totaling \$2.2 million.

62. OncLive®, the nation's leading multimedia resource for oncology professionals and Pfizer, Exelixis, and Regeneron, announced the inductees of the 12th Annual Giants of Cancer Care recognition program on May 1. The Giants of Cancer Care program aims to honor and celebrate the accomplishments of leading researchers and educators whose discoveries have propelled the field and set the groundwork for future advancements. The inductees have been selected by their peers for their remarkable achievements in oncology research and clinical practice.

Kelly Hunt, M.D. FACS, FSSO, professor and chair, Department of Breast Surgical Oncology, The University of Texas MD Anderson Cancer Center, will be inducted into the Surgical Oncology category at the ceremony on May 30. Dr Hunt is a translational researcher whose work focuses on finding less invasive, more effective surgical procedures for patients with breast cancer and soft tissue sarcomas. The KeyHunt Laboratory is working to develop novel treatment strategies involving agents that target cell cycle regulation. Ongoing studies are investigating the underlying mechanisms of resistance to standard of care therapeutics and metastasis for ER positive breast cancer. Dr. Hunt is the principal investigator of a \$6 million CPRIT Academic Research grant (RP180712).

Guillermo Garcia-Manero, M.D., professor, The University of Texas MD Anderson Cancer Center, will be inducted into the Leukemia category at the ceremony on May 30. Dr. Garcia-Manero specializes in state-of-the-art treatments for leukemia. His research focuses on myelodysplastic syndromes (MDS) and acute myeloid leukemia (AML), and his goal is to develop and validate new therapeutics to treat these deadly diseases. He leads teams of clinicians, medical fellows, nurses, physician assistants and researchers to conduct pre-clinical, translational, and clinical studies. The goal of these studies is to understand, treat, and eventually cure MDS, AML and other leukemias. Dr. Garcia-Manero has been the principal investigator in two CPRIT Academic Research grants (RP100202, RP140500) totaling \$1.67 million.

63. The National Academy of Inventors (NAI) announced that Hongjun "Henry" Liang, Ph.D., professor, Department of Cell Physiology and Molecular Biophysics at the Texas Tech University Health Sciences Center (TTUHSC) School of Medicine has been named to the 2024 class of Senior Members for the National Academy of Inventors (NAI) on May 9, 2024. Dr. Liang is developing novel hydrophilic nanoparticles known as nanoantibiotics that target bacterial infections, especially those that are resistant to treatment with known antibiotics. To date, Dr. Liang's nanoantibiotics research has resulted in several peer-reviewed publications and he holds several patents related to the development of bionanotechnologies. On July 26, 2022, his most recent invention in nanoantibiotics was issued U.S. Patent #11,395,804 ("Hydrophilic Nanostructured Membrane Active Antimicrobials with High Activity, Selectivity and Biodegradability").

"My long-term goal is to understand the fundamental science of biology, and to make use of this knowledge for the development of engineering solutions to benefit health care," Dr. Liang said. "I'm fortunate to enjoy the great intellectual support available at TTUHSC and I look forward to building new collaborations with colleagues across the nation to tackle the challenges in biomedical science and engineering." Texas Tech University Health Sciences Center and Dr. Lang received two Academic research grants (RP180827, RP230443) totaling \$400,000.

64. On May 10, 2024, the James P. Allison Institute at The University of Texas MD Anderson Cancer Center announced the appointment of its first members, CPRIT Scholar James P. Allison, Ph.D., Padmanee Sharma, M.D., Ph.D., Jennifer Wargo, M.D., Sangeeta Goswami, M.D., Ph.D., and CPRIT Scholar Kenneth Hu, Ph.D. In addition, Garry Nolan, Ph.D., will join the Allison Institute as an adjunct member. The team consists of pioneering researchers and rising stars who will bring diverse expertise in immuno-

biology to lead groundbreaking research that will deepen our understanding of the immune system and bring the benefits of immunotherapy to all patients.

The Allison Institute is a visionary research and innovation hub created to drive breakthroughs that will integrate immunobiology across disciplines. With exceptional discovery, translational and clinical research, the Allison Institute will rapidly advance breakthroughs into novel and synergetic therapies that enable cures for more patients. "We are proud to be joined by these stellar scientists, and we are confident that together we will set the tone for the exceptional research we aim to support at the Allison Institute," said Dr. Allison, director of the Allison Institute and regental chair of Immunology at MD Anderson. "Our collective expertise in areas that now will include immune-microbiome interactions, epigenetic mechanisms, and novel methods for spatial transcriptomics and proteomics fits well with our priority research areas, and we look forward to collaboratively advancing the field." MD Anderson has received multiple CPRIT grants with Dr. Allison, Dr. Sharma, Dr. Wargo, and Dr. Hu as primary investigators.

65. CPRIT Scholar Julian West, Ph.D., assistant professor in the Department of Chemistry at Rice University, was named one of 12 early-career researchers featured in *Chemical & Engineering News'* (C&EN) 2024 Talented 12. This annual issue of the weekly news magazine published on May 17, 2024, highlights rising stars across all chemistry research disciplines. Dr. West's research has found ways to simplify the production of entire libraries of feedstock chemicals for drug and chemical manufacturers. His methods are more sustainable than the mainstay reactions chemical makers have relied on for decades and the catalysts he uses are far cheaper than the gold, palladium, rhodium, and other rare-metal industry standards. Dr. West's research on sustainable catalytic methods has made impacts on the 2030 UN Sustainable Development Goals of affordable and clean energy and responsible production and consumption. Rice University recruited Dr. West from the California Institute of Technology in 2019 with the support of a \$2 million CPRIT Recruitment of First-Time, Tenure-Track Faculty Members grant (RR190025).

66. On May 22, Baylor College of Medicine announced this year's Michael E. DeBakey Excellence in Research Awards to one CPRIT Scholars and three CPRIT primary investigators in recognition of their outstanding published scientific contributions to clinical and basic science research over the past three years. The awards are named in honor of pioneering heart surgeon Dr. Michael DeBakey, the first president of Baylor College of Medicine, and sponsored by the DeBakey Medical Foundation.

Bing Zhang, Ph.D., has significantly advanced our understanding of cancer biology, improved data analysis methodologies and broadened data accessibility resources for the scientific community. He has enhanced the understanding of pancreatic cancer, lung squamous cell carcinoma, head and neck cancer, and uterine cancer by conducting a comprehensive proteogenomic characterization of these cancers. Dr. Zhang's work has revealed potential therapeutic targets, identified proteins for early detection, highlighted targetable points of immune regulation, and illuminated key mechanisms for immune evasion. He has also introduced a graph theory-based method designed to enhance the characterization of protein isoforms – different forms of a protein – a long-standing challenge in the field. His team developed a web portal with 40,000 gene-, protein-, mutation- and phenotype-centric web pages featuring innovative visualization techniques designed to enhance comprehension and reasoning for the advancement of both basic and translational cancer research. (RR160027, RP220050, RP240137)

Leonid Metelitsa, M.D., Ph.D., director, Center for Advanced Innate Cell Therapy, co-director, Neuroblastoma Program, and associate director, Texas Children's Cancer Center, is an internationally recognized leader in the field of natural killer T cell (NKTs) research, for bringing research bench to bedside, and as a leading expert in pediatric cancer immunotherapy. His group was among the first to demonstrate that NKTs localize to primary tumors and that their presence at tumor sites is associated with positive clinical outcomes. Dr. Metelitsa has demonstrated success in developing NKT cell therapy to target high-risk neuroblastoma, an aggressive pediatric cancer. His research has been continuously supported by the National Institutes of Health, National Cancer Institute, Department of Defense, Cancer Prevention and Research Institute of Texas, Leukemia and Lymphoma Society and other institutions. (RP100528, RP110129, RP121035, RP130588, DP150083)

Maksim Mamonkin, Ph.D., associate professor, Department of Pathology & Immunology and the Center for Cell and Gene Therapy, is a translational immunologist engineering cellular therapies for hematologic malignancies and other diseases. He

has made major advances in translational immunology, including shaping a new direction in cell therapy of T cell malignancies and a new cell therapy concept in T cell mediated auto- and alloimmunity. His laboratory utilizes fundamental immunology and synthetic biology to create effective cell therapies against treatment-refractory cancers. His group has led translational development of chimeric antigen receptor T-cell therapies of T-lineage leukemia, lymphoma, and acute myeloid leukemia that are being evaluated in three ongoing Phase I clinical trials at Baylor. Dr. Mamonkin is also the scientific co-founder and chief scientific officer of March Biosciences, a clinical-stage biotech company developing engineered T cells for diseases with high unmet clinical need. His research resulted in multiple publications in leading journals and the technologies have been licensed to several biotech companies. (RP180810, RP210158, RP230391)

Christine Beeton, Ph.D., academic director of the Cytometry and Cell Sorting Core, director of the graduate program in Immunology & Microbiology; professor of integrative physiology, is known for her novel work on the identification of therapeutic targets and the design of novel treatments for rheumatoid arthritis. She developed recombinant analogs of sea anemone and of scorpion venom toxins to block the Kv1.3 channel on effector memory T lymphocytes and showed their efficacy in animal models of rheumatoid arthritis (RA) and other autoimmune diseases. Her research also focuses on using antioxidant nanomaterials for the treatment of other T lymphocyte-mediated autoimmune diseases, such as multiple sclerosis. Dr. Beeton created non-invasive methods for peptide drug delivery, eliminating the need for repeated injections. This has been an obstacle in the delivery of small peptides as drugs for chronic diseases. Her team bioengineered a probiotic bacterium to secrete one of her Kv1.3-blocking venom peptide analogs for its oral delivery, finding it to be more effective than the injected peptide in stopping disease progression in lab models of RA. (RP180672)

67. On May 22, The University of Texas Health Science Center at San Antonio announced that CPRIT Scholar Yu Luan, Ph.D., assistant professor in the Department of Cell Systems and Anatomy, received a UT System Rising STARS (Science and Technology Acquisition and Retention) award in the amount of \$100,000 to help lead breakthrough research in cancer genomics, especially in the treatment of blood cancers among Hispanic children.

"UT Health San Antonio is home to experts across various fields of cancer research, especially blood cancer and houses the largest Hispanic biobank in South Texas," Dr. Luan said. "My work is also particularly relevant for advancing the health agenda of South Texas with its exceptionally large Hispanic population. I feel that this aligns perfectly with my research strategy and offers a unique resource for advancing our understanding of cancer through a comprehensive genomic and epigenomic approach." The University of Texas Health Science Center at San Antonio recruited Dr. Luan in February 2024 with the support of a \$2 million CPRIT Recruitment of First-Time, Tenure-Track Faculty Members grant (RR240016).

68. The University of Texas MD Anderson Cancer Center announced on May 23 that Lewis Foxhall, M.D., professor, Department of Clinical Cancer Prevention, Division of OVP, Cancer Prevention and Population Sciences, has been named a Fellow of the American Society of Clinical Oncology. The Fellow of the American Society of Clinical Oncology (FASCO) is a distinction conferred upon ASCO members to recognize their extraordinary volunteer service, dedication, and commitment to ASCO. Their efforts benefit ASCO, the specialty of oncology, and, most importantly, the patients whom they serve. Dr. Foxhall has been the primary investigator on seven CPRIT Prevention grants since September 2009. The most recent CPRIT grant awarded to The University of Texas MD Anderson Cancer Center and Dr. Foxhall was a \$2.5 million Expansion of Cancer Prevention Services to Rural and Medically Underserved Populations (PP220005) in February 2022.

69. Baylor College of Medicine's top educational leaders were honored at the annual Faculty Awards Day, held in May at the Texas Medical Center campus. CPRIT Scholar Pavan Reddy, M.D., professor and director of the Dan L Duncan Comprehensive Cancer Center, was appointed to The John M. O'Quinn Foundation Chair in Cancer. Dr. Reddy was recruited in 2022 with the support of a \$6 million CPRIT Recruitment of Established Investigators grant (RR220033).

CPRIT Scholar Xi Chen, Ph.D., adjunct associate professor of molecular and cellular biology, was appointed to the Cullen Duncan

McAshan Endowed Professorship in Cancer Research. Dr. Chen was recruited in 2014 from Weill Cornell Medical College with the support of a \$2 million CPRIT Recruitment of First-Time, Tenure-Track Faculty Members grant (RR150009).

70. The University of Texas at Arlington announced on May 30, 2024, that Xinlei “Sherry” Wang, Ph.D., has been named a 2024 fellow of the American Statistical Association (ASA). She serves as the director for research in the Division of Data Science, which serves as a hub to organize, provide infrastructure support, and facilitate growth in instructional and research programs involving data science, and is a professor in the Department of Statistics and Data Science. Dr. Wang was selected for her outstanding contributions in developing and applying statistical and computational methods to complex data challenges, for excellence in mentoring doctoral students and junior researchers, and for exceptional leadership of data science programs. Founded in 1839, ASA is the world’s largest community of statisticians and the second oldest continuously operating professional association in the country. Only up to one-third of 1% of the total association membership can be elected as fellows each year. The University of Texas Southwestern Medical Center received a \$900,000 CPRIT Individual Investigator Research Awards for Computational Biology grant (RP190208) in August 2019 to dissect cellular heterogeneity of bulk tumors for prediction of overall survival and responsive patients to immunotherapy, for which Dr. Wang was a subcontractor.

71. At the 17th Annual University of Texas Southwestern Academy of Teachers (SWAT) Reception and Awards ceremony held on June 3, 2024, CPRIT Scholar Maralice Conacci-Sorrell, Ph.D., associate professor in the Department of Cell Biology and in the Children’s Medical Center Research Institute, was honored as one of the seven new members of The UT Southwestern Academy of Teachers Outstanding Educator Awards 2023. SWAT consists of a group of exceptional UTSW educators who strive to provide an academic and organizational environment that fosters excellence in teaching at all levels, rewards superb teachers, stimulates innovation in education, and promotes scholarship in education.

Dr. Conacci-Sorrell is a translational researcher whose lab investigates basic mechanisms of cell survival and migration, aiming to reveal druggable pathways involved in metastatic behavior. Her current research uses integrative approaches to understand the fundamental functions of Myc, a potent driver of many human cancers, in normal and cancer cell biology. The University of Texas Southwestern Medical Center recruited Dr. Conacci-Sorrell in 2015 from the Fred Hutchinson Cancer Center with the support of a \$2 million CPRIT Recruitment of First-Time, Tenure-Track Faculty Members grant (RR150059). UTSW and Dr. Conacci-Sorrell also received a \$1.05 million CPRIT Individual Investigator grant (RP220046) in 2022 to determine the potential of using tryptophan-derived molecules as markers to diagnosis liver cancer and to examine the efficacy of limiting tryptophan availability or activity to inhibit tumor growth.

72. On June 5, 2024, The James P. Allison Institute at The University of Texas MD Anderson Cancer Center announced the appointment of CPRIT Scholar Xi Chen, Ph.D., associate professor, Department of Experimental Therapeutics, as an associate member to further the institute’s ongoing work of impactful immunobiology research. Dr. Chen’s lab is focused on learning how cancer and its immune microenvironment sense and respond to stresses and therapeutic insults to evade immune surveillance and develop drug resistance. Associate members are mid-career researchers who have made significant contributions to the field. They are provided with seven years of research support and will have academic appointments at MD Anderson to facilitate collaboration across the institution. Baylor College of Medicine recruited Dr. Chen from Weill Cornell Medical College in November 2014 with the support of a \$2 million Recruitment of First-Time, Tenure-Track Faculty Members CPRIT grant (RR150009). BCM also received a \$2 million CPRIT Individual Investigator Research Awards for Clinical Translation grant (RP230285) in 2023 to further Dr. Chen’s research to test the highly innovative immunotherapy with ORIN1001, taxane, and pembrolizumab in a Phase II clinical trial to establish the efficacy and define predictive biomarkers.

73. The American-Italian Cancer Foundation announced on June 1, 2024, that Giulio F. Draetta, M.D., Ph.D., senior vice president, CSO, and professor in the Department of Genomic Medicine at The University of Texas MD Anderson Cancer Center, is

the recipient of the 2024 Prize for Scientific Excellence in Medicine in the Basic Science Category. Dr. Draetta's lab investigates functional genomics, epigenetics, cancer cell metabolism, stem cell biology, cancer modelling, and traditional cancer medicine, with an overarching goal of identifying therapeutically actionable dependencies in specific disease contexts. The award includes a \$50,000 prize to be presented at AICF's Benefit Dinner & Auctions in November 2024. The University of Texas MD Anderson Cancer Center received three CPRIT Academic Research grants (RP220544, RP170722, RP160471) totaling \$2.6 million, including the CPRIT Early Clinical Investigator Award- Christopher Alvarez-Breckenridge, to support Dr. Draetta's research.

74. The University of Texas Medical Branch at Galveston announced on June 13, 2024, that CPRIT Scholar Michael Sheetz, Ph.D., professor in the Department of Biochemistry & Molecular Biology at The University of Texas Medical Branch at Galveston, is the top scholar in the world publishing on cytoskeletons and among the top 0.05 percent of scholars according to ScholarGPS™. ScholarGPS is the world's most comprehensive scholarly analytics platform, comprised of powerful computational systems and processes such as novel data mining, artificial intelligence, and machine learning, used to identify and analyze the individual impact of over 200 million books, book chapters, journal articles, conference papers, and patents associated with over 3 billion citations.

Dr. Sheetz is a cell biologist and pioneer in mechanobiology and biomechanics, studying the detailed molecular mechanisms involved in a variety of cellular phenomena from cancer metastasis to aging and muscle function. Dr. Sheetz is also ranked highly in the fields of Life Sciences (254), Molecular and Cell Biology (54), Motility (15), Biophysics (56), and Integrin (6). Sheetz was ranked at 1,156 by ScholarGPS among scholars in all fields. "Throughout my career in research, I've been fortunate to have wonderful collaborators, students, postdocs and fellow faculty across many disciplines, who have made our scientific discoveries possible," Dr. Sheetz said. "In addition, it has been a great privilege to have had the support from funding agencies and institutions that enabled us to obtain the tools needed to make the fundamental discoveries. I enjoy research and can think of no other endeavor that could replace my curious pursuit of answers to nature's questions." The University of Texas Medical Branch at Galveston recruited Dr. Sheetz in May 2018 with the support of a \$6 million CPRIT Recruitment of Established Investigators grant (RR180025).

75. Texas Tech University Health Sciences Center announced on June 13, 2024, that researchers from the university have been named to Stanford University/Elsevier's sixth edition of the World's Top 2% of Scientists List. The rankings, compiled using data through 2022, combine standardized data on citations, h-index and other bibliometric indicators to identify the world's leading researchers and comprise approximately 2% of all scientists worldwide. In the latest rankings, scientists' career-long data are updated through 2022. Three of the recipients are current or past program directors for CPRIT grants to the Texas Tech University Health Sciences Center.

- Ulrich Bickel, M.D., is the associate dean, Office of Sciences and associate professor, Jerry H. Hodge School of Pharmacy (Pharmacology and Pharmacy, Neurology and Neurosurgery, Clinical Medicine). He has served as program director for CPRIT Academic Research grants RP120422 and RP200572.
- C. Patrick Reynolds, M.D., Ph.D., is the Cancer Center Director for the School of Medicine (Oncology and Carcinogenesis, Immunology, Clinical Medicine) and professor of Pediatrics, Cell Biology & Biochemistry, and Medicine. He has served as program director for CPRIT Academic Research grants RP100762, RP101353-P12, RP110763-P3, RP110763-AC, RP110763-C1, RP170510, RP200432, RP210154, and RP220460.
- Quentin R. Smith, Ph.D., is a professor at the Jerry H. Hodge School of Pharmacy (Neurology and Neurosurgery, Oncology and Carcinogenesis, Clinical Medicine). He has served as program director for CPRIT Academic Research grants RP110786 and RP120489.

76. On June 13, the *Dallas Morning News* announced that The University of Texas schools ranked third among the most innovative universities in the U.S. according to a study by the National Academy of Inventors (NAI). The UT system, which includes nine universities and five health institutions, received 235 U.S. utility patents in the 2023 calendar year, 10 more than

in 2022. Utility patents are granted for inventing a new or improved and useful process, product, or machine. These patents are important for work completed at universities because they lay the groundwork for scientific advancement. In FY23, UT Southwestern Medical Center was granted 47 U.S. utility patents, UT Dallas was granted 32, and UT Arlington was granted 20. The University of California system ranked first with 546 patents and the Massachusetts Institute of Technology ranked second with 365 patents.

Shalini Prasad, Ph.D., is a professor in the Department of Bioengineering and Biomedical Engineering graduate program at UT Dallas. Dr. Prasad is a cancer researcher who was granted two U.S. patents and four foreign patents in 2023. "The environment in Texas allows us to do truly innovative work, and the output of innovative work is intellectual property," she said. "And it's important to take that intellectual property and to convert that into something that's a product ... it's not just creating it and putting it on the shelf, it's about then converting that." Dr. Prasad added, "Texas allows us to do that, especially through partnering with companies of various sizes, small, medium, large, to transport it."

In the last decade, innovation in Texas has led to a biotech boom which in turn has led to an increase in medical research opportunities and collaborations within the UT system. Jinming Gao, Ph.D., professor in the Department of Biomedical Engineering, Cell Biology, Otolaryngology – Head & Neck Surgery, and Pharmacology at UT Southwestern, said though Dallas doesn't have the tech ecosystem of Boston or San Francisco, the past five to ten years have seen "fundamental, transformational changes here in the DFW metroplex." Dr. Gao holds 16 patents in the United States and 72 worldwide in the fields of polymer biomaterials, nanoparticle drug delivery, tumor surgical imaging, and cancer immunotherapy. "We are actually attracting investors around the East Coast and West Coast to start ... offices here," he said. "They're looking for the new signs and new discoveries and new technology that's happening here, so I think we have a huge potential."

Venu Varanasi, Ph.D., associate professor at the Bone and Muscle Research Center at UT Arlington, said that with the production of more inventions, faculty can secure more funding which will allow undergraduate and graduate students to contribute to inventions. "I pride myself on having all of my trainees be part of my inventions," Dr. Varansi said. "And that's the component that bleeds into the teaching and mentoring side."

Dr. Varanasi's lab conducts research on the effects of oxidative stress as it relates to its impedence of traumatic injury repair and tissue regeneration. Oxidative stress is a condition that impedes tissue repair through damage to DNA of various progenitor cells responsible for tissue regeneration, thereby interrupting the healing process. His research focuses on medical devices for regenerating skull bone, jawbone, and dental implants geared toward faster healing and reducing the need for additional procedures for patients. In 2023, he was granted a U.S. patent for his work in live 3D printing, a process of printing bone to repair a defect in an animal.

77. The Institute for Data Science in Oncology (IDSO) at The University of Texas MD Anderson Cancer Center announced on June 18 the establishment of its internal advisory council to identify needs and opportunities for data science development and integration across MD Anderson, advancing work that will yield significant benefits for patients and families. The advisory council is co-led by Florencia McAllister, M.D., associate professor in the Department of Gastrointestinal Medical Oncology and Clinical Cancer Prevention, and by Robert Ghafar, vice president of Procedural and Therapeutic Operations. The IDSO was launched in November to integrate MD Anderson's leading scientific and clinical expertise with the most advanced computational and data science approaches to transform cancer care and research.

The internal advisory council will work closely with IDSO Affiliates and focus area co-leads to advance the work of the institute toward the greatest potential impact. Two of the newly appointed members of the internal advisory council are CPRIT Scholars: CPRIT Scholar Kevin Nead, M.D., assistant professor, Department of Epidemiology (RR190077); and CPRIT Scholar Yuan Pan, Ph.D., assistant professor, Department of Symptom Research (RR210085). Chunru Lin, Ph.D., associate professor, Department of Molecular & Cellular Oncology has been a primary investigator for two CPRIT Academic Research grants (RP150094, RP180259).

The University of Texas MD Anderson Cancer Center and Dr. McAllister received a \$2.1 million CPRIT Individual Investigator Research Awards for Clinical Translation (RP200173) in February 2020.

78. The *Nature Index* ranked two CPRIT-grantee institutions to its list of 25 top rising institutions in North America for their growth in research published in the world's leading science journals. The University of Texas Health Science Center at San Antonio and The University of Texas Medical Branch at Galveston ranked sixth and seventh, respectively. The *Nature Index* 2023 Rising Stars list highlights universities, health systems, nonprofits, and other research organizations that have posted the greatest increases—from 2015 to 2022—in authored or co-authored papers appearing in leading journals chosen by an independent group of scientists.

CPRIT has awarded The University of Texas Health Science Center at San Antonio 88 research awards totaling \$143.5 million, including 19 CPRIT Scholar recruitment awards. The University of Texas Medical Branch at Galveston has received 33 CPRIT research awards totaling \$44.5 million, including four CPRIT Scholar recruitment awards.

79. On June 28, the American Society for Nutrition (ASN) announced that Robert Chapkin, Ph.D., Allen Endowed Chair in Nutrition and Chronic Disease Prevention in the Texas A&M College of Agriculture and Life Sciences Department of Nutrition, was one of 15 individuals inducted into the ASN Class of 2024 Fellows. Induction as a Fellow of the Society is the highest accolade bestowed by ASN and honors individuals for their significant contributions and outstanding lifetime achievements in the field of nutrition.

Dr. Chapkin's Lab evaluates dietary and microbial modulation for the prevention of cancer and chronic inflammatory diseases using preclinical models and human subjects. He has made highly significant precision medicine-related contributions including seminal cancer prevention strategies to delineate host responses to diet-derived and endogenous (gut microbial) bioactive agents. The National Institutes of Health has continuously funded Dr. Chapkin's research for the past 35 years.

Texas AgriLife Research and Dr. Chapkin have received four CPRIT Academic Research grants since 2010 (RP100473, RP120028, RP160589, RP200604) totaling \$1.5 million.

80. The Friar Society awarded the 2024 Friar Centennial Teaching Fellowship to CPRIT Scholar Tom Yankeelov, Ph.D., professor of biomedical engineering and core faculty member at the Oden Institute for Computational Engineering and Sciences at The University of Texas at Austin on June 27. Dr. Yankeelov was honored for his work bridging the gap between computational science and oncology. The Friar Society, established in 1911, is the oldest and one of the most distinguished multi-disciplinary honor societies at UT Austin. The award is given in recognition of a faculty member who, first and foremost, has attained distinction in teaching undergraduates; and second, who embodies the Friar ideal in having made a significant contribution to the university beyond the duties of his or her calling.

The overall goal of Dr. Yankeelov's research is to improve patient care by employing advanced *in vivo* imaging methods for the early identification, assessment and prediction of tumors' response to therapy. He is passionate about educating the next generation of cancer scientists and has taught several courses in both medical and engineering schools including Medical Imaging, Mathematical Methods, Cancer Imaging, Biophysical Models of Cancer, and Computational Oncology. UT Austin recruited Dr. Yankeelov in 2015 from Vanderbilt University with the support of a \$6 million CPRIT Recruitment of Established Investigators grant (RR160005).

81. On June 27, Rice University and the University of Texas MD Anderson Cancer Center announced the creation of the Cancer Bioengineering Collaborative. Led by CPRIT Scholar Gang Bao, Ph.D., Foyt Family Professor of Bioengineering and professor of Chemistry and Materials Science & NanoEngineering at Rice University and Jeffrey Molldrem, M.D., at The University of Texas MD Anderson, the initiative aims to foster collaboration between the two institutions on cancer research, to develop new technologies for cancer detection and therapy, and to secure external funding for further research and training.

The new joint efforts include a seed grant program to facilitate collaboration between investigators at Rice and MD Anderson, a monthly seminar series focused on cancer bioengineering, annual retreats to showcase cutting-edge research and further stimulate new collaborations, and meetings hosting international leaders in cancer and bioengineering research. "There is

tremendous potential in bringing together experts in engineering and cancer as part of this focused, collaborative framework that is truly unique, not only owing to the complementary nature of the respective strengths but also because this is the first formal joint research initiative of its kind between the two institutions," said Dr. Bao.

Rice University recruited Dr. Bao in 2014 from the Georgia Institute of Technology & Emory University with the support of a \$6 million CPRIT Recruitment of Established Investigators grant (RR140081). Rice University and Dr. Bao have received three additional CPRIT Academic Research grants (RP170721, RP210116, RP220518) totaling \$5.22 million.

82. The Rice Global Paris Center hosted the BioElectronic Therapeutics conference and workshop June 27-28, the first formal event dedicated to the field of bioelectronics held at Rice University's Paris campus. Rice bioengineers CPRIT Scholar Omid Veiseh, Ph.D., and Jacob Robinson, Ph.D., along with Northwestern University's Johnathan Rivnay, Ph.D., organized the event that brought together a diverse group of leaders from academia, industry, venture capital, foundations, and government to discuss the rapidly evolving field of bioelectronics and accelerating technological advancements to improve patient care. Bioelectronics is an interdisciplinary field that combines principles of biology and electronics to develop devices and systems for monitoring, interacting with, and manipulating biological processes and functions.

Rice recruited Dr. Veiseh from Massachusetts Institute of Technology in 2016 with the support of a \$2 million CPRIT Recruitment of First-Time, Tenure-Track Faculty Members award (RR160047). Rice and Dr. Veiseh also received a \$250,000 CPRIT High Impact/High Risk research award (RP210205) in 2021.

83. The Lung Cancer Research Foundation (LCRF) announced the appointment of CPRIT Scholar Kathryn O'Donnell, Ph.D., associate professor, Department of Molecular Biology at The University of Texas Southwestern Medical Center, as its new Scientific Advisory Board (SAB) chair, effective July 1. LCRF's mission is to improve lung cancer outcomes by funding research for the prevention, diagnosis, treatment, and cure of lung cancer.

The O'Donnell Laboratory is focused on understanding what contributes to tumor initiation, progression, and metastasis. The team developed and utilized transposon mutagenesis systems, which have helped to identify novel genes that promote liver cancer, leukemia, and non-small cell lung cancer. This led to the discovery of oncogenic cell surface receptors in lung cancer, which the team is currently researching. These studies may provide new therapeutic approaches to target cancer cells.

The University of Texas Southwestern Medical Center recruited Dr. O'Donnell in 2010 from Johns Hopkins University with the support of a \$2 million CPRIT Recruitment of First-Time, Tenure-Track Faculty Members grant (R1101). UT Southwestern and Dr. O'Donnell received three CPRIT Academic Research grants (RP150676, RP190610, and RP200327) totaling \$3.1 million.

84. On July 3, Rice University announced that the National Institutes of Health awarded nearly \$2 million from the Maximizing Investigators' Research Award (MIRA) program for established investigators to CPRIT Scholar Han Xiao, Ph.D., associate professor of chemistry. The MIRA program will support Dr. Xiao's lab with a five-year grant to develop noncanonical amino acids (ncAAs) with diverse properties to help build proteins. The overall goal of his lab is to develop innovative chemical tools that will allow scientists to understand complex biology systems and develop novel therapeutic strategies. His research integrates elements from multiple disciplines spanning synthetic chemistry, chemical biology, molecular biology, cancer biology, and immunology.

Rice University recruited Dr. Xiao from Stanford University with the support of a \$2 million CPRIT Recruitment of First-Time, Tenure-Track Faculty Members grant (RR170014) in 2017.

85. Texas Tech University Health Sciences Center announced the first recipients of the Douglas Stocco Research Chair, an endowment formerly known as the Texas Tech University Health Sciences Center's (TTUHSC) Research Endowment. Min Kang, PharmD, professor of pediatrics in the TTUHSC School of Medicine and associate vice president for research, received the

honor at a ceremony on July 9. With the endowment, Dr. Kang aims to increase the visibility of TTUHSC's world-class research efforts and to conduct cutting-edge research in pediatric cancer.

Douglas Stocco, Ph.D., served in many leadership roles including executive vice president for research and dean of the Graduate School of Biomedical Sciences during his 40 years at TTUHSC. Research that was conducted in Stocco's lab, which described the cloning, sequencing and naming of the Steroidogenic Acute Regulatory (StAR) protein for the first time, was published in September 1994 in the *Journal of Biological Chemistry*.

Texas Tech University Health Sciences Center and Dr. Kang received three CPRIT Individual Investigator grants (RP101042, RP130547, RP170470), a Core Facility Support Awards grant (RP220631), and a TREC: Major Instrumentation Award (RP230447) totaling \$6.9 million.

86. On July 10, the Controlled Release Society (CRS) announced that CPRIT Scholar Omid Veiseh, Ph.D., associate professor of bioengineering and faculty director of the Rice Biotech Launch Pad, was elected to its College of Fellows. CRS is an inclusive global scientific community that advances research, technology, education, and networking in the field of delivery science. Dr. Veiseh earned this distinction based on his global impact in his field, with emphasis on groundbreaking contributions evidenced by seminal scientific publications and transformative inventions. Fellows have distinguished themselves as leaders in their field through impactful contributions in fundamental or applied research, technology, products, and/or education within the areas of interest of the CRS.

Rice University recruited Dr. Veiseh from Massachusetts Institute of Technology in May 2016 with the support of a \$2 million CPRIT Recruitment of First-Time, Tenure-Track Faculty Members grant (RR160047).

87. Texas placed third overall in CNBC's America's Top States for Business 2024 rankings, released on July 11, and earned the top spot in two of the 10 categories. CNBC scored all 50 states on 128 metrics in 10 broad categories of competitiveness. Texas ranked first in the "Workforce" category based on the percentage of STEM workers in the state, percentages of employees with college and associate degrees and industry-recognized certificates, success in attracting talent of all levels, and the net migration of educated workers to the state. Texas also received the top score in the "Technology & Innovation" category based on issued patents per capita, health, science and agriculture research grants, its role in advancing AI, and participation in the Tech Hubs program through the Biden Administration's CHIPS and Science Act. Texas moved up from its 8th place finish in 2023.

88. The *U.S. News & World Report* announced their 2024-25 "Best Hospitals" survey results on July 16. Several CPRIT grantee institutions performed well in the rankings. Now in its 35th year, the Best Hospitals survey evaluates nearly 5,000 hospitals in more than 30 medical and surgical services.

The University of Texas MD Anderson Cancer Center ranked first in the nation for cancer care. MD Anderson has maintained the top position for the past 10 years and has consistently been one of the top two hospitals in the nation for cancer care since the survey's inception in 1990.

Houston Methodist Hospital ranked as the No. 1 hospital in Texas. Houston Methodist ranked in more specialties than any other hospital in Houston, including cancer, cardiology, heart and vascular surgery, diabetes and endocrinology, gastroenterology/GI surgery, geriatrics, neurology/neurosurgery, obstetrics and gynecology, orthopedics, pulmonology and lung surgery, and urology. Houston Methodist also landed on the Best Hospitals "Honor Roll," the list of 20 hospitals with exceptional breadth and depth of excellence.

The University of Texas Southwestern Medical Center ranked first among hospitals in Dallas-Fort Worth and the No. 2 hospital in Texas. UT Southwestern ranked among the nation's top 50 hospitals in 11 specialties, the most of any hospital in Texas, and achieved top 25 rankings in cancer, cardiology, heart and vascular surgery, rehabilitation, diabetes and endocrinology, neurology and neurosurgery, and pulmonology and lung surgery.

89. On July 17, The University of Texas MD Anderson Cancer Center named its ninth cohort of Andrew Sabin Family Fellows - a distinguished group of 10 rising faculty members whose innovative research encompasses a variety of fields, including immunology, radiation oncology, and biostatistics. Five CPRIT grantees, including four CPRIT Scholars, are 2024 Sabin Family Fellows. The fellowship, created by the Andrew Sabin Family Foundation, provides a dedicated source of funding (\$100,000 over two years) for junior faculty and emerging clinicians to support groundbreaking research that advances the institution's mission to end cancer.

CPRIT grantees named as 2024 Sabin Family Fellows include: Lauren Colbert, M.D., (RP240259), CPRIT Scholar Mauro Di Pilato, Ph.D., (RR210017), CPRIT Scholar Wen Jiang, M.D., Ph.D., (RR180017, RP220553), CPRIT Scholar Yuan Pan, Ph.D., (RR210085), and John Paul Shen, M.D., (RR180035, RP240392).

90. The University of Texas at Austin announced on July 25 that CPRIT Scholar Ku-Lung "Ken" Hsu, Ph.D., associate professor and holds the Stephen F. and Fay Evans Martin Endowed Professorship in Chemistry, was honored with the Faculty Early Career Development (CAREER) award from the National Science Foundation (NSF). The Program is the National Science Foundation's (NSF) most prestigious award in support of early-career faculty who exemplify the role of teacher-scholars through outstanding research, excellent education, and the integration of education and research within the context of the mission of their organizations. The awardees receive approximately half a million dollars in funding over five years to support projects that lead to new discoveries and create tangible benefits for society.

Dr. Hsu's NSF CAREER award supports his research to understand metabolic regulation of cellular function at the single-cell level. His team seeks to establish an understanding of how identical cells differentiate into functionally distinct cell lineages. Their research uses a combination of organic synthesis, bioanalytical chemistry, and bioorganic chemistry. Ultimately, the team aims to develop new molecules to enable chemical biology and therapeutic discovery.

The University of Texas at Austin recruited Dr. Hsu in 2022 from the University of Virginia with the support of a \$4 Million CPRIT Recruitment of Rising Stars grant (RR220063).

91. The Advanced Research Projects Agency for Health (ARPA-H) awarded up to \$18 million over five years to Rice University in collaboration with the University of Texas MD Anderson Cancer Center. Rice University announced on August 13 that this multi-institutional research collaboration will use these funds to develop and validate a new system for improving tumor removal accuracy for breast and head & neck cancer.

This novel, affordable, slide-free cancer pathology system, AccessPath, will help surgeons completely remove tumors during surgery by enabling rapid, automatic tumor margin classification of resected tumors. The team, led by Principal Investigator and CPRIT grantee Rebecca Richards-Kortum, Ph.D., professor and director of the Rice360 Institute for Global Health Technologies at Rice University, are working to solve key technical challenges in tumor removal, ultimately improving patient outcomes. This system is also expected to significantly cut the cost of pathology equipment and streamline analysis for negative tumor margin classification, enabling immediate pathology assessments during surgery.

"Because of its low cost, high speed, and automated analysis, we believe AccessPath can revolutionize real-time surgical guidance, greatly expanding the range of hospitals able to provide accurate intraoperative tumor margin assessment and improving outcomes for all cancer surgery patients," said Dr. Richards-Kortum.

92. The Lasker Foundation awarded the 2024 Albert Lasker Basic Medical Research Award, known as America's Nobel Prize, on September 19 to CPRIT grantee, Zhijian "James" Chen, Ph.D., professor of Molecular Biology, director of the Center for Inflammation Research and George L. MacGregor Distinguished Chair in Biomedical Science at The University of Texas Southwestern Medical Center. Dr. Chen received this award for his discovery of the cGAS enzyme - a critical component of the STING pathway - which senses invading pathogens and triggers the body's innate immune system.

The STING pathway can be thought of as the alarm system that sounds when, in the event of cellular stress, DNA enters a cell. Release of DNA within the cell can result from infection, inflammation, cancer, mitochondrial stress, or metabolic stress, for example. Once this happens, the policing mechanism of the innate immune system is immediately called into action. Importantly, this discovery has opened the possibility for the development of medicines to treat infections, cancer and inflammatory diseases more effectively. Agonists (activators) of this signaling pathway are not only being tested in vaccine development, but also as cancer drugs, and show strong preclinical antitumor effects in combination with checkpoint inhibitors.

The Lasker Awards, often called "America's Nobels" recognize significant advances in the understanding, diagnosis, treatment, cure, and prevention of human disease and are regarded as the country's preeminent biomedical research prize. Since 1945, the Lasker Foundation has awarded more than 400 prizes. Dr. Chen becomes the fourth UT Southwestern faculty member to earn a Lasker Award, following Nobel Laureates Alfred Gilman, M.D., Ph.D., - CPRIT's inaugural Chief Scientific Officer - Michael Brown, M.D., and Joseph Goldstein, M.D.

Dr. Chen's seminal laboratory research at UT Southwestern has been supported by CPRIT for more than a decade, and has led to the development of a new class of drugs that activate a patient's immune system to fight cancer by a biotech company founded on this work - ImmuneSensor Therapeutics, Inc. In an elegant example of completing the translational cycle, ImmuneSensor received a CPRIT Product Development Research Award (DP220030) for early-phase clinical trials to evaluate the therapeutic efficacy of the combination of this novel STING agonist (IMSA101) with immune checkpoint inhibitors in solid tumors (PI: Lijun Sun, DP220030).

93. On August 18, VICTORY Houston, Inc. announced more than \$1 million in awards to local programs and research committed to fighting cancer. CPRIT Scholar Michael D. Taylor, M.D., Ph.D., received a \$250,000 award for Pediatric Brain Tumor Research Program: Building a Roadmap to Find Early Group 3 Medulloblastoma. Dr. Taylor is a pediatric neurosurgeon and brain tumor researcher at Texas Children's Cancer and Hematology Center, and a professor in the Department of Pediatrics and Neurosurgery at Baylor College of Medicine. His research centers on the molecular genetics of medulloblastoma and ependymoma, two of the most common malignant pediatric brain tumors. He has published over 400 peer-reviewed publications, many in high-impact journals such as *Nature*, *Science*, *Cell*, *Cancer Cell*, and *Lancet Oncology*.

Baylor College of Medicine recruited Dr. Taylor with the support of a \$6 million CPRIT Recruitment of Established Investigators grant (RR220051) in 2022.

94. On August 15, Rice Innovation announced its two most recent awardees of the One Small Step Grant. Launched in September 2023, the grant aims to support lab-stage projects across campus, providing crucial capital for projects to spin out of the university and successfully attract investment from angel investors and venture capital. After a rigorous evaluation process, two outstanding projects were selected for funding, receiving a total of \$200,000. LymphGuide, developed by Martha Fowler, bioengineering doctoral student at Rice University in CPRIT Scholar Omid Veisheh's lab, received a \$100,000 award. LymphGuide is a customizable alginate-based hydrogel platform combined with an engineered cell therapy that aids in lymphatic cell regrowth, initially targeting the treatment and prevention of lymphedema.

Rice University recruited Dr. Veisheh from the Massachusetts Institute of Technology with the support of a \$2 million CPRIT Recruitment of First-Time, Tenure-Track Faculty Members grant (RR160047) in 2016.

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