

Accelerating Cancer Discovery

by Debra Bradley Ruder '80

Brown's Legorreta Cancer Center is developing innovative ways to combat cancer and improve outcomes for patients locally and globally.

As the White House reignites the country's Cancer Moonshot to "end cancer as we know it today," Brown's Legorreta Cancer Center is on a mission to reach that goal.

The center is advancing world-class cancer research and care by bringing together experts from Brown's Warren Alpert Medical School, School of Public Health, affiliated hospitals and other campus programs to better diagnose, treat and prevent the disease. Collaborators participating in research, population health and clinical practice — from the laboratory bench to the patient bedside — are studying how cancer grows and turning scientific findings into cutting-edge therapies to address the unique needs of patients.

"We want our academic center to be the destination for people in Rhode Island and surrounding communities to receive

outstanding, state-of-the-art, compassionate and personalized cancer care," says Legorreta Cancer Center Director Dr. Wafik S. El-Deiry, an accomplished cancer investigator, clinician, professor of medical science, professor of pathology and laboratory medicine, and associate dean for oncologic sciences at the medical school. "We're focused on making a significant impact in our region through our research, and then sharing those findings with the global cancer research community."

One center priority is to expand access to the most innovative clinical trials — the gold standard for testing new ways of thwarting cancer in individuals and populations — launched from Brown's laboratories.

Faculty at the center also are investigating why certain cancers have high rates in the Ocean State, among them breast, prostate, lung,



DR. WAFIK S. EL-DEIRY

Building a World-Class Center

Based in the Jewelry District southeast of downtown Providence, the center was established in 2020 to harness the innovative cancer biology research, clinical trials and patient care taking place at Brown and its affiliated hospitals in the Lifespan and Care New England health systems.

In December 2021, the University received a \$25 million gift from Pablo and Almudena Legorreta to propel the center into world-class status and position it to work toward National Cancer Institute (NCI) designation, the highest federal rating. The transformative investment will, in part, support Brown in recruiting leading physician-scientists in key cancer specialties, attracting stellar trainees and providing the research infrastructure needed to make new discoveries and translate them into promising diagnostics or therapies.



DR. MUKESH K. JAIN

"The gift will have a ripple effect across the entire spectrum of cancer research, education and clinical care," says Dr. Mukesh K. Jain, Brown's dean of medicine and biological sciences and a professor of molecular biology, cell biology and biochemistry. "It will give us the critical mass to be a strong contender for NCI

designation in the coming years." The U.S. has about 70 such cancer centers, and this would be Rhode Island's first.

Pablo Legorreta, a life sciences entrepreneur and trustee of Brown's governing body, the

uterine, bladder, thyroid and brain cancers, and whether they disproportionately affect certain racial, ethnic, socioeconomic or other groups. "Health care disparities are a huge problem nationally," El-Deiry states. "Increasing cancer screening, early detection and interventions within our underserved and diverse communities is a major goal for our center."

Corporation, applauds the center's emphasis on collaboration. "The best way to solve a very complex problem like cancer is to bring together talented scientists and researchers with different backgrounds, perspectives and expertise," he said in a University announcement. "[Our family is] so excited to support the center and help it grow and expand."

Seeking Answers

Center investigators are illuminating the inner workings of cancer cells and their surrounding environments to answer such questions as "How do cancer treatments work?" and "How do tumor cells outsmart the immune system?" In recent research, El-Deiry and his colleagues found that blocking a particular tumor-promoting protein with medication or gene silencing may help improve the effectiveness of immunotherapy. In another study, a Brown team has developed a new combination of drugs, which they will test in a clinical trial, to prevent drug-resistant tumors from growing despite low-oxygen conditions.

As center director, El-Deiry is constantly looking for new approaches to personalize patient care for adults and children — whether they're at risk for cancer, have cancer or are survivors.

"I want to put the latest available technologies in the hands of amazing people so they can make scientific discoveries and move them to clinical trials," El-Deiry says. "We're doing all this to benefit our community. We want to improve health by studying cancer in Rhode Island, making the most advanced early detection technologies available to those at risk, and offering every patient the best possible treatment options."

More than 7,000 people in Rhode Island, and nearly 2 million in the U.S., are expected to learn they have cancer this year.

Source: American Cancer Society

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