



# Creating a Future Immune to Cancer

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**2022 Annual Report of the  
Cancer Research Institute**

**With the lives of millions of cancer patients at stake each year, our mission to save more lives with immunotherapy becomes even more urgent. CRI scientists are making new discoveries each day about our immune system and how we can harness its power to defeat cancer.**

Immunotherapy is now the fourth pillar of cancer treatment, complementing and sometimes replacing surgery, radiation, and chemotherapy as options for patients. Through its decades of commitment to advancing scientific research that has made effective immunotherapy possible, the Cancer Research Institute has given new hope to millions of cancer patients around the world. Our work, however, has only just begun.

While immunotherapy is effective in many different cancer types, a significant but unacceptably low percentage of patients responds to treatment. Fewer still achieve lasting cures. The fact, however, that many patients with advanced cancer have been cured with immunotherapy drives CRI's

scientists forward in their pursuit of discoveries that one day will lead to the end of cancer deaths.

In fiscal year 2022 (July 1, 2021, to June 30, 2022), CRI awarded \$22.2 million to support bold and innovative laboratory and clinical research, train the next generation of scientists, power bioinformatics resource hubs, and fund drug incubators designed to bring promising new immunotherapies to patients. We also delivered high-quality, expert-vetted information about cancer immunotherapy and clinical trials to thousands of patients and caregivers, provided both in English and Spanish—broadening the reach and impact of CRI's lifesaving work into more communities

As we approach the 70th anniversary of CRI's founding, we look ahead to a better future for cancer patients everywhere—a future where cancer is no longer feared but instead a disease that can be managed or even cured with immunotherapy. With more research, we will realize this vision sooner.

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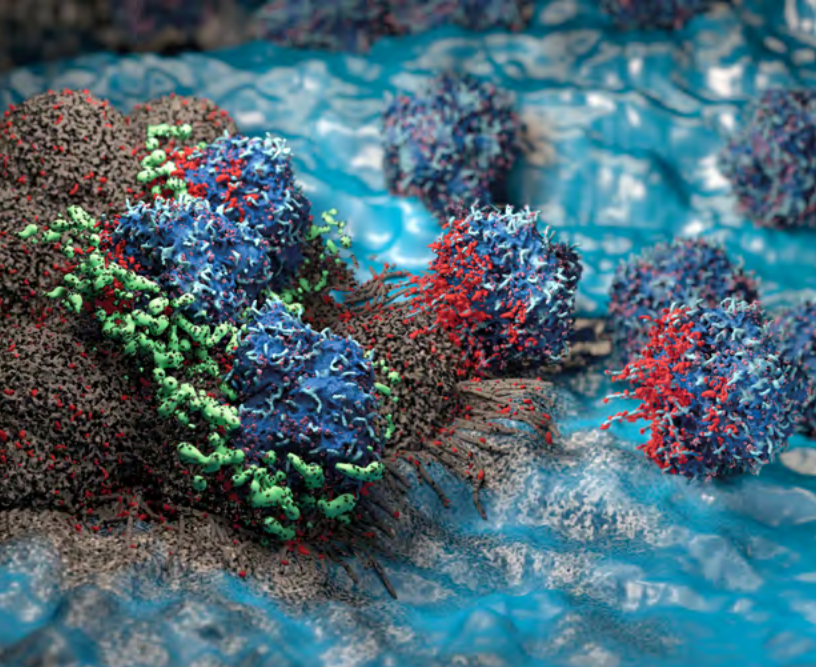
**Jill O'Donnell-Tormey, Ph.D.**  
Chief Executive Officer and  
Director of Scientific Affairs



**OUR MISSION: SAVE MORE LIVES**  
**by fueling the discovery and**  
**development of powerful**  
**immunotherapies for all cancers.**

Founded in 1953, the Cancer Research Institute (CRI) is a 501(c)(3) nonprofit organization dedicated to funding laboratory and clinical research aimed at harnessing our immune system's power to treat and potentially cure all cancers. This work has led to a revolutionary new class of cancer treatments called immunotherapy, which today is giving millions of cancer patients a better chance at living longer.



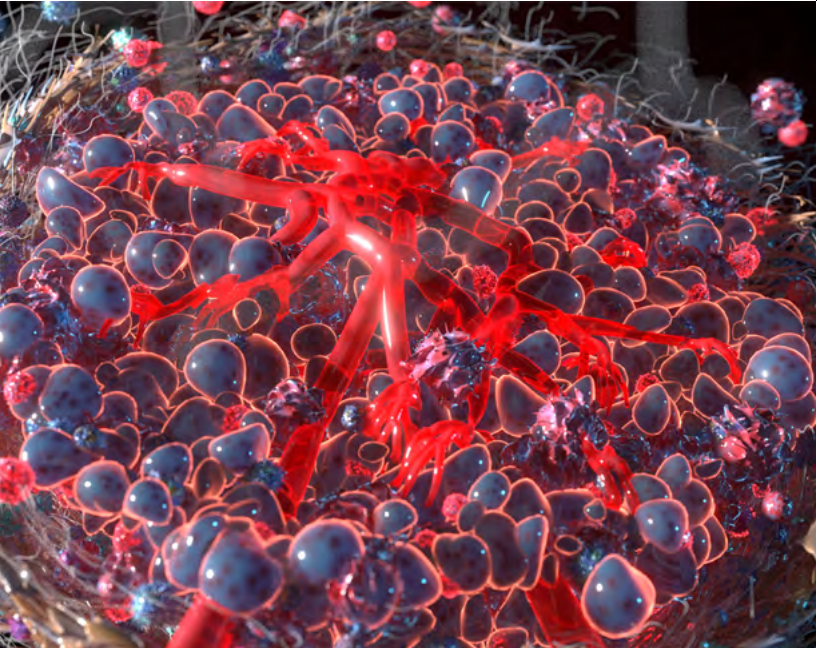


## Overcoming T Cell Exhaustion and Improving Responses to Immunotherapy

During protracted immunological battles within our bodies, such as in chronic viral infection and cancer, the immune system's primary cellular strike force, our T cells, can become "exhausted" and no longer able to effectively respond. How to reverse or prevent this exhaustion is a central aim of CRI scientists determined to make immunotherapy an effective treatment for more patients—and they are making significant progress. This includes the identification of gaps in cellular circuitry involved in converting veteran T cells into memory T cells. These gaps impair this process and result in less vigorous responses when these T cells encounter cancer a second time. In another approach, CRI scientists have genetically engineered "super assassin" T cells capable of rallying other, naturally present immune cells to their aid by secreting chemical messengers called cytokines when they encounter cancer cells. Ongoing research exploring these and other discoveries and resulting advances are leading to new therapeutic strategies to improve patient responses to immune checkpoint blockade and other T cell-based immunotherapy approaches.

## Advancing New Technologies to Accelerate Innovation

Technological innovation is a fundamental component of scientific research. New technologies make possible new tools that facilitate discovery and enable breakthroughs. Advances in genetic sequencing, computing power, artificial intelligence, imaging, laboratory research modeling, and more have pushed the fields of immunology and tumor immunology forward at breakneck speeds. These advances make it possible to ask questions about—and find solutions to—scientific puzzles that simply could not be explored before due to cost, time, and other factors that slow the pace of progress. CRI scientists not only harness cutting-edge technologies to carry out their research, but they also are inventing new technologies needed to make the next great leaps in cancer immunotherapy. This includes a new approach to determining the function of any gene in the human genome. This powerful tool, called CRISPRa, has helped CRI scientists identify "master switches" that can be manipulated to enhance immune cells and potentially improve cancer patient responses to immunotherapy.



## Surmounting Immunosuppression in the Tumor Microenvironment

Most approved immunotherapies today centrally involve stimulating T cell-mediated immune responses against tumors. Other cells of the immune system, however, also hold great potential for improving cancer patient responses. CRI scientists are striving to unleash their untapped potential. Macrophages are one type of immune cell that plays a significant role in affecting the interplay of cancer and the immune system. These cells are involved both in combatting cancer as well as in aiding cancer's growth and spread. They are vulnerable to the ability of tumors to convert macrophages to their "side" of the cellular battle. These "turncoat" macrophages can suppress attacking T cells, rendering them incapable of mounting an effective anti-tumor response. Innate lymphoid cells are another type of immune cell that shows promise as a new recruit to the anti-tumor response given their link to intestinal inflammation and colorectal cancer. CRI scientists are working to understand the molecular pathways and mechanisms involved in these processes. Their efforts may reveal valuable targets that unlock new, more effective treatments for patients.

The Cancer Research Institute funds the entire spectrum of scientific discovery, from basic laboratory studies on the fundamentals of the immune system to innovative clinical trials of novel immunotherapy combinations. CRI's funding decisions are guided by a renowned Scientific Advisory Council that includes four Nobel Laureates and 27 members of the National Academy of Sciences. In Fiscal Year 2022, CRI awarded \$22.2 million in grants and fellowships to scientists around the world.

### CRI Irvington Postdoctoral Fellowship Program

CRI fellowships support the career development and laboratory research of promising young scientists working under the mentorship of leading immunologists.

**\$6,809,000**

awarded to 39 scientists

### Clinic and Laboratory Integration Program (CLIP)

CLIP grants provide catalytic support for the translation of basic laboratory discoveries into novel therapies that can be tested in the clinical setting.

**\$2,583,000**

awarded to 13 scientists

### CRI Anna-Maria Kellen Clinical Accelerator

The CRI Clinical Accelerator serves as a unique, venture philanthropy-driven partnership model that brings together academia, nonprofit, and industry to develop and de-risk novel cancer immunotherapy combinations.

**\$1,223,269**

supporting 14 trials or trial arms

### Lloyd J. Old STAR Awards

The Lloyd J. Old STAR Program (Scientists **T**Aking **R**isks) provides investigators with long-term funding in order to promote freedom and flexibility in exploring innovative avenues of research.

**\$7,500,000**

awarded to 6 scientists

### Technology Impact Awards

The CRI Technology Impact Award funds initiatives that seek to bridge the gap between the technological development and clinical application of cancer immunotherapies.

**\$1,000,000**

awarded to 5 scientists

### Impact Grants

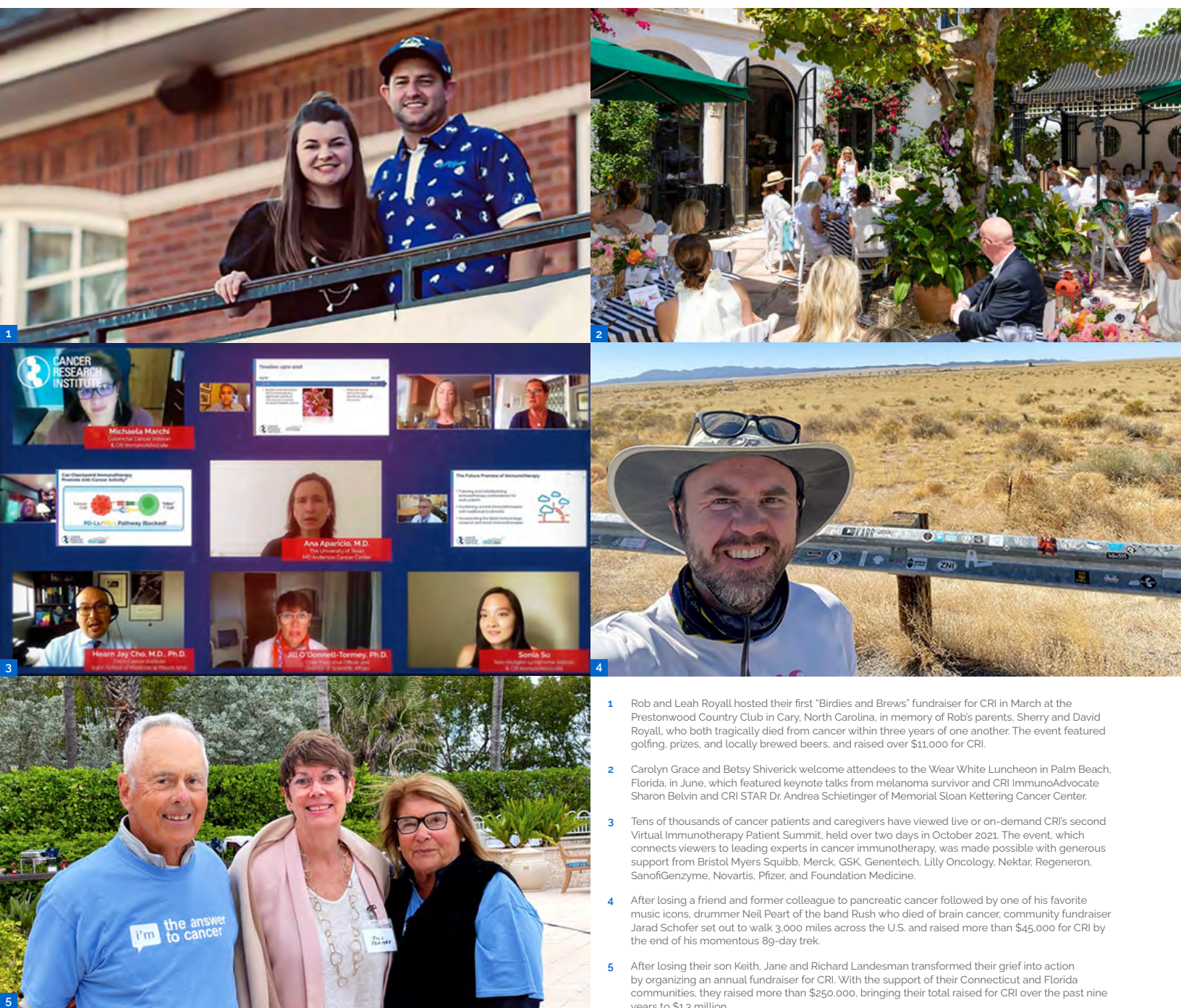
Impact Grants support projects aimed at advancing scientific goals and addressing challenges that would otherwise limit progress in cancer immunotherapy research and drug development.

**\$3,033,836**

awarded to 7 scientists



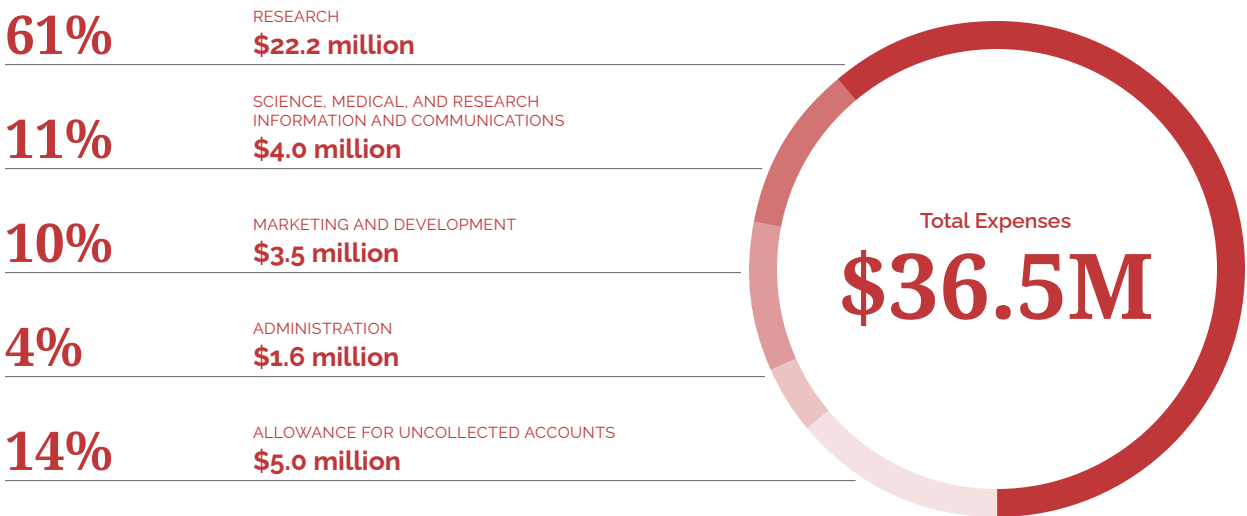
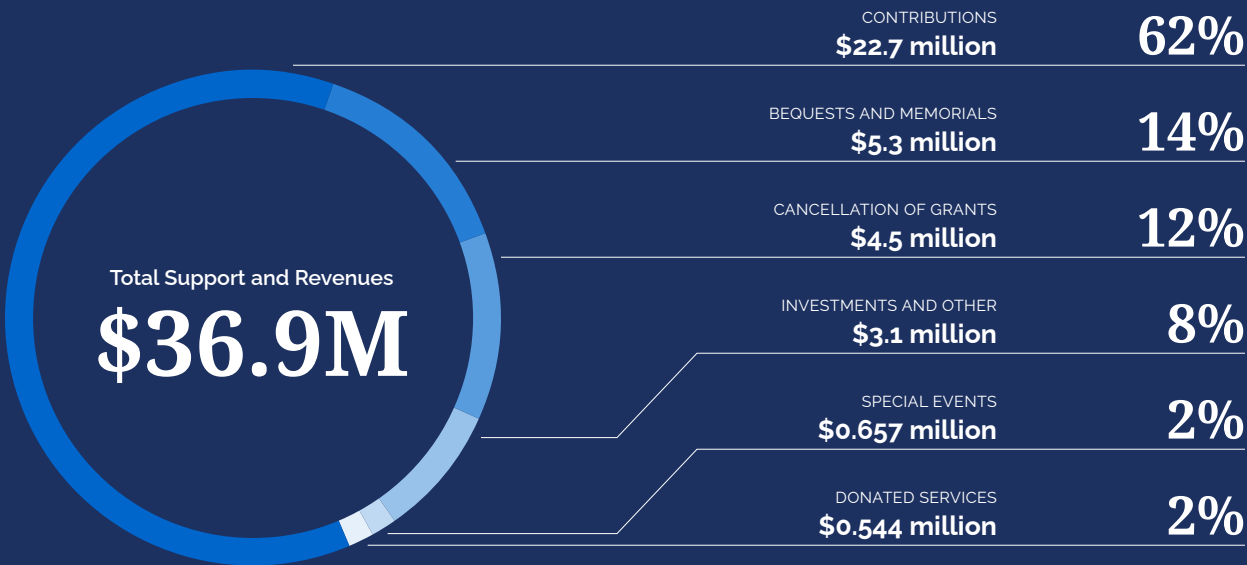
Generous support from individuals, foundations, and corporate sponsors makes possible our work to advance lifesaving science leading to new cancer treatments and cures. Through direct donations, workplace giving, bequests, planned gifts, special events, community fundraising, donated services, and sponsorships, donors and supporters gave \$29.3 million to CRI in Fiscal Year 2022.



- 1 Rob and Leah Royall hosted their first "Birdies and Brews" fundraiser for CRI in March at the Prestonwood Country Club in Cary, North Carolina, in memory of Rob's parents, Sherry and David Royall, who both tragically died from cancer within three years of one another. The event featured golfing, prizes, and locally brewed beers, and raised over \$11,000 for CRI.
- 2 Carolyn Grace and Betsy Shiverick welcome attendees to the Wear White Luncheon in Palm Beach, Florida, in June, which featured keynote talks from melanoma survivor and CRI ImmunoAdvocate Sharon Belvin and CRI STAR Dr. Andrea Schietinger of Memorial Sloan Kettering Cancer Center.
- 3 Tens of thousands of cancer patients and caregivers have viewed live or on-demand CRI's second Virtual Immunotherapy Patient Summit, held over two days in October 2021. The event, which connects viewers to leading experts in cancer immunotherapy, was made possible with generous support from Bristol Myers Squibb, Merck, GSK, Genentech, Lilly Oncology, Nektar, Regeneron, SanofiGenzyme, Novartis, Pfizer, and Foundation Medicine.
- 4 After losing a friend and former colleague to pancreatic cancer followed by one of his favorite music icons, drummer Neil Peart of the band Rush who died of brain cancer, community fundraiser Jared Schofer set out to walk 3,000 miles across the U.S. and raised more than \$45,000 for CRI by the end of his momentous 89-day trek.
- 5 After losing their son Keith, Jane and Richard Landesman transformed their grief into action by organizing an annual fundraiser for CRI. With the support of their Connecticut and Florida communities, they raised more than \$250,000, bringing their total raised for CRI over the past nine years to \$1.3 million.

Donor trust is our most prized asset. To earn and keep this trust, we remain committed to accountability and transparency, holding ourselves to the highest standards of fiscal integrity and responsible use of donor dollars to achieve the greatest mission impact possible.

To access our complete audited financial statements, IRS forms 990, and annual reports, visit [cancerresearch.org/financials](https://cancerresearch.org/financials).



End of Year Net Assets  
**\$66.7 million**

**Leaders in business, philanthropy, and science volunteer their time and expertise to guide CRI's strategic course, shape its mission-driven programs, oversee its operations, and increase awareness of CRI's impact.**

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