DAMON RUNYON
CANCER RESEARCH
FOUNDATION

Celebrating Scientists

70 YEARS

7 DECADES OF VISION,
DETERMINATION, AND
BREAKTHROUGHS

Illustration of
Damon Runyon

When famed journalist and short story writer Damon Runyon passed away from throat cancer in 1946, his good friend, renowned radio broadcaster Walter Winchell, implored "Mr. and Mrs. America" to send anything they could spare to fight cancer.

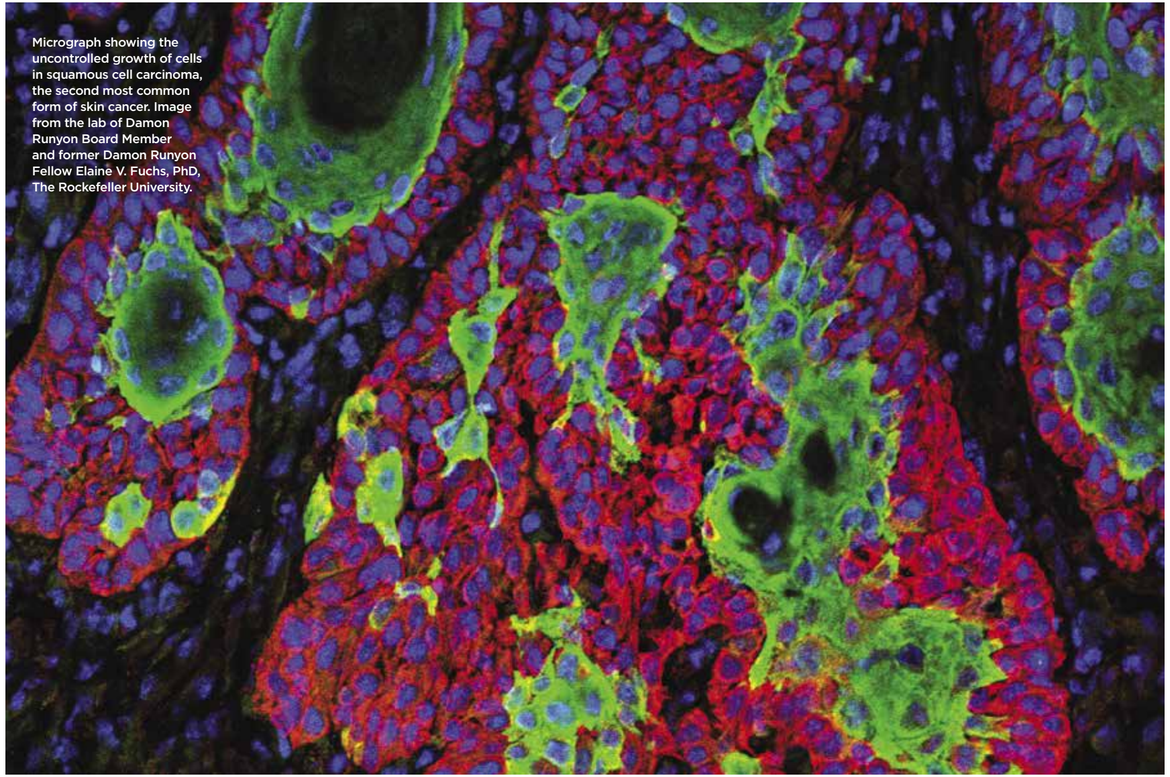
Their donations allowed Winchell to establish the "Damon Runyon Cancer Memorial Fund." Runyon's legacy lives on in the Broadway hit *Guys and Dolls*, based on his short stories, and the cancer research foundation established in his memory.

Over the last 70 years, we have invested $327.5 million in more than 3,600 exceptional scientists. Our specific focus is to foster the next generation of leaders: emerging talent with unique insights, drive, and boundless vision. Twelve of our scientists have won Nobel Prizes.

Damon Runyon scientists have been leaders in transforming cancer from a mystery into an understood group of diseases driven by genetic changes that cause cells to grow out of control and spread to distant sites. They have identified new approaches to prevention, diagnosis, and treatment. They have saved countless lives.

On the following pages, we celebrate the Damon Runyon scientists who have brought us to this point. We also celebrate our donors for helping us pursue our crucial mission of recruiting brilliant, creative, and audacious scientists into cancer research.

Together we will achieve our ultimate goal: **the end of suffering from cancer.**



Micrograph showing the uncontrolled growth of cells in squamous cell carcinoma, the second most common form of skin cancer. Image from the lab of Damon Runyon Board Member and former Damon Runyon Fellow Elaine V. Fuchs, PhD, The Rockefeller University.

CELEBRATING THE SCIENTISTS

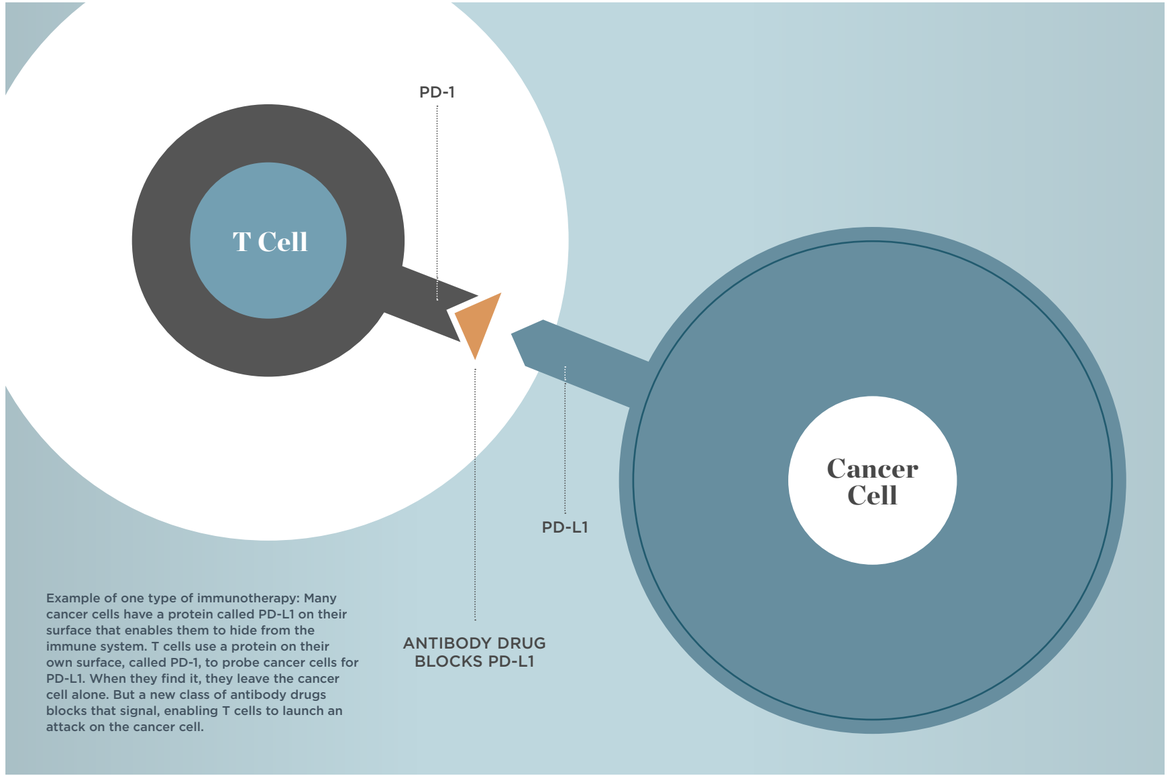
Unraveling the Cell's Secrets

One of our scientists recently compared the inner workings of a cell to New York City—both are comprised of complex, highly structured, and constantly moving systems. The more we understand how these systems work in healthy human cells and how they go awry in cancer, the more effective we will be in preventing, stopping, or even reversing all types of cancer.

Damon Runyon has a 70-year history of supporting discovery scientists committed to this complex and challenging effort, who have contributed significantly to our fundamental understanding of cancer. **We remain committed to supporting scientists relentlessly pursuing a greater understanding of the human cell.**

WE NOW KNOW THAT:

- **Cancer is caused by changes in the structure or function of our DNA, the cell's rulebook, which disrupts the systems in cells.**
- **These genetic changes can be inherited, caused by our environment, or occur over time as we age.**
- **The molecular alterations in cancer cells can be targeted in multiple ways with different therapeutic approaches.**
- **The immune system can be unleashed to attack cancer cells more effectively.**



Example of one type of immunotherapy: Many cancer cells have a protein called PD-L1 on their surface that enables them to hide from the immune system. T cells use a protein on their own surface, called PD-1, to probe cancer cells for PD-L1. When they find it, they leave the cancer cell alone. But a new class of antibody drugs blocks that signal, enabling T cells to launch an attack on the cancer cell.

CELEBRATING THE SCIENTISTS

Targeting Cancer's Achilles' Heel

Traditional chemotherapy works like a sledgehammer hitting not only cancer cells, but also healthy cells caught in the assault, leading to terrible side effects. Damon Runyon scientists are identifying unique characteristics of cancer cells that can be targeted with rapier-like action without harming normal cells. Scientists like:

PETER K. VOGT, PhD
who co-discovered the first oncogene, opening the door to the discovery of many more of these cancer-causing genes.

C. ALEXANDER KAMB, PhD
who co-discovered the BRCA1 mutation, which is now connected with not just breast cancer, but other cancers as well.

GORDON J. FREEMAN, PhD
who demonstrated that cancer cells can disable the immune system through the PD-1 pathway, and if this is blocked, T cells can attack cancers.

MATTHEW L. MEYERSON, MD, PhD
who is a leader in mapping the genomic alterations of multiple different cancer types as part of the national Cancer Genome Atlas project.

CELEBRATING THE SCIENTISTS

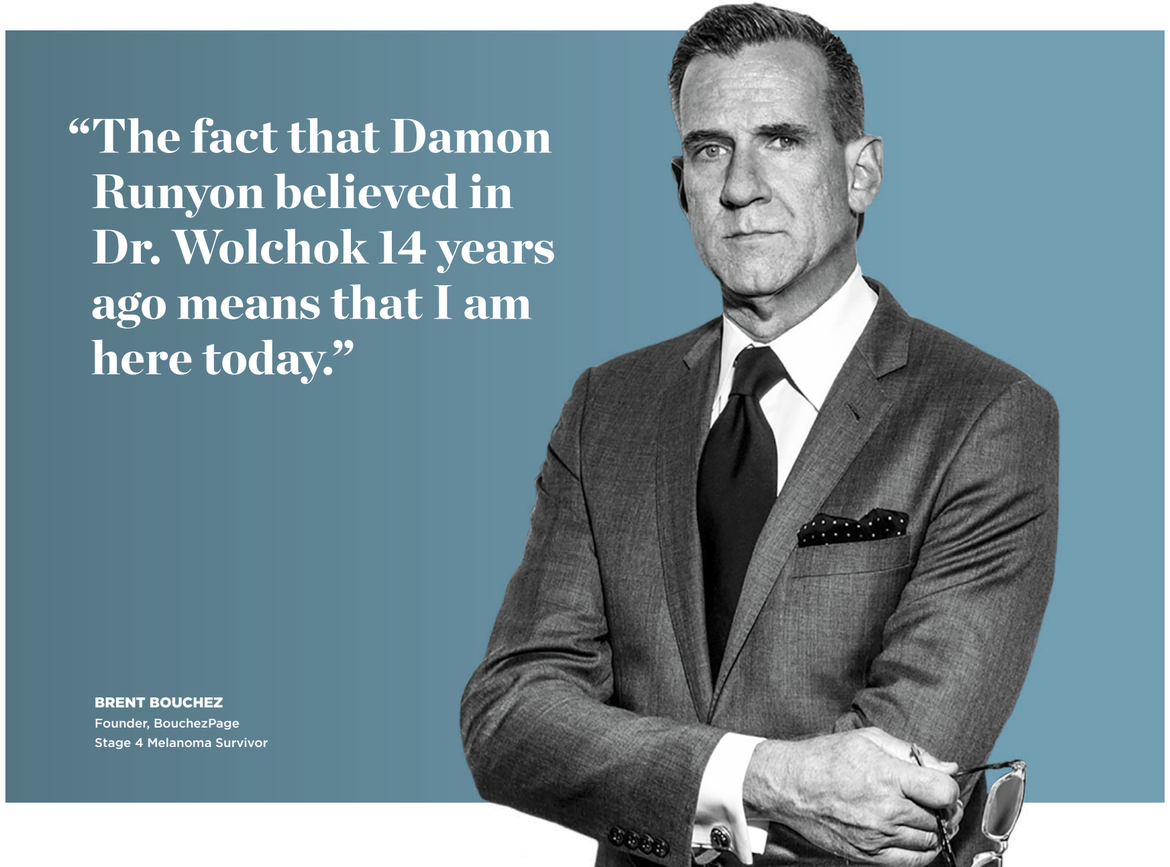
Creating Revolutionizing Technologies

Just as the computer has revolutionized virtually every aspect of life, new technologies in the lab are accelerating the pace of discovery. When a necessary technology doesn’t exist, Damon Runyon scientists invent it and then share it with the scientific community.

Damon Runyon scientist **Feng Zhang, PhD**, developed the CRISPR/Cas9 system in 2013 to alter the DNA of any living organism. This genome-editing system is able to find a target gene and eliminate it or replace it with a corrected gene, much like the “Find and Replace” function in word processing. This technology has already revolutionized scientific research. The hope is that it can be harnessed to cure cancers and other diseases caused by genetic mutations.

OTHER TECHNOLOGIES DEVELOPED BY DAMON RUNYON SCIENTISTS INCLUDE:

- Devices to highlight single cancer cells during surgery
- Technology to sequence the genomes of single cancer cells
- Methods to detect circulating tumor DNA in blood through “liquid biopsies”



CELEBRATING THE SCIENTISTS

Saving Patients’ Lives

Our scientists tell us there is no more rewarding experience than when their research saves one of their patients. Damon Runyon scientists have helped develop and test new treatments, from the earliest days of chemotherapy to today’s immunotherapies.

These are just a few examples:

MIN CHIU LI, MD

Was the first to cure a solid tumor with chemotherapy and demonstrated the need to extend treatment to prevent metastases.

H. MICHAEL SHEPARD, PhD

Led the team at Genentech that developed Herceptin for breast cancer and prevented the effort from being abandoned by the company.

ALICE T. SHAW, MD, PhD

Demonstrated that ALK inhibitors are effective in non-small cell lung cancer patients harboring specific genetic mutations.

JEDD D. WOLCHOK, MD, PhD

Led the clinical trials leading to the first approved cancer immunotherapy.

CELEBRATING THE SCIENTISTS

Seeking Ways to Prevent Cancer

The best approach to cancer is to prevent it from ever happening. Since our founding, Damon Runyon scientists have focused on different approaches to preventing cancer, such as:

ERNST L. WYNDER, MD

Proved the connection between lung cancer and smoking.

RICHARD A. FISHEL, PhD

Identified the mutations responsible for Lynch Syndrome, an inherited condition that increases the risk of a wide range of cancers, which may be prevented through screening.

ANDREW T. CHAN, MD, PhD

Showed that regular aspirin use prevents recurrence of colorectal cancers.

MAURA L. GILLISON, MD, PhD

Identified the human papillomavirus (HPV) as a cause of the growing number of head and neck cancers, adding further evidence for the need to vaccinate girls and boys against HPV.

Thank you!

To all Damon Runyon scientists, past and present, who work tirelessly to discover new ways to prevent, diagnose, and cure all forms of cancer and to our entire community for supporting this life-saving work.

Celebrating our community, which believes in the power of brilliant scientists to end cancer

Since that shout-out by Walter Winchell to all Americans, people from across the nation have supported Damon Runyon scientists as our best hope for making breakthroughs against cancer, including:

CELEBRITIES like Marilyn Monroe, Joe DiMaggio, Bob Hope, and Marlene Dietrich, who helped Winchell establish our unique organization.

The many members of our **BOARD OF DIRECTORS** over the past 70 years who support, guide, and advocate passionately for our mission.

Our **AWARD SELECTION COMMITTEES**, comprised of world-renowned scientists, who each year review hundreds of applications to select the best and brightest young scientists for our awards.

Our **INDIVIDUAL, FOUNDATION, AND CORPORATE PARTNERS** who have made significant commitments to expand our programs over the years to ensure that the best emerging talent chooses and remains in cancer research.

Our **BROADWAY THEATER PARTNERS** who have made Damon Runyon Broadway Tickets a fantastic way to get the best seats in the house while supporting the future stars of cancer research.

Our **DONORS**, large and small, who have supported Damon Runyon for 70 years and know that **100% of their donations go to high-impact researchers.**

THE PACE OF PROGRESS IS ACCELERATING.
Now is the time to stand behind and support the best minds in science to put an end to cancer!

Board of Directors

DAMON RUNYON
CANCER RESEARCH
FOUNDATION

ONE EXCHANGE PLAZA
55 BROADWAY, SUITE 302
NEW YORK, NY 10006

DAMONRUNYON.ORG