# Damon Runyon and William Raveis Charitable Fund Announce Sponsored Scientists

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This year the William Raveis Charitable Fund sponsors five outstanding young scientists, committing $450,000 to innovative projects with the greatest potential to impact cancer research. This support helps us foster the next generation of brave and bold scientists and fill gaps in traditional research funding that threaten future breakthroughs.

We are grateful to everyone at William Raveis for their partnership and support in raising more than $2.5 million for Damon Runyon since 2015 through various events and the annual Raveis Ride + Walk. The partnership has sponsored 18 scientists in New York, Connecticut and Massachusetts, with research covering a range of cancers including breast, lung, blood, colorectal, skin, pancreatic, brain, gastric and pediatric.

2020 William Raveis Charitable Fund Sponsored Scientists:

Damon Runyon Clinical Investigator Vinod Balachandran, MD, at Memorial Sloan Kettering Cancer Center, is focusing on pancreatic cancer, which has a poor prognosis with 95% of patients dying within five years of diagnosis. As a physician scientist, Balachandran has access to rare patients who survive, on average, six years with pancreatic cancer and whose tumors have 12-times as many activated immune T cells as patients who have more typical poor outcomes. T cells are highly specialized cells of the immune system designed to protect the human body from infections and cancer. He has discovered that their exceptional survival is linked to T cells recognizing novel cancer proteins that make these cancers resemble infections. His research aims to better understand these unique cancer proteins in long-term survivors, which may lead to novel immunotherapies to treat all patients with pancreatic cancer.

Damon Runyon Clinical Investigator Adrienne Boire, MD, PhD, at Memorial Sloan Kettering Cancer Center, is investigating leptomeningeal metastasis, or spread of cancer cells into the spinal fluid, a devastating complication leading to rapid neurologic disability and death. Boire is analyzing patient samples, and in parallel, mouse models of this disease to shed light on the molecular

mechanisms that describe cancer cell interactions with their microenvironment. This research may suggest new targets for therapeutic intervention, paving the way for novel treatment approaches.

Damon Runyon Fellow Kunitoshi Chiba, PhD, at Brigham and Women's Hospital, investigates how cancer cells evade a patient's immune system. Though checkpoint blockade therapies have expanded treatment options for some cancer patients, many do not respond or form drug resistance. Chiba is using molecular and genetic approaches to dissect the ways that cancer-associated mutations alter the tumor environment to avoid being detected by the immune system. The aim of this research is to improve the efficacy of cancer immunotherapy so many more patients will benefit.

Damon Runyon Physician-Scientist Lillian Guenther, MD, at the Dana-Farber Cancer Institute, is investigating Ewing sarcoma, an aggressive bone tumor affecting children and young adults with low cure rates. Guenther aims to identify critical genes on which Ewing sarcoma cells are dependent for survival, with the goal of discovering weaknesses in these cancer cells that may be exploited to stop cancer growth. CITED2 is of particular interest as a Ewing sarcoma-specific dependency gene based on a genome-wide screen in hundreds of cancer cell lines. Her goal is to develop new directed cancer therapies for patients with this devastating disease. She hopes that these studies will have an additional impact on the treatment of other cancers where CITED2 has been shown to play a role, including acute myeloid leukemia.

Damon Runyon-Dale Frey Breakthrough Scientist Sigrid Nachtergaele, PhD, at Yale University, is investigating the roles of RNA methylation in cancer development. Methylation is a process that chemically tags mRNA to alter gene expression and protein production. She has discovered a novel enzyme (m1A) that modifies RNA in this way and aims to uncover how malfunctions can lead to cancer. Her investigations will expand the understanding of how mRNA modifications are regulated and result in altered cell signaling and growth in normal and cancer cells.  Building on this knowledge, her goal is to identify novel therapeutic targets for cancer.

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