Memorial Sloan Kettering Cancer Center

FUNDING THE FUTURE: EARLY-CAREER SCIENTISTS AT MSK

Young investigators often bring exciting new ideas to exploring disease—which is one reason they face challenges in funding their research. Thoughtful donors fill that gap. Meet three gifted MSK physician-scientists whose work is among the most advanced in their fields, thanks to philanthropic support of their early explorations.

OUTSMARTING SARCOMAS AND OTHER RARE CANCERS

Ping Chi, MD, PhD, researches and treats sarcomas, rare cancers with more than 50 subtypes. MSK is one of the few cancer centers worldwide with the expertise, resources, and patient population to study these diseases.

"I focus on several subtypes, such as gastrointestinal stromal tumors (GIST)," says Dr. Chi. "Many GIST patients eventually develop resistance to the standard treatment protocol. It's not unusual—cancers too often develop new mutations that overcome a previously effective therapy. We need to outwit them." Dr. Chi runs clinical trials on drugs to prevent or stop resistance.

She is also excited about the minimally invasive liquid biopsy. "Liquid biopsies allow us to see mutations that drive cancer through a blood test—we can assess and adjust medication in real time," she says. "If we could develop one type of therapy that circumvents most resistance mechanisms, and intervene early, that would be ideal."

Ping Chi, MD, PhD, Medical Oncologist

"Donors fund the time my lab needs to advance care. Time is what we want to give every patient with cancer—they cannot wait, and neither should we."

Share your thoughts with us! Call us at 800.585.4118 or send us an email at annualgifts@mskcc.org. If you would like to make a gift, just call, or visit giving.mskcc.org/donate.

Sarat Chandarlapaty, MD, PhD, Medical Oncologist

A DISCOVERY FOR TREATMENT-RESISTANT BREAST CANCER

In 2012, Sarat Chandarlapaty, MD, PhD, was eager to learn why some breast cancer patients were developing resistance to hormone therapies. He was working with Michael Berger, PhD, who was developing MSK-IMPACT, the breakthrough method to sequence tumor tissue for mutations in the 468 genes associated with cancer.

Dr. Chandarlapaty had a novel concept. He wanted to sequence tissue samples from the cancer that had spread. At that time, everyone else was focused on analyzing the original tumor. "These women had run out of options," he says, "and we needed to understand what was driving their metastasis, so we came up with a new way to find out."

Thanks to philanthropic funding, Dr. Chandarlapaty moved forward. Many of the women had an ESR1 mutation—which was not in the original tumor. Their cancer had genetically changed over time with exposure to hormone therapy. Six years later, this scientist's work is helping change the way advanced breast cancer is treated.

"My early research was speculative, risky—so philanthropic funding paid for it. Once I had the data, I applied for, and received, NIH funding."

FIRST-EVER TREATMENTS FOR RARE BLOOD CANCERS

Omar Abdel-Wahab, MD, is an oncologist and scientist who explores blood cancers. He was a leader in MSK research that led the FDA to approve a first-of-its-kind drug for relapsed or refractory acute myeloid leukemia (AML) in 2017.

"Diagnosing rare blood cancers is complex—I like the challenge," says Dr. Abdel-Wahab. He researches malfunctions in protein particles called spliceosomes, which may lead to cancer. Spliceosome mutations are common in blood cancers.

Enasidenib, the FDA-approved drug, helps the 12% of AML patients who have the IDH2 mutation and who have become resistant to other treatments. It's the first drug option for them—ever.

Dr. Abdel-Wahab also helped find a new use for an existing drug, vemurafenib, when his team found the BRAF mutation in Erdheim-Chester disease (ECD), a blood cancer so rare that patients number in the hundreds. This is the only FDA-approved drug for patients with ECD.

Omar Abdel-Wahab, MD, Hematologic Oncologist

"Philanthropy is the seed capital for the next wave in cancer treatments. It not only launched my career—it now funds 50% of my work."

Thank you—your philanthropy makes scientific discovery possible.