Five Damon Runyon Alumni Named HHMI Investigators

June 4, 2018 By Damon Runyon Cancer Research Foundation

Five Damon Runyon alumni are among the 19 individuals named Howard Hughes Medical Institute (HHMI) Investigators this week. These scientists were selected because they ask hard questions in uncharted territories of biology and have the potential to make breakthroughs that will benefit humanity. The appointment provides flexible funding of $8 million dollars over a seven-year term for each scientist, enabling them to pursue provocative fundamental questions of critical importance to biomedical progress.

“We are delighted that our alumni are being recognized for their significant accomplishments and their promise to make future advances in healthcare. This is a testament to our strategy to foster the next generation of leaders while they are just venturing out into the research world with their bold, risky ideas,” said Lorraine Egan, president and CEO, Damon Runyon Cancer Research Foundation.

Meet our distinguished alumni:

Thomas Bernhardt, PhD (Damon Runyon Fellow ’02–’03), at Harvard Medical School, is focusing on how bacteria build their cell wall in order to grow and divide. Understanding the mechanisms of bacterial cell wall synthesis has critical implications for human disease and health—including new targets to combat drug-resistant infections.

Howard Chang, MD, PhD (Damon Runyon Scholar ’06–’08), at Stanford University, is probing the mystery of a class of genes called long noncoding RNAs, which are pervasive in the human genome, but do not produce proteins like normal genes. Long noncoding RNAs are now known to be important in cancer and other human diseases, as well as development and aging.

Ralph DeBerardinis, MD, PhD (Damon Runyon Clinical Investigator ’11–’14), of the University of Texas Southwestern Medical Center, studies the metabolic pathways used by a cell to grow, develop, and expend energy. Understanding what goes wrong in these pathways when cancer and other diseases develop will lead to therapeutic agents that selectively target tumors, stopping their growth, while leaving metabolism in the rest of the body undisturbed.

Elizabeth Sattely, PhD (Damon Runyon Fellow ’08–’10), at Stanford University, is developing plants that can produce lifesaving drugs and building stronger plants along the way. Her lab engineered a

common tobacco plant to produce a chemical that is used to create etoposide, a chemotherapy drug that treats various forms of cancer. This is potentially a less expensive and more efficient way of producing the vital drug.

Feng Zhang (Damon Runyon-Rachleff Innovator ’12–’14) of the Broad Institute of MIT and Harvard, is a leader in developing genome editing technologies, including CRISPR. His tools are being used globally to modify DNA for a wide range of applications, from improving crops to studying disease. The hope is genetic errors in patients’ cells will be corrected to treat disease someday.

Read more about the new HHMI investigators here.

This post was originally published on May 23, 2018, by Damon Runyon Cancer Research Foundation. It is republished with permission.

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