Seven Damon Runyon Alumni Elected to Prestigious National Academy of Sciences

This brings the total number of Damon Runyon scientists who are members of the National Academy of Sciences to 86.

May 8, 2020 By Damon Runyon Cancer Research Foundation

Seven Damon Runyon alumni were elected to the National Academy of Sciences (the science "Hall of Fame"), one of the highest honors that can be given to a U.S. scientist. This membership recognizes their distinguished and continuing achievements in original research.

Damon Runyon alumni were part of the 120 newly elected members and 26 international members joining the Academy, which was established in 1863.

This brings the total number of Damon Runyon scientists who are members of the National Academy of Sciences to 86.

Howard Y. Chang, MD, PhD (Scholar '06-'08), Stanford University School of Medicine

Chang's research focuses on understanding how small molecules attached to the DNA affect gene expression and coordinate cell fate and function, as well as on the role played by long noncoding RNAs in biological development, cancer and aging.

Scott N. Keeney, PhD (Fellow '94-'97), Memorial Sloan Kettering Cancer Center

Working with yeast and mice as model organisms, Keeney and his team are examining the molecular details of how cells repair the double-stranded DNA breaks that initiate the exchange of genetic information between homologous chromosomes during the formation of gametes. Understanding how this process fails in diseases such as Down syndrome and some cancers may lead to new therapies.

Judy Lieberman, MD, PhD (Fellow '84-'86), Boston Children's Hospital and and Harvard Medical School

The Lieberman lab studies cytotoxic T lymphocytes (CTL) that induce cell death in the immune defense against viral infection and cancer. Granzyme A, the most abundant CTL death-inducing protease, triggers a novel form of programmed cell death. The Lieberman lab uncovered the

molecular basis for DNA destruction in this pathway.

Michael K. Rosen, PhD (Fellow ‘93-‘95), University of Texas Southwestern Medical Center

Rosen’s research focuses on compartments within a cell, called biomolecular condensates, which concentrate proteins and nucleic acids without a surrounding membrane. Biomolecular condensates form through phase separation, like oil and water. These phase-separated structures are involved in many fundamental cellular mechanisms in health and disease.

Lorraine S. Symington, PhD (Fellow ‘83-‘85), Columbia University Medical Center

Using yeast as a model organism, Symington’s lab studies how cells repair harmful breaks in DNA strands with homologous recombination. Defects in this repair mechanism have been associated with increased mutations and cancer. This research may lead to novel drugs that increase DNA damage, or disable other repair mechanisms, for treating cancers with homologous recombination deficiencies.

Peter Tontonoz, MD, PhD (Scholar ‘99-‘00), University of California, Los Angeles

The Tontonoz laboratory focuses on how lipids control gene expression and the role of nuclear receptors in lipid metabolism. These studies are expected to provide insight into fundamental regulatory strategies and may identify targets for therapeutic intervention in diabetes, obesity and cardiovascular disease.

Robert Tycko, PhD, (Fellow ‘86), National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health

The Tycko lab is developing experimental techniques that can elucidate the structural properties of proteins important in biology and human disease using solid state NMR techniques and electron microscopy. This research aims to provide new structural and mechanistic information about protein assemblies that are associated with Alzheimer’s disease, type 2 diabetes and AIDS.

This post was originally published by Damon Runyon Cancer Research Foundation. It is republished with permission.
