The Leslie Gehry Brenner Prize for Innovation in Science

The Hereditary Disease Foundation created the Leslie Gehry Brenner Prize for Innovation in Science to honor Leslie's memory. This annual prize of $100,000 reflects Leslie's many talents and gifts – originality, spontaneity, precision and rigor – all critical attributes in a scientist.

My daughter, Leslie died of uterine cancer on November 16, 2008, one month after her 54th birthday. A wonderfully talented, original, free spirit, Leslie made us better by her presence and we mourn her absence. She was a gifted artist – creative with everything she touched. She drew magnificently and was an inspired painter, photographer and filmmaker. She celebrated life with joy and was extraordinarily courageous in the face of death. Leslie willed her modest estate to the Hereditary Disease Foundation and our family matched her gift.

The past recipients of the Leslie Gehry Brenner Prize for Innovation in Science have been David Housman, for his paradigm-breaking research to discover the Huntington's disease gene; Gillian Bates, for developing the very first mouse model of HD; Leslie Thompson, for innovatively turning skin cells from an HD patient into stem cells; Beverly Davidson, for showing that gene silencing can improve HD symptoms in mouse models; and William Yang, for co-inventing a powerful mouse genetic technology and showing that chemical tags on abnormal HD protein can act as a molecular switch to abolish HD in HD mouse models. Tonight these trailblazers are joined by Anne B. Young.

This year's recipient, Anne B. Young, has always thought outside the box. Deep Brain Stimulation directly came out of Anne’s understanding of how the brain works. She created the MassGeneral Institute for Neurodegenerative Disease (MIND) to promote innovative means of collaboration among scientists, and her new start-up company creates affordable novel therapeutics.

The accomplishments of these Prize recipients honor Leslie's spirit and memory as will the future scientists to be selected in the coming years.

With thanks,

Frank Gehry
Anne B. Young epitomizes the most creative, original, out-of-the-box approaches to science and life. She solves complex scientific puzzles by turning them on their heads and using novel solutions.

She is a brilliant diagnostician and an even more spectacular healer. She addresses the most complex problems with the right combination of medicines and therapies.

But even more so, she is a healer of hearts and souls beyond medicines. She respects and loves her patients and they adore her. From Michigan to Venezuela to Mass General, patients and families follow her like a beacon of hope and acceptance. We know Anne is on our side.

Anne’s passion and enthusiasm have always been with patients and families who are often considered “untouchable,” particularly patients with Huntington’s disease or Parkinson’s disease.

We went to Venezuela annually from 1979 to 2002. Anne joined us as a critical member of the team in 1981. She personally performed many of the 20,000 neurological examinations and drew many of the 4,000 blood samples.

Anne personally performed many of the 500 diagnoses of HD. As “Gene Hunters,” the accuracy of each diagnosis is essential. One misdiagnosis could lead the team astray from finding the gene. Knowing which person actually has HD is paramount. Finding the DNA marker – the first for any genetic disease – in 1983, is largely thanks to Anne!!! A decade later, in 1993, finding the HD gene itself – is thanks to Anne’s brilliance and perseverance!!

Anne’s research interest has always been in an area deep in the brain called the basal ganglia which controls movement. HD wrecks havoc by causing too much movement; Parkinson’s disease too little.
Anne and her late husband, John B. Penney, discovered an elegant and sophisticated explanation for how these brain areas communicate with each other – or fail to do so.

Their model still holds true – even 30 years later!!

Deep Brain Stimulation, the most modern and least invasive means of intervention today, is based on their profound and insightful model.

Anne created the MassGeneral Institute for Neurodegenerative Disease (MIND) in 1999. Everyone at MIND collaborates and shares imagination and innovation. Now Anne has launched a new startup company, Effective Therapeutics, LLC. Her mission and passion is to develop novel, innovative and affordable treatments and cures!!

Anne leads with creativity, imagination, catalytic force, grace, brilliance, humor, kindness, warmth and empathy.

For all these and more, Anne is the recipient of the 2016 Leslie Gehry Brenner Prize for Innovation in Science.

Anne B. Young, M.D., Ph.D., is a Phi Beta Kappa, summa cum laude graduate of Vassar College in 1969. She received an M.D. and a Ph.D. in Pharmacology from Johns Hopkins in 1974, and then completed residency training in neurology at the University of California, San Francisco in 1978. Directly after residency she was recruited to the University of Michigan as Assistant Professor of Neurology. She and her husband, John (Jack) B. Penney, M.D., created a Movement Disorders Unit where they focused on Huntington’s and Parkinson’s disease. She rose to Professor of Neurology in 7 years. She was recruited in 1991 to Harvard Medical School as Julieanne Dorn Professor of Neurology and Massachusetts General Hospital as its first female chief in its 200 year history. Anne maintained her clinical practice and laboratory throughout her 21 years as Chief of Service. Anne holds membership in the National Academy of Medicine and the American Academy of Arts and Sciences. She is also the only person (male or female) to have been president of both the international Society for Neuroscience and the American Neurological Association.
As a graduate student with Solomon H. Snyder, M.D., Anne provided the first biochemical evidence of glutamate as a neurotransmitter showing clearly that glutamate is the transmitter of the cerebellar granule cells. She developed biochemical techniques to measure inhibitory amino acid neurotransmitter receptors in mammalian brain and spinal cord. As a faculty member at the University of Michigan, Anne and her late husband Jack worked together to establish the first biochemical data that glutamate was the neurotransmitter of the corticostriatal, corticobulbar and corticospinal pathways. They developed film-based techniques for quantitative receptor autoradiography.

Working in depth on postmortem Huntington’s brains and experimental models of Huntington’s disease, they provided evidence to support their novel model of the basal ganglia published in 1986 and 1989. This model has held up over 30 years and is still the most widely cited model of basal ganglia function (the basal ganglia are the brain regions affected by Huntington’s, Parkinson’s diseases and related disorders). The model predicted a network for the control of movement that is disrupted at various nodes in different movement disorders. Alterations in these nodes in Huntington’s and Parkinson’s diseases and related disorders suggested therapies such as deep brain stimulation. Anne has worked more recently on gene expression changes in Huntington’s and Parkinson’s diseases. She established the MassGeneral Institute for Neurodegenerative Disease (MIND) in 1999. The mission of MIND is to accelerate the development of novel and effective therapies for neurodegenerative diseases. It brings together in the same place scientists at MGH concentrating on studies of Alzheimer’s, Parkinson’s, Huntington’s diseases and amyotrophic lateral sclerosis. Labs are encouraged to translate discoveries into assays for drug discovery and animal models for drug trials. Anne has spearheaded the comprehensive drug discovery efforts at MIND and MIND investigators have been successful in identifying drug targets for Parkinson’s, Huntington’s, Alzheimer’s and ALS.

In 2015, Anne joined David Housman (the first Leslie Gehry Brenner Awardee) to co-found a start-up company, Effective Therapeutics, LLC. The mission of ET, LLC is to develop effective and affordable therapies for neglected diseases, particularly Huntington’s disease. Although certainly gene-silencing methods may prove effective in HD, it will remain too expensive for most individuals with HD throughout the world. ET, LLC plans to develop small molecules, many of which have already been in man for other issues, for the treatment of HD and related diseases.
Anne credits the Hereditary Disease Foundation, Milton Wexler and Nancy Wexler with her career success. She was invited to her first HDF workshop in 1979 and was astonished at the informative, frank and creative discussion. Nancy Wexler founded the US-Venezuela Huntington’s disease Collaborative Research Project in 1979. When Anne was invited in 1981 to go to Venezuela as a neurologist to examine all the family members, she eagerly accepted. That and subsequent trips, until 2002 when Chavez came to power, changed her and her family’s lives. From all these experiences, she is dedicated to finding an affordable, effective therapy for HD.

Thank you to the Gehry Family for
The Leslie Gehry Brenner Prize for Innovation in Science

On behalf of all families with Huntington’s disease and all scientists worldwide working on Huntington’s disease, the Hereditary Disease Foundation thanks the Gehry family for their continuing generosity. Berta, Frank and the entire Gehry family are critical members of our community!! From Founding Trustees in 1967 to today, you have brought out the best and most creative in how we think, feel and change the world!!!!

We are getting close to discovering treatments and cures using stem cells, gene therapy and other novel techniques and breakthroughs in technology. We are even discovering genetic modifiers. The Gehry family’s support over many decades is continuing to push the creative edge even further – getting funds in the right hands right away!!!!