

MDA's *Wings* Milestones in ALS Research
OVER WALL STREET®

Highlighting ALS Research Efforts

1874



French neurologist **Jean Martin Charcot** establishes Amyotrophic Lateral Sclerosis (ALS) as a distinct disease.

1940s

Yankees first baseman **Lou Gehrig** dies of ALS in 1941, prompting ALS to become widely known as Lou Gehrig's disease.



1950s



MDA begins funding basic ALS research with the help of Lou Gehrig's widow and **MDA** National Campaign Chairperson, Eleanor.

1960s

MDA funded biochemical studies of metabolism and nerve-to-muscle signal transmission begin, while studies of **microscopic** structure of nerve and muscle cells continue.



1970s



MDA funded studies of ALS cases raise questions about the environment and ALS. There is a deeper understanding of how nerves and muscle fibers **interact**.

1980s

Various **clinical trials** begun and deemed ineffective, while ALS genetics are studied.



1990s



MDA continues its research focus and begins to fund studies to identify ALS risk factor genes. Investigations into magnetic resonance **spectroscopy**, an imaging technique, in the ALS brain are studied.

Milestones in ALS Research

Made Possible Through...



2000s

In 2001, **MDA's Wings of Hope** is founded by ALS patient Toni Diamond and her husband Warren Schiffer. Through Columbia's MDA/ALS clinic another patient, Michael P. Beier becomes part of the effort. Through his rallying cry the Wall Street Community unites and answers his call for support and the event becomes **MDA's Wings Over Wall Street**, raising over \$6 million for ALS research since its inception.

Aimed at finding cures for Amyotrophic Lateral Sclerosis (ALS) **MDA's Wings Over Wall Street** is one of MDA's most successful fundraising events benefiting the research teams at the Eleanor and Lou Gehrig MDA/ALS Research Center at Columbia and the Robert Packard Center for ALS Research at Johns Hopkins. As you can see from the milestones below, the support that Wings provides these two stellar institutions brings us closer to a cure each year.



Toni M. Diamond
1958 – 2004

In 2001 Packard Center scientists discover that stem cells carrying extra glutamate transporters can prevent neuron damage.

Columbia begins banking tissue and DNA of ALS patients in an effort to initiate an ALS State Registry; holds two international ALS symposia.

The formation of the world's first Motor Neuron Center at Columbia University is made possible in part because of MDA's Wings Over Wall Street. Previously, scientists and doctors worked independently of each other, often repeating research and not sharing results.

In 2002, Packard Center scientists develop the first animal model for the ALS2 gene. The first use of human embryonic stem cells in ALS models yields information that rats' spinal cords protect against a paralytic virus.

MDA's Wings Over Wall Street transforms Columbia's MDA/ALS Research Center into one of the most active ALS research centers at present. It is recognized as a leader in providing the most comprehensive patient care, while conducting aggressive clinical and science based research.



Michael P. Beier
1963 – 2003

In 2004, Packard Center scientists find that embryonic stem cell-derived motor neurons form working circuits with muscle in paralyzed mice. In 2005 their results find that the new dynactin mouse model of ALS is the truest yet.

In 2006, Packard Center scientists create a fruit fly version of motor neuron disease to search for new drug targets, identify two factors that interact with cells that may increase and protect against the toxic progress triggered by ALS, and identify a novel gene that is essential for motor neuron generation.

In 2006 the Columbia Center finds that astrocytes, which normally support motor neuron survival, kill exclusively motor neurons in tissue culture when those astrocytes have abnormal SOD proteins.

Because of MDA's Wings Over Wall Street the aggressive research being conducted by both institutions is yielding promising results. But we need your support to continue the quest to cure ALS. To find out how you can support the fight against ALS, please contact:

MDA's Wings Over Wall Street
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