

**The following is a description of Hereditary Disease Foundation Workshops we have held in 2008:**

### **Pipelines and Pathogenesis and Future Directions for the HDF**

January 26, 2008

Santa Monica, California

The generous participation of by a woman whose husband recently died of HD and her daughter greatly helped workshop attendees grasp the far-reaching and complex consequences of HD.

The January Workshop is always a fantastic opportunity for the scientists to get an overview of where the current research stands and how to proceed.

### **Gene Delivery and New Developments**

January 27, 2008

Santa Monica, California

One of the most conceptually appealing options for treating and even curing Huntington's disease (HD) is to target its root cause by eliminating, or reducing, mutant huntingtin. As explained by HDF's Executive Director for Science Carl Johnson, the main options for achieving this goal are targeting huntingtin messenger RNA (mRNA) using RNA silencing techniques, or targeting the huntingtin protein using antihuntingtin intrabodies. How, when, and where to deliver these cargoes for maximum efficacy and minimal side effects, however, remains uncertain. In this workshop, participants identified outstanding issues to be discussed in greater depth at an upcoming workshop dedicated to establishing a research agenda for gene delivery as a treatment for HD.

Participants agreed that the most important and immediate task to be accomplished is to clearly define the open questions and issues that need to be addressed to move gene delivery into the clinic. The first clinical trial will mark the beginning of a long process of development, and it will be important to identify at the outset the aims of this process as clearly as possible.

### **The Hereditary Disease Foundation and The Lou Ruvo Brain Institute Common Threads**

#### **Workshop II: Calcium in Neurodegeneration**

February 5-6, 2008

Las Vegas, Nevada

Age-related neurodegenerative disorders, such as Huntington's (HD), Parkinson's (PD), and Alzheimer's (AD) diseases, are major causes of morbidity and mortality worldwide. Despite having very different symptoms and pathologies, these different diseases also have much in common. All are characterized by the accumulation of protein aggregates in the brain, for example. What do the similarities and differences reveal about the underlying pathology that drives these neurodegenerative disorders, and how might that knowledge help scientists develop new preventions and therapies? To help answer those questions, the Hereditary Disease Foundation and Keep Memory Alive, the foundation that supports the Lou Ruvo Brain Institute in Las Vegas, Nevada, sponsored their second "Common Threads" workshop in February. The workshop was devoted to the calcium hypothesis, which suggests that imbalance in the level of calcium in certain neurons in the brain is a major trigger for neurodegeneration.

## **Proving Pathogenesis Working Group**

June 13-14, 2008

Santa Monica, California

This smaller working group meeting focused on creating a path leading towards more precisely defining therapeutic pathophysiology and finding druggable targets to cure Huntington's disease.

## **Planning for clinical trials of RNAi-based therapy in Huntington's disease**

July 16-17, 2008

New York, New York

Participants included researchers who focused on both viral and non-viral delivery of RNAi from both academia and interested companies.

The goals of the workshop were to discuss 1) where, at what stage of disease progression and by what means RNAi therapy would be delivered; 2) what behavioral, imaging and other biomarker readouts of the HD phenotype and of potential side effects would be utilized and 3) what experimental results from wild type (safety) and HD model (efficacy) animals would be required before proposing to proceed with human trials.

## **Venezuela Data Workshop**

August 6-7, 2008

Cambridge, Massachusetts

Researchers working with the data collected in Venezuela came Cambridge to discuss the status of their current research findings. A primary goal of this workshop was to work on papers for publication.

## **The Milton Wexler Celebration of Life Symposium**

August 8-10, 2008

Cambridge, Massachusetts

Milton invented the small, interdisciplinary workshop with a maximum of around 18-20 people. When he heard how many people we were inviting to our big August workshops, he was justifiably horrified. He said, "How can we stimulate creativity, imagination and sharing in such a large setting?" And sometimes it is difficult.

We reassured him, however, that people trust each other and are willing to talk openly and present unpublished data.

This year's meeting encompassed the ideas of more than 330 people who traveled to Cambridge from all over the world for four days of intense discussion, debate and designing future therapies for Huntington's disease and related disorders such as Alzheimer's disease, Parkinson's disease and Lou Gehrig's disease. There were over 200 abstracts, posters and talks. We'll post a report from the Workshop on our website as soon as it becomes available.