

Hereditary Disease

F O U N D A T I O N



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Two New Honors for HDF President Nancy Wexler

Academy inducts 196 into the fold
Harvard ceremony honors leaders

By Associated Press / October 9, 2005



CAMBRIDGE — Scholars, artists, and executives are among new fellows and honorary members who were inducted yesterday into the 225th class of the American Academy of Arts and Sciences.

The new members were inducted in a ceremony at Harvard University's Sanders Theatre.

Among the inductees speaking at the ceremony were Tom Brokaw, former anchor of the NBC Nightly News; physicist and Nobel laureate Eric Cornell; Harvard Law School dean and former White House official Elena Kagan; historian and University

of Chicago provost Richard Saller; poet Susan Stewart; and genetics pioneer Nancy Wexler.

Some of the other inductees include: Rudiger Wehner, a researcher who showed how the honeybee's eyes and brain use the sky for navigation; Edith Flanigen, a pioneer in molecular chemistry who invented more than 200 synthetic materials; Christopher Donnan, the leading specialist on Peru's oldest pre-Hispanic state; William Bridges, the inventor of the Argon laser; Horton Foote, an Academy Award-winning screenwriter; Art Spiegelman, a Pulitzer Prize-winning cartoonist; Larry Page and Sergey Brin, cofounders of Google; and Anne Moore, chairwoman and CEO of Time, Inc.

The academy honored 196 inductees from 26 states and 17 foreign honorary members from 10 countries. Founded in 1780 by John Adams, James Bowdoin, John Hancock, and others, the academy has honored leaders ranging from George Washington to Albert Einstein. ■

*Please see page 2,
Science is Cool!*

Steven Finkbeiner Receives Lieberman Award

HDF has named Steven Finkbeiner, M.D., Ph.D., of the Gladstone Institute of Neurological Disease at UCSF, as the recipient of its highly esteemed Lieberman Award. The award was initiated by longtime HDF trustee Harry Lieberman to catalyze innovative efforts in the search for a cure for Huntington's disease.

The annual honor, featuring \$150,000 in research funding over two years, is



widely considered to be among the most prestigious awards honoring breakthrough research into the devastating illness.

Finkbeiner was recognized for resolving a mystery associated with Huntington's disease, using a robotic microscope that he custom-designed to

*Continued on page 3,
Steven Finkbeiner*

HDF and World Hero Michael C. O'Brien

Michael Corey O'Brien grew up knowing that he had a 50 percent chance of inheriting the mutant Huntington's disease gene. He watched his mother struggle with the disease for over 27 years before it finally took her life. His sister Diane, who inherited the disease, died from a fall in 1997—loss of balance being a common symptom. A few years later, another sister, Alice O'Brien Ross, began to show signs of the disease and is now in its early stages.

For Mike, living in the present was a priority. He received a master's degree in political science, but knowing that at any time he could be diagnosed with Huntington's, took less traditional jobs—jobs that offered adventure. He has been a river-raft guide and a bartender, but it was mountain climbing that became his passion.

A few years ago, Mike and his brother Chris had an idea. They found a way

to bridge their shared thirst for adventure with their common desire to increase Huntington's awareness and raise funds to fight the disease. They decided to climb Mount Everest. As the first brothers to summit Mount Everest together, they hoped to garner media attention for Huntington's and raise \$100,000 for HDF. They embarked on their journey last spring.

On May 1, 2005, Mike tragically fell to his death while crossing Everest's treacherous Khumbu Icefall.

But his legacy lives on today. Chris O'Brien and his siblings Kathryn, David, Meghan, and Alice, their father Dr. David O'Brien, Mike's longtime partner Rebecca Stodola, and many



Mike and Chris O'Brien

friends are continuing this work in Mike's name. To date, almost \$80,000 has been raised towards their \$100,000 goal. Learn more about the O'Brien family, and how you can help, at www.hdfoundation.org. ■

**This article was compiled from excerpts of Michael's eulogy, delivered by his brother-in-law, Bruce Davidson.*

SCIENCE IS COOL!

Women's Adventures in Science featuring Nancy Wexler!



Nancy Wexler, Hereditary Disease Foundation President, was also chosen as one of ten influential women scientists to be featured in the **National Academy of Science's** new series *Women's Adventures in Science*. The series is meant to attract and inspire middle-school students, particularly young girls, to science, and to making a difference. The book and web-site follow an animated Nancy as she first becomes aware of Huntington's disease and eventually dedicates her life to finding a cure. The book is available online at www.Amazon.com, and to educators at www.Scholastic.com. The paperback edition will be available in the spring.

Congratulations, Nancy! ■

Visit Nancy online at www.IWasWondering.org.

Letter from the President

Dear Friends,

When you are at risk for Huntington's disease, reaching 60 is a delicious milestone! When you are 20 and 30 – you're never sure if the day ever will arrive. So this is a celebration I'd like to shout from the rooftops!

Herb Pardes, my longtime partner, HDF Trustee, and President and CEO of New York Presbyterian Hospital, asked me what I wanted to commemorate reaching this joyous time and I answered - "A CURE FOR HUNTINGTON'S DISEASE AS FAST AS POSSIBLE!!!!!" I always answer this when someone asks what I especially want most in life.

So this is the clarion call to friends around the country and the world to come celebrate and have a good time. We are celebrating the scientists who have done so much to bring us almost to the pinnacle of what we want to achieve – the CURE! We are raising funds so that these scientists and others together can push us up to the cure. We want treatments for symptoms, we want to roll back the disease once it starts, we want to prevent the HD gene from even beginning its mischievous handiwork – WE WANT THE CURE NOW AND WE DON'T WANT TO WAIT ANY LONGER!!!

On November 1st in New York City, the Hereditary Disease Foundation is holding a Gala at the Waldorf Astoria to honor the scientific accomplishments of HDF's extraordinary scientists. The thanks belong to them and also to every single person who, over the years, has made their work possible, and to everyone who continues to support their work.

There is so much to celebrate - work that happens every day, all around the world. Our unique workshops are hotbeds of activity: pioneering research is discussed and scientific boundaries are pushed, future areas for research are explored, and novel approaches to science are offered by the world's most promising scientists. HDF's esteemed Scientific Advisory Board continues to fund fellowships and research projects that are uncovering how the huntingtin gene destroys the brain so that drugs can be developed to slow, reverse and prevent the process. In laboratories at premier institutions from Los Angeles to Paris and New York to Auckland, scientists are dissecting this disease and contributing their findings to a research community wholly committed to finding a cure.

We are working to promote Huntington's disease awareness at the local, national and international levels, and we are in the midst of an internal reorganization which will help us to expand our funding network and strengthen the work we do. It is an exciting time at HDF, and I'm thrilled that you are a part of it!

There is one more important honor to note: The Hereditary Disease Foundation applauds, with respect and love, the life of our friend Michael Corey O'Brien, a man whose experience with Huntington's led him to the highest place on earth. Mike and his brother Christopher, a new M.D., Ph.D. graduate, attempted to summit Everest together as the first American brothers to reach the top and raise awareness and funds for Huntington's disease research. Chris continues the fight and Mike's spirit does as well. We offer our condolences to the O'Brien family, and pledge in Mike's memory and for the entire O'Brien family that we will find a cure.



Nancy Wexler, Ph.D., President

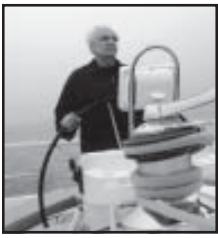
Steven Finkbeiner,

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Finkbeiner: I think the genius of the Hereditary Disease Foundation is that they have the ability to identify work that will have a major impact on Huntington's disease and they move quickly to support it. In addition, they have a clear goal to cure Huntington's disease and an overarching plan to achieve this goal... I owe HDF a deep debt of gratitude and hope that I can repay that debt through the research we do and by fostering the development of my own trainees in the same way that HDF has helped me.

allow the tracking of changes in cells, including those associated with neurodegeneration, over long periods of time. As reported in a *Nature* cover story last fall (October 14, 2004), Finkbeiner and his team determined that abnormal deposits of mutant huntingtin protein, which appear in the brains of all Huntington's disease patients, are not the cause of neuronal death, but rather are a beneficial coping response on the part of distressed cells. The findings suggest that mutant huntingtin protein inflicts its damage in some form other than as abnormal deposits.

The new funding will enable Finkbeiner and his team to build on these findings. He will use the microscope to elucidate which forms of mutant huntingtin are most poisonous. Identifying these toxic forms could reveal how mutant huntingtin causes degeneration and may lead to specific therapies that block it. ■



A Note from the Board

Dear Friends:

For more than 35 years, Hereditary Disease Foundation has sought to understand and stop the devastation of Huntington's disease. With your help, we have initiated and funded groundbreaking research, and fostered unique collaborations within the scientific community. Tremendous progress has been made, progress that has confirmed that Huntington's disease *is* treatable.

The knowledge that this killer can be stopped mandates that we must move quickly. With 30,000 people diagnosed, and 150,000 more at risk in the United States alone, there is no time to lose. When we consider the implications finding a cure for Huntington's disease has on other hereditary disorders—schizophrenia, Parkinson's, manic depression, Alzheimer's, Lou Gehrig's, even cancer—our charge takes on an even greater urgency.

Moving swiftly towards a cure means that we at the Hereditary Disease Foundation must be organized so that we can be nimble and expeditious—able to seek out the most promising areas of research for increased funding, capable of supporting those efforts, adept at working with families and scientists to ensure that a single vision and dedication to finding a cure is shared, and able to nurture the seeds of hope.

To do this, we are working closely with Changing Our World, a national philanthropic services firm, to strengthen our own capacity and to develop the infrastructure necessary to deftly solve the Huntington's puzzle. The Foundation is taking the needed steps now, as we prepare ourselves for the final push for a cure.

With your partnership, the Hereditary Disease Foundation will continue to play a vital role in the fight to stop Huntington's.

Thank you,

Frank O. Gehry
Vice-President, Board of Trustees

Thank You!

We wish to thank over 200 HDF supporters and friends who responded to our recent survey. We learned about our strengths and areas where we could improve. You, as a member of the HDF family, play a critical role in shaping the future of the Foundation. Based on your responses, changes are happening. Stay tuned!

Welcome, Karen! Thanks, Jennifer!

We welcome Karen Dean to the HDF family as our new Controller. Karen brings extensive finance and nonprofit work experience, and will play a vital role in HDF's restructuring and reorganization process. Karen can be reached at 212-928-0420 or karendean@hdfoundation.org.

We would like to thank Jennifer Quinn, our former Controller, for her hard work and dedication to HDF. Good luck, Jennifer. We wish you the best!

Hereditary Disease Foundation

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For information about how you can include the Hereditary Disease Foundation in your estate planning, contact Karen Dean at 212-928-0420 or karendean@hdfoundation.org

2005 Funding



Discovering the Molecular and Cellular Causes in the Pathogenesis of HD:

Research Grants:

- Ilya Bezprozvanny, University of Texas Southwestern Medical Center, Dallas
- Alexander Osmand, University of Tennessee, Knoxville
- Isabel Perez-Otano, Center for Research in Applied Medicine, Pamplona, Spain

Postdoctoral Fellowships:

- Pascal Leuraud (Mentor: Emmanuel Brouillet), Centre National de la Recherche Scientifique, Paris, France
- Dobrila Rudnicki (Mentor: Russell Margolis), Johns Hopkins University, Baltimore

Research Contract:

- Leslie Thompson & J. Lawrence Marsh, University of California at Irvine

Identifying Targets for HD Therapeutic Development:

Research Grants:

- Steven Finkbeiner, J. David Gladstone Institute at University of California at San Francisco (Lieberman Award)

Postdoctoral Fellowships:

- Kanae Ijima-Ando (Mentor: Tim Tully), Cold Spring Harbor Laboratory, Cold Spring Harbor, New York
- Sanjay Magavi (Mentor: Carlos Lois), Massachusetts Institute of Technology, Cambridge
- Vibha Taneja (Mentor: Susan Liebman), University of Illinois, Chicago
- Sheng Zhang (Mentor: Norbert Perrimon), Harvard Medical School, Boston

Research Contract:

- Christian Néri, Institut National de la Santé et de la Médicale (INSERM), Paris, France

Testing Potential HD Therapeutics in Mouse Models of HD:

Research Contracts:

- Gillian Bates, Guy's Hospital at King's College, London, UK
- M. Flint Beal, Cornell University School of Medicine, New York
- Beverly Davidson, University of Iowa, Iowa City
- Jeffrey Johnson, University of Wisconsin, Madison
- X. William Yang, University of California at Los Angeles

Diagnostics for HD Pathogenesis and Progression:

Research Contracts:

- John Mazziotta, University of California at Los Angeles
- Edward McCabe, University of California at Los Angeles
- Jean Paul Vonsattel, Columbia University Medical Center, New York

The Hereditary Disease Foundation Funds Cutting-Edge, Imaginative Research

HDF provides financial support for research focused on Huntington's disease and related disorders. Funded research is broad, aimed at critical pathways — from investigating the causes of the disease to the development of treatments, prevention and cures. Research Grants, Postdoctoral Fellowships, and Research Contracts are initially shaped by Dr. Carl Johnson, HDF's Executive Director for Science, to ensure that the work is most relevant to curing HD and does not waste time or money, as much as possible. Proposals are then reviewed for funding by members of HDF's Scientific Advisory Board, an interdisciplinary group of exceptional scientists, who improve the relevance even more.

Currently supported research is seeking to discover the molecular and cellular causes of the disease, identifying sites against which to develop potential treatments, testing putative therapies in animal models of HD, and studying potential diagnostic reagents that may detect and monitor early changes during clinical trials. ■

“Our case is an excellent example where a combination of the financial and intellectual support of Hereditary Disease Foundation greatly facilitated scientific progress.” – Russell Margolis, M.D., mentor of Dr. Dobrila Rudnicki, a postdoctoral fellow funded by the HDF

Recent and Upcoming Events

January 29-30, 2005
Workshop: “Innovation and Standardization: Accelerating the Search for Huntington's Disease Therapies,” Los Angeles, CA

March 19, 2005
Workshop: “Clinical Trials and Biomarkers,” Cambridge, MA

July 24-29, 2005
Gordon Research Conference: “CAG Triplet Repeat Disorders,” South Hadley, MA

October 1-2, 2005
Workshop: “Autophagy in the Pathogenesis of HD,” New York, NY

November 1, 2005
HDF Gala, New York, NY

November 19-20, 2005
Workshop: “Stem Cells in the Treatment of Huntington's Disease,” Los Angeles, CA

January 7-8, 2006
Workshop, Los Angeles, CA

HDF Welcomes New Members of Scientific Advisory Board



Beverly Davidson, Ph.D.
*Roy J. Carver Professor in Internal Medicine
Professor in Neurology,
and Physiology & Biophysics
University of Iowa*



Steven Finkbeiner, M.D., Ph.D.
*Associate Professor of Neurology and Physiology
University of California, San Francisco
Investigator
Gladstone Institute of Neurological Disease*



Robert E. Hughes, Ph.D.
*Assistant Professor, Genetics of Aging
Buck Institute for Age Research*



X. William Yang, M.D., Ph.D.
*Assistant Professor
Neuropsychiatric Institute
David Geffen School of Medicine at UCLA*

<http://www.pbs.org/wgbh/nova/sciencenow/3210/02.html>

Research scientists are hoping that RNAi, already in human clinical trials, will treat a host of diseases, including AIDS, cancer, and Huntington's.