



THE HEINZ C. PRECHTER BIPOLAR RESEARCH FUND

Bipolar Genes Project & Genetics Repository

AT THE UNIVERSITY OF MICHIGAN DEPRESSION CENTER

2011 • Volume 4

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A Decade of Making a Difference

Dear Friends,

This year marks the 10th Anniversary of the Heinz C. Prechter Bipolar Research Fund (previously the Heinz C. Prechter Fund for Manic Depression). Over these past 10 years, you have generously supported us as we conduct some of the most compelling genetic research ever done on bipolar illness.

In fact, thanks to your support in helping us successfully meet two recent challenge grants, an additional \$2.8 million is now available to pour into advanced research on bipolar disorder.

These contributions have enabled us to lay a new foundation for medical research and initiate a number of significant projects. For example, we launched a Genetics Repository, the largest project of its kind in the nation, and we initiated a Longitudinal Study to identify potential illness patterns in bipolar disorder. Our latest project delving into stem cell research will shed new light on the biology of nerve cells from individuals with bipolar illness. These exciting initiatives are only the beginning!

As we celebrate this progress and the Anniversary of the Fund, I would like to thank the brilliant Prechter bipolar research team, under the direction of Dr. Melvin McInnis, and extend my thanks to Mary Sue Coleman, President of the University of Michigan, and Dr. Ora Pescovitz, Executive Vice President for Medical Affairs at the University of Michigan Health System, for their continued support of our quest to find a cure.

Thank you all for "A Decade of Making a Difference."

Waltraud E. Prechter



Heinz C. Prechter
Bipolar Research Fund

A DECADE IN REVIEW

July 6, 2001

Heinz C. Prechter falls victim to suicide at age 59



October 2001

Waltraud "Wally" Prechter and her children establish the **Heinz C. Prechter Fund for Manic Depression** to promote scientific collaboration and medical research focused on the genetics and the intricacies of bipolar disorder



May 2002

Wally Prechter provides testimony before **U.S. Congress** urging a five percent increase in federal funding for the National Institute of Mental Health and bipolar research



June 2002

President George W. Bush appoints Wally Prechter to serve on the **New Freedom Commission on Mental Health** to help improve the mental health care system for all Americans



October 2002

Heinz C. Prechter Fund for Manic Depression raises \$1.25 million at "**The Cure Frontier: Gala Dinner**," the largest single fundraising event for bipolar disorder in U.S. history

“Bipolar disorder, a complex illness at the crossroads of biology, genes, human psychology, and our dynamic environment, will be solved through the collaborative efforts of individuals and families who bear the personal burden of the disorder and research teams of basic and clinical scientists. The future and the base of 21st century medical research in bipolar disorder, or any human illness, is the participation of passionate individuals – those who have bipolar and those who want to cure it!”



Melvin McInnis, M.D.
Thomas B. and Nancy Upjohn Woodworth Professor of Bipolar Disorder and Depression, and Principal Investigator of the Prechter Bipolar Research Projects

“The Prechter Bipolar Genes Project is a jewel and a key priority in an array of premier research programs at the U-M Depression Center. This Center was the first interdisciplinary initiative in the nation dedicated to transforming research, clinical translation, education and public policy of depressive and bipolar illnesses. The research program established by the Prechter Fund has truly accelerated advances in earlier detection and more personalized, effective treatments of bipolar disorder. The greatest achievements are still on the horizon, but within sight.”



John F. Greden, M.D.
Executive Director,
U-M Depression Center
and Founding Chair,
National Network of Depression Centers (NNDC)

A look back...

Initial Scientific Advisory Board 2001-2004

Huda Akil, Ph.D.
Gardner Quarten Distinguished Professor of Neuroscience and Psychiatry
Co-Director and Senior Research Scientist
Mental Health Research Institute
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Emory University School of Medicine
Atlanta, Georgia

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Division of Genetic Epidemiology in Psychiatry
Mannheim, Germany

Manuel E. Tancer, M.D.
Chair
Department of Psychiatry and Behavioral Neurosciences
Wayne State University School of Medicine
Detroit, Michigan

A DECADE IN REVIEW

Spring 2003
Heinz C. Prechter Fund for Manic Depression presents nearly **\$850,000 in research grants** to Stanford University and Harvard University/Massachusetts General Hospital for further study of pediatric bipolar disorders



May 2003
Wally Prechter testifies before the **Michigan Senate Health Policy Committee** seeking parity in health insurance coverage for mental illness



June 2003
Wally Prechter receives the highest honor in the area of bipolar research, the **Mogens Schou Award from the International Society for Bipolar Disorders (ISBD)**, for her efforts to advance breakthrough medical research and for her work to combat the stigma of mental illness

AWARD

October 2003
“**The Cure Frontier: Gala Dinner II**” raises over \$1 million for bipolar disorder research in one single evening



November 2003
The Association of Fundraising Professionals (AFP) presents the Heinz C. Prechter Fund for Manic Depression the **Outstanding Foundation Award** at National Philanthropy Day

AWARD

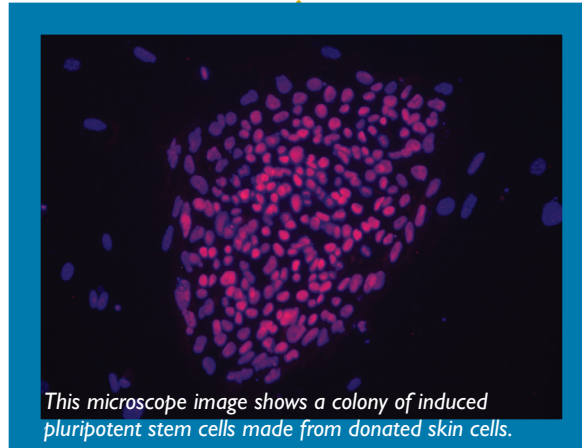
Stem Cell Research Offers New Hope

FOR UNLOCKING THE SECRETS OF BIPOLAR DISORDER

New stem cell lines developed from the skin of adults living with bipolar disorder are providing researchers at the University of Michigan an unprecedented opportunity to delve into the genetic and biological underpinnings of this devastating mood disorder. Scientists will be able to link new findings – such as how gene expression is affected by different medications – to extensive clinical and demographic data from the cell donors, who are also participants in the Prechter Fund's flagship Longitudinal Study of Bipolar Disorder, a long-term study of hundreds of individuals.

“Currently the best treatments for bipolar disorder are only effective for 30 to 50 percent of patients,” says Melvin McInnis, Principal Investigator of the Prechter Projects. “New discoveries have been limited, in part due to the lack of access to tissue and cells from individuals with bipolar disorder. But that is now changing because of the Prechter research program and advances in stem cell research.”

The new stem cell lines were made from fibroblasts from skin samples donated by adult research volunteers both with and without bipolar disorder. In the lab, scientists can coax these skin cells into behaving like embryonic stem cells. Known as induced pluripotent stem cells, or iPSC, these, in turn, can be manipulated to develop into different types of body cells, including brain cells.



This microscope image shows a colony of induced pluripotent stem cells made from donated skin cells.

“We will be able to see if there are differences in how the neurons of a person with bipolar disorder make connections, determine how they respond to different medications and explore potential deficiencies in signaling pathways,” explains

Sue O’Shea, Ph.D., a professor of cell and developmental biology at the U-M Medical School who leads the stem cell lab with Gary Smith, Ph.D, professor of obstetrics and gynecology. So far, five lines have been created. The goal, O’Shea says, is to develop 30 cell lines – 20 from people with bipolar disorder and 10 from control subjects. Creating each line is a painstaking and expensive process. “We often think of stems cells being used in therapies to treat disease, but this is a great example of stem cells’ usefulness for studying the mechanisms

of disease,” O’Shea says. “The iPSC cells renew themselves, so they’re an unlimited source of material and offer hope to individuals with bipolar disorder.”

Bipolar disorder affects 6 million adults in the U.S. Because bipolar disorder runs in families, research at the University of Michigan has focused on studying disease genes. There is no single gene that “causes” someone to become bipolar, but the disease has its roots in genetic vulnerabilities.

February 2004
Wally Prechter appointed co-chair of the **Michigan Mental Health Commission** by Governor Jennifer Granholm

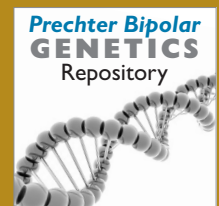
Spring 2004
University of Michigan Depression Center, the Broad Institute/MIT, Wayne State University, the University of Pittsburgh and the University of Cincinnati receive **nearly \$900,000 in research grants** from the Heinz C. Prechter Fund for Manic Depression

May 2004
Heinz C. Prechter Fund for Manic Depression transfers to the University of Michigan Health System and becomes the **Heinz C. Prechter Bipolar Research Fund at the University of Michigan Depression Center**



July 2005
Launch of the **Prechter Bipolar Genetics Repository**, the first of its kind in the nation. Searching for the genetic underpinnings of bipolar disorder, the repository is a collaborative effort between the **University of Michigan, Weill Cornell and Stanford**

October 2005
Actress, producer and mental health rights advocate **Margot Kidder** makes a special appearance at a reception focusing on the newly established Prechter Bipolar Genetics Repository



Weill Cornell Medical College



STANFORD
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www.PrechterFund.org



Heinz C. Prechter 1942-2001

*It's not the people you know or the money you make.
It's not the position you are in or the success you have.
It is the person you are, day by day, and minute by minute.
It is what you do when no one is looking or what you say
when no one is questioning.*

*Who you are cannot be written on a sheet of paper
and it can't be described in an article on the front page.
Who you are can be defined by the unselfish way
you influence others and it can reveal itself
in the amount of passion you possess.
No one ever said it would be easy and then again,
what did they say?*

*Don't have an answer ... that's right because you are
the master of your fate, the captain of your ship.
You decide what happens and when you do,
well even before that, the Lord will be with you.
He's there to give you the strength that you need
and the faith that you require.
There is nothing in this world, in it or beyond it,
that you can't handle.*

by Stephanie Prechter

GRANT TITLES

Grants were awarded in 2003 and 2004 by the Heinz C. Prechter Fund for Manic Depression – now the Heinz C. Prechter Bipolar Research Fund at the University of Michigan Depression Center

Broad Institute \$200,000

Projects in the Program on Pathogenesis of Psychotic Illness

Harvard University/ Massachusetts General Hospital \$500,000

Prechter Center for the Study of Genetics of
Pediatric Bipolar Disorders

Stanford University School of Medicine \$344,904

Genetic Analysis of Families with Anticipation for Bipolar Disorder

University of Cincinnati \$100,000

Neurophysiology of Pediatric Bipolar Disorder

University of Michigan Depression Center \$100,000

Pediatric Bipolar Research Scholar Award

University of Pittsburgh \$299,996

The Pharmacogenetics of Bipolar Disorder

Wayne State University \$200,000

Use of High Field Real-Time Functional Magnetic Resonance
Imaging to Examine Brain Circuits Involved in Affective
Regulation in Patients with Bipolar Disorder

A DECADE IN REVIEW

December 2005

Adolescents at High Risk for Familial Bipolar Disorder Study started, to identify risk factors in the development of bipolar disorder

February 2006

First research participant enrolled in the **flagship Longitudinal Study of Bipolar Disorder** (study of many individuals over many years)

August 2006

Johns Hopkins University joins as collaborator in the Prechter Bipolar Genetics Repository

September 2006

Neiman Marcus fashion show raises over \$200,000 to benefit the Heinz C. Prechter Bipolar Research Fund

Neiman Marcus

July 2007

First Annual Prechter Lecture featuring keynote speaker Dr. James Potash, Johns Hopkins University

July 2008

Second Annual Prechter Lecture featuring keynote speaker Dr. Terence Ketter, Stanford University



January 2009

First research participant enrolled in **B-SNIP study** on brain processing and genetic patterns in those with bipolar and schizophrenia



Research UPDATE

Synopsis of the Prechter Research Projects

AS OF JULY 2011

The Heinz C. Prechter Longitudinal Study of Bipolar Disorder, our flagship study, is designed to gather detailed clinical data on the course and outcome of individuals diagnosed with bipolar disorder compared with healthy control participants. This open cohort study gathers extensive clinical, environmental, neuropsychological, and genetic data from cases and controls and includes regular follow-up evaluations. The aim is to identify potential illness patterns in bipolar disorder by monitoring the longitudinal (long-term) course of the illness using a large sample size. The central hypothesis is that response and illness patterns will be predicted from the clinical, psychological, environmental, and genetic parameters. The longitudinal nature of the study will allow for both state and trait based analyses.

We have reached an important milestone in participant recruitment with 650 people enrolled in the Prechter Longitudinal Study as of June 2011. Additionally, in February 2011, the study officially entered year five, and we have maintained a high retention rate of approximately 90% through year three. Recently, the study was extended from a five-year to a ten-year longitudinal study. Of the 650 participants currently enrolled, 426 participants have completed year 1, 261 have completed year 2, 161 have completed year 3, 73 have completed year 4, and 11 have completed year 5.

The Prechter Longitudinal Study supports further pursuit of disease traits through long-term designs that combine cognitive, behavioral, social, environmental, and biological factors. Building a longitudinal database and repository with ongoing and additional studies, and using participants who can be engaged

in further research, are key for the future of translational research in mood disorders. Many other studies stem from the Prechter Longitudinal Study of Bipolar Disorder. A list with detailed explanations of each can be found on our website prechterfund.org/research/projects/.

We are pleased to announce that Penn State University has recently joined the team of academic institutions collaborating in the Prechter Fund's Genetics Repository. The Repository now houses 1,533 genetic samples from studies at the University of Michigan along with its collaborating sites Johns Hopkins, Stanford, Weill Cornell, and now Penn State University.



Weill Cornell Medical College

May 2009

Saks Fifth Avenue fashion show raises more than \$140,000 for the Heinz C. Prechter Bipolar Research Fund



June 2009

New collaboration with the U-M Department of Psychology on ERP (**Event-Related Brain Potential**) to examine the relationship between levels of impulse control and suicidal behavior

July 2009

Third Annual Prechter Lecture featuring keynote speaker Dr. Maria Oquendo, Columbia University



September 2009

Heinz C. Prechter Bipolar Research Fund featured in the scientific journal **Frontiers in Neuroscience**



December 2009

Challenge Grant: Challenges from an anonymous donor and the World Heritage Foundation/Prechter Family Fund raised nearly \$2.8 million for the Prechter projects

MICHIGAN **in** CHICAGO

A NIGHT OF THEATER TO BENEFIT THE Heinz C. Prechter Bipolar Research Fund



THE MAY 5 BENEFIT EVENT FOR THE HEINZ C. PRECHTER BIPOLAR RESEARCH FUND showcased a Broadway play that is making great strides toward destigmatizing bipolar illness by prominently featuring bipolar disorder at center stage. The “Michigan in Chicago” event centered around a spectacular performance of the Pulitzer Prize- and Tony Award-winning musical “Next to Normal,” which portrays the experiences of a woman living with bipolar disorder with honesty and compassion. The evening concluded with a talk-back with the musical’s cast.

“We would like to thank everyone who attended or participated in this wonderful event,” said Melvin McInnis, M.D., Principal Investigator of the Prechter Fund. “A special thank you goes to our Event Committee and sponsors. We are grateful for their exceptional generosity in donating their time and funds to support bipolar research. Their support for this research provides hope to those who are struggling with bipolar disorder, their families, and those of us who are working to find a cure for this extremely challenging illness.”

The event raised close to \$70,000 for the Prechter projects* at the University of Michigan Depression Center. This event marked the Prechter Fund’s first foray outside of the state of Michigan to expand our audience of supporters who have an interest in bipolar disorder research.

*For more information on the Prechter projects, please visit our website at <http://www.prechterfund.org/research/projects/>.

The total raised since the inception in 2001 of the Heinz C. Prechter Bipolar Research Fund is over \$10 million from private donations. Those gifts to the Prechter Fund have been leveraged to obtain an additional \$10 million in funding from federal government agencies for related projects and programs at the University of Michigan Depression Center. We are grateful to our many supporters over the years!

A DECADE IN REVIEW

September 2010
Fourth Annual Prechter Lecture featuring keynote speaker Dr. Akira Sawa, Johns Hopkins University



October 2010
Former first lady of Canada and international mental health advocate **Margaret Trudeau** headlines benefit luncheon for the Heinz C. Prechter Bipolar Research Fund, helping raise over \$200,000

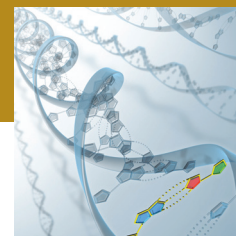


January 2011
University of Michigan is one of 10 clinical trial sites for the **Bipolar CHOICE** (Clinical Health Outcomes Initiative in Comparative Effectiveness) project

January 2011
Penn State University joins as collaborator in the Prechter Bipolar Genetics Repository

February 2011
First research participant to complete 5 year follow-up in the flagship Longitudinal Study of Bipolar Disorder

March 2011
Launch of the stem cell project “**Cellular and Molecular Neurobiology of Mood Disorders**,” whose goal it is to establish stem cell lines from skin cells taken from individuals with bipolar disorder and study details of molecular mechanisms



Lecture SERIES

FOUNDATIONS AND FRONTIERS

5th Annual Prechter Lecture

October 3, 2011
1:00 p.m. - 5:00 p.m.
Rackham Graduate School
Amphitheater, 4th Floor
915 East Washington Street
Ann Arbor, Michigan, 49109

The entire program is free and open to everyone; however, online registration at www.prechterfund.org/register is required. A reception (from 4 p.m. to 5 p.m.) will follow the lecture.

The Prechter Lecture Series at the U-M Depression Center is supported through the generosity of the following sponsors:

- Chrysler Corporation
- Comerica Bank
- Dearborn Sausage
- Ernst & Young
- Fritz Enterprises, Inc.
- General Motors Foundation
- Neiman Marcus
- Scott Snow (financial advisors) LLC

Initiated in 2007, the Prechter lecture series brings to Ann Arbor, Michigan each year distinguished researchers to present a scientific summary and discussion on the current status of bipolar disorder research. This year, we are pleased to announce:

Keynote speaker **Andrew A. Nierenberg, M.D.**, Associate Director, Depression Clinical and Research Program, Massachusetts General Hospital; Medical Director, Bipolar Research Program, Massachusetts



General Hospital; and Associate Professor of Psychiatry, Harvard Medical School. Dr. Nierenberg is presenting on "Doing the Impossible Task of Practicing Evidence Based Psychiatry: Treating Bipolar Depression as an Example."

Simon Evans, Ph.D., Research Assistant Professor, Department of Psychiatry, University of Michigan. Dr. Evans is presenting on "Nutritional Considerations in Bipolar Disorder."

Melissa Gross, Ph.D., Associate Professor, Movement Science; Director, Behavioral Biomechanics Laboratory; Associate Professor, School of Art & Design; Assistant Research Scientist, Institute of Gerontology; University of Michigan. Dr. Gross is presenting on "Embodiment of Emotion: How Feelings Affect Body Movements."

Melvin McInnis, M.D., Thomas B. and Nancy Upjohn Woodworth Professor of Bipolar Disorder and Depression; Director of the Bipolar Research Program, Department of Psychiatry; Associate Director, University of Michigan Depression Center. As the Principal Investigator of the Prechter Bipolar Research Fund, Dr. McInnis will present a synopsis of the afternoon's program.

May 2011
Wally Prechter honored by the Mental Health Association in Michigan as **Mental Health Advocate**

May 2011
Michigan in Chicago benefit, featuring the Broadway musical "Next to Normal" about a woman living with bipolar disorder, raised close to \$70,000 for the Heinz C. Prechter Bipolar Research Fund

June 2011
PGBD project (Pharmacogenomics of Mood Stabilizer Response in Bipolar Disorder) launched to identify genes associated with good response to two commonly used mood stabilizing agents – lithium and valproate

August 2011
Start of project "**Nutritional Components of Psychiatric Disease and Treatment Response**" to understand dietary and genetic interactions

October 2011
Fifth Annual Prechter Lecture featuring keynote speaker Dr. Andrew Nierenberg, Massachusetts General Hospital, Harvard Medical School



AWARD



MICHIGAN in CHICAGO



www.PrechterFund.org



The Heinz C. Prechter
Bipolar Research Fund
at the
University of Michigan
Depression Center

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www.PrechterFund.org

bit.ly/Prechter-Facebook



Rachel Upjohn Building
4250 Plymouth Road
Ann Arbor, MI 48109



University of Michigan
Depression Center

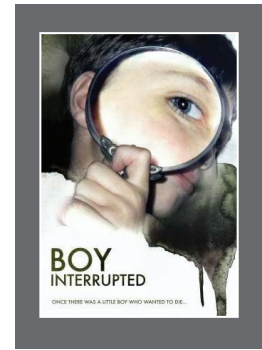
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Scott Snow

If you wish to be added to or
deleted from our mailing list,
please contact: coucarr@umich.edu
or 734-764-6161.

Upcoming EVENTS

We hope you will attend the Fund's benefit event in March 2012 at the historic Michigan Theater in Ann Arbor, Michigan, featuring the gripping documentary **"Boy Interrupted"** and a panel discussion with the filmmaker and U-M researchers.



The film tells the heartbreaking story of Evan Perry, a 15-year-old boy who took his own life after a lifelong struggle with bipolar disorder. An official selection of the 2009 Sundance Film Festival, the documentary recounts Evan's life and death in the words of his parents, filmmakers Hart and Dana Perry, and others who knew him. Evan's life was marked by intense mood swings. Despite his family's vigilance, along with a new school, new friends and numerous therapy sessions and medication, Evan's obsession with ending his life proved overwhelming. His suicide sent his parents looking for answers from experts, friends and family members, as well as from the reams of video they'd taken of Evan through the years. Illustrating how one family deals with loss and grief, this moving film confronts the stigma associated with mental illness and suicide among children.

OUR MISSION

To support research into psychiatric genetics, bipolar disorder, neuroimaging and neuroscience in order to find genetic solutions for individuals with bipolar illness to help them live an excellent quality of life.

- *The Prechter Fund provides direct support for the first independently funded bipolar genetics repository in the nation. Repository investigators are hunting for the genetic component of the illness.*

- *The Fund established a longitudinal study on bipolar disorder to help identify predictors of the course of the illness and how it will respond to treatment.*

- *Additionally, the Fund is working toward a personalized approach to mental health care, with the ultimate goal of creating a "customized" approach to treating an individual's bipolar illness.*

Progressive; Patient-focused
Research
Efficient
Collaborative
Health and Hope
Timely and good data; **T**ranslational
Exemplary in the nation and the world
Results-oriented

Executive Officers of the University of Michigan Health System:

Ora Hirsch Pescovitz, M.D., Executive Vice President for Medical Affairs; James O. Woolliscroft, M.D., Dean, U-M Medical School; Douglas Strong, Chief Executive Officer, U-M Hospitals and Health Centers; Kathleen Potempa, Dean, School of Nursing.

The Regents of the University of Michigan:

Julia Donovan Darlow, Laurence B. Deitch, Olivia P. Maynard, Denise Ilitch, Andrea Fischer Newman, Andrew C. Richner, S. Martin Taylor, Katherine E. White, Mary Sue Coleman (ex officio).

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