



THE HEINZ C. PRECHTER BIPOLAR RESEARCH FUND

Bipolar Genes Project & Gene Repository

AT THE UNIVERSITY OF MICHIGAN DEPRESSION CENTER

2012 • Volume 5

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Longitudinal Study of Bipolar Disorder Reaches 840 Participants

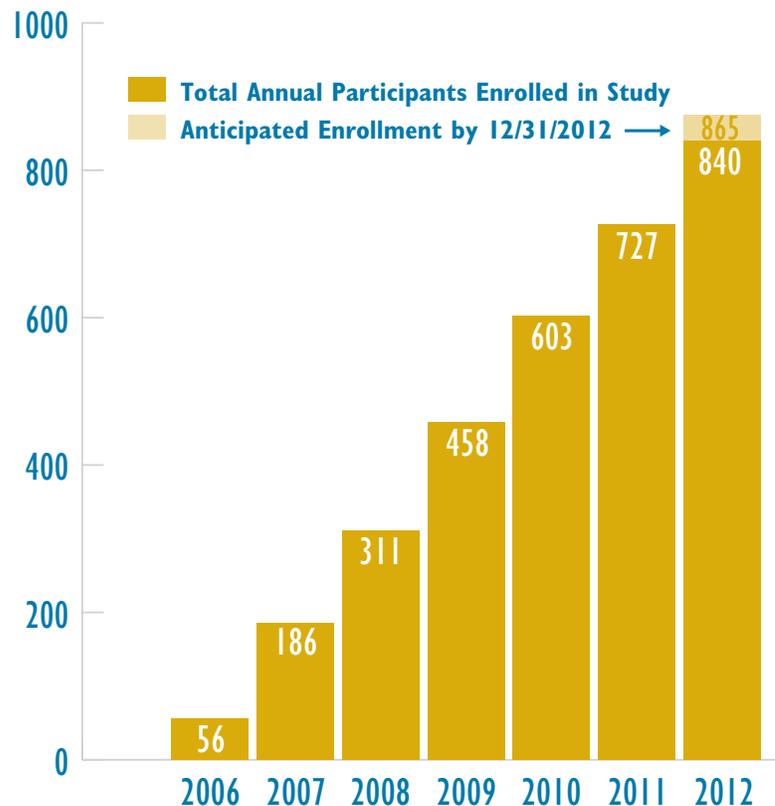
The **Largest** Long-Term Research Study for **Bipolar Disorder in the Nation**

The Prechter Longitudinal Study of Bipolar Disorder was launched in 2006. To this day, the study already has 840 research participants enrolled and it is the largest long-term research study for bipolar disorder in the nation. The ultimate goals of this groundbreaking study are to engage 2000 participants and follow them over the course of 10 years.

“What makes this study so unique is that it is ‘longitudinal,’ meaning it will follow patients over a long period of time in order to learn how to predict the outcome of the illness, what treatments specific individuals respond to, and ultimately, to determine how to find a cure.”

Melvin G. McInnis, M.D.

Thomas B. and Nancy Upjohn Woodworth Professor of Bipolar Disorder and Depression and Principal Investigator of the Prechter Bipolar Research Fund



MORE SUPPORT IS NEEDED

to sustain our flagship research study. Please consider making a gift!



Scan the QR code to make a donation.

...continued on page 2

Dear Friends:

These are exciting times for the Heinz C. Prechter Bipolar Research Fund, and we are grateful for the support provided by so many over the last 11 years, especially the Schwartzberg family for their generous commitment to our groundbreaking stem cell research.



The Prechter Research Team is making progress on a number of scientific fronts. Our longitudinal study, genetics repository, and stem cell research project are making significant inroads, but there is still much to do to unlock the mysteries of this brain disorder. Continued funding is critical to maintaining the success of these long-term projects.

Eleven years ago this month, my family established the Heinz C. Prechter Bipolar Research Fund. Today, I am proud to say that it has a strong foundation in place and a highly competent team of researchers, under the direction of Dr. Melvin McInnis.

With this groundwork firmly laid, the fundraising leadership now resides in the capable hands of the University of Michigan Development Team. This dedicated group of professionals will create innovative initiatives to raise awareness and financial support for the Prechter Bipolar Research Fund.

I will forever remain passionate about the goals of the Fund and will always be dedicated to spreading the word about its mission; however, I plan to take more time to enjoy my children and three young granddaughters. They, along with the work of the Fund, are Heinz's greatest legacy.

I will always continue to support the Fund and will be an advocate for mental health. Additionally, I will continue to be involved with efforts to enhance the lives of those living with mental illness.

Thank you for your continued support of the Fund and for your gracious support in the past.

Very Sincerely,

A handwritten signature in black ink that reads "Waltraud E. Prechter".

Waltraud E. Prechter

Founder, Heinz C. Prechter Bipolar Research Fund

Dear Friends and Supporters of the Prechter Bipolar Genetics Repository and Prechter Research Projects:

This newsletter is full of remarkable news. We are so very excited that this year's Nobel Prize in Medicine was awarded to Sir John B. Gurdon and Shinya Yamanaka, the scientists who discovered how to reprogram pluripotent stem cells from a skin cell biopsy. This established the processes in 2007 that we began using three years later to begin growing stem cells from bipolar individuals in the Prechter studies. At this time, we have 42 stem cell lines established from 5 individuals, and these lines are now being studied in the lab.

DNA sequence data is being generated from our participants. Many research volunteers are participating in several additional projects that are building up the Prechter Bipolar Genetics Repository and attracting attention from collaborators from around the nation. Grants are being submitted and scientific manuscripts accepted for publication. There is energy and enthusiasm in the researchers, patients, friends and families.

The Prechter research studies are the flagship projects for the University of Michigan Depression Center and provide the example for longitudinal (long-term) clinical research in mood disorders!

The recent announcement of an eight percent cut in federal support for research programs is extremely disappointing. This emphasizes the need for the University of Michigan to develop more grassroots and philanthropic support for our clinical research. Our participants with bipolar disorder tell us that they consider themselves collaborators in our cause, and that they feel better by participating in our research. Supporting research makes you a collaborator, too, as well as a sponsor and a friend.

Thank you for all you have done and all you are doing. Lives depend on it.

A handwritten signature in black ink that reads "Melvin McInnis MD".

Melvin McInnis, M.D.

Thomas B. and Nancy Upjohn Woodworth Professor of Bipolar Disorder and Depression and Principal Investigator of the Prechter Bipolar Research Fund

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Longitudinal Study of Bipolar Disorder Reaches 840 Participants

Bipolar disorder is known to run in families, but most genes involved have not yet been identified. Additionally, every individual's response to the illness, life circumstances, and treatment can vary widely. Studying many individuals over time will allow scientists to better understand how to treat and, eventually, prevent bipolar disorder.

The purpose of the Longitudinal Study is to identify potential illness patterns in bipolar disorder through the analysis of genetic and environmental information and continued observation of research participants. This unique study was designed to gather detailed clinical and biological data for research on the course of the illness and outcomes for bipolar individuals compared with healthy control participants. **This is best accomplished by monitoring study participants long-term; tracking patterns of disease, responses, and outcomes to interventions; and keeping participants engaged and active in both their ongoing care and research of the illness.**

Total Enrolled	840
Completed Year 1	541
Completed Year 2	413
Completed Year 3	270
Completed Year 4	181
Completed Year 5	80
Completed Year 6	21



Scan the QR code to find out more about the study.

Enrollment in the Longitudinal Study and Annual Follow-ups as of October 15, 2012.

With the emergence of novel interventions and investigatory technologies, Longitudinal Study research participants with specific criteria for enrollment may be quickly assembled for additional studies, thereby adding to the value of this flagship study (see page 3 for examples).

\$1 Million Gift Will Advance Groundbreaking Stem Cell Research into Bipolar Disorder

A \$1 million commitment from the Schwartzberg family of New York will allow us to continue our mission to unravel the unknowns about bipolar disorder using stem cell lines developed from skin cells. 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 Longitudinal Study.

The gift establishes the **Steven M. Schwartzberg Memorial Fund**. Al and Florence Schwartzberg named the fund in honor of their son Steven, who died three years ago after a long struggle with bipolar disorder. “Steven was a brave, sweet and sensitive soul who had to fight a fight that many others in the U.S. are suffering through today,” says Steven’s brother, Harris Schwartzberg. “We hope that by supporting the work of the dedicated stem cell and clinical researchers at the University of Michigan, we will be closer to putting an end to this insidious disease that negatively affects the lives of so many.”



Steven Schwartzberg with nephew Howie Starer, and nieces Melissa Starer, Isabel Schwartzberg, Sabrina Schwartzberg, and Molly Schwartzberg.

Longitudinal Voice Patterns in Bipolar Disorder

One of the main symptoms of bipolar disorder is changes in speech. **During mania, speech increases in rate, rhythm, and volume. During depression, the opposite occurs.** The purpose of this study is to use special computer software to analyze the sound waves of speech and identify changes that may happen before a mood episode.

Participants in this study will be given a smart phone that is slightly modified to include an application that records outgoing speech. Voice patterns will be analyzed by computer software that is programmed to detect changes in the physical elements of speech such as amount of speech, pitch, rate, rhythm, and volume.

All analyses will be computer based, speech is encrypted, and the research team will not listen to the actual contents of speech. In addition, weekly recorded clinical assessments will be conducted for the duration of the study. Participants for this study will be recruited from the Prechter flagship Longitudinal Study of Bipolar Disorder. Both participants with bipolar disorder and unaffected controls will be examined for comparison.

Circadian Rhythms in Bipolar Disorder

Many of us have a daily routine. Generally, we have usual times for walking and sleeping, eating, starting chores or work, and even going to the bathroom! Many of these activities include biochemical, psychological, and behavioral processes called circadian rhythms. Circadian rhythms play a role in synchronizing all of our bodily systems to optimal phase relationships. How well our circadian rhythms are synchronized may influence our overall psychological and physical health and well-being.

Circadian rhythms are internally self-sustained but may be modified by several environmental factors, or “time-givers.” Time-givers help circadian rhythms stay “in tune” like the many instruments of a great orchestra. The major time-giver to living creatures is daylight. Other time-givers include family and work schedules.

In bipolar disorder, circadian rhythms are sometimes “out of tune,” and scientists do not know exactly how or why that is. If we understand how circadian rhythms are out of tune and how these systems relate to time-givers, then we might be able to improve treatments for bipolar disorder.

To this end, the Circadian Rhythms in Bipolar Disorder (CRBP) Study was initiated with the support of donors to the Depression Center’s Executive Director’s Innovation Fund. Additional support was provided through the Phil Jenkins Award for Innovation in Depression Treatment, awarded to Danielle Novick, Ph.D., postdoctoral fellow in psychiatry.

The CRBP Study is designed to be innovative in its use of technology. To gather information about time-givers, participants



The actiwatch used in this research study.

wear an actiwatch. An actiwatch is a non-invasive, lightweight wristwatch-like device that records physical movement and light exposure. To gather information about mood, participants respond to a daily text message on their cell phone that asks them to rate their mood on a 1 to 10 rating scale. Integrating the text message information with the actiwatch data will provide “real-time” information about the relationship between an individual’s biological rhythms, daily routines and mood.

Participation in the CRBP Study involves completing questionnaires, keeping a sleep and activity diary for two weeks, responding to a daily text message for six weeks, and wearing an actiwatch for two weeks. The CRBP Study is actively recruiting participants. If you would like more information, please e-mail CRBPstudy@gmail.com.

Meet Members of OUR TEAM



Masoud Kamali, Ph.D.

*Clinical Lecturer in Psychiatry,
Department of Psychiatry*

Dr. Kamali joined the Prechter bipolar research group over four years ago. Prior to that, he had several years of clinical experience working in community mental health and inpatient hospital settings.

“Witnessing the resolve of patients and their families struggling with the consequences of severe mental illness inspired me

to focus my research on identifying the causes and finding better treatments for these disorders,” says Dr. Kamali.

His main interest is in understanding the risk factors associated with suicidal behavior, with the hope of developing more effective treatment options and preventing this far too common and tragic consequence of severe psychiatric disorders. Suicide is one of the leading causes of mortality, especially in the young adult population, and individuals with bipolar disorder have one of the highest rates of suicide. Despite the many advances in the field, we still have difficulty with identifying those at the highest immediate risk and few treatment options exist that specifically target suicidal behavior.

Clearly, suicide is a very complex behavior that does not have a single cause. However, the detailed clinical and biological data gathered from all the research volunteers who participate in the Prechter Longitudinal Study of Bipolar Disorder is an extremely valuable source that can help answer some of our questions.

Dr. Kamali’s research has been examining factors such as levels of salivary cortisol – a hormone that can indicate the response to stress – and dimensional measures of personality, such as impulsivity and anger, that influence suicidal behavior. With additional funding support from the American Foundation for Suicide Prevention (AFSP) and the Michigan Institute for Clinical and Health Research (MICHR), Dr. Kamali and collaborators from the Department of Psychology are looking at the differences in the electroencephalograms (EEG) or “brain waves” of individuals with bipolar disorder with and without a history of suicide, and unaffected control participants.

“The goal is to find a biological marker for suicidal behavior which will have significant consequences. It can help better identify individuals at risk and can also be utilized as a measure of response to treatment. With the help of all our volunteer research participants, we hope to continue exploring new frontiers, and to find better answers and more optimal treatments for this debilitating disorder.”



Kelly Ryan, Ph.D.

*Clinical Lecturer, Neuropsychology
Section, Department of Psychiatry*

Dr. Ryan has always been fascinated with how brain changes can manifest as problematic behaviors, and specifically, how they can have devastating effects on one’s daily life. This led her to pursue a career in clinical neuropsychology. She obtained her Ph.D. in Clinical Psychology at Wayne State University and she completed a postdoctoral

fellowship in Clinical Neuropsychology at the University of Michigan. Her early research looked at how executive functioning (one’s ability to make decisions, solve problems, and plan and organize – all skills that are associated with the frontal region of the brain) created problems in everyday situations, such as driving a car, in patients with medical and neurological illness.

Since joining the faculty at the University of Michigan Department of Psychiatry and the Prechter Bipolar Research Team three years ago, she has been exploring the role of executive functioning on important areas of life functioning, such as work functioning, among individuals with bipolar disorder. While she recognizes that there needs to be research efforts looking for risk factors, causes, and more effective treatment of symptoms in bipolar disorder, **she finds that it is also crucial to understand what specific aspects of the disease – which can include psychological, cognitive, and biological aspects – interfere with leading a normal life.**

It is Dr. Ryan’s hope that her research can lead to more tailored treatments, in addition to medication treatment. She believes that there should be a push to devise psychotherapy treatments or rehabilitation efforts to help those with bipolar disorder “get back on their feet” or regain previously good functioning.

The large-scale, long-term nature of the Prechter Longitudinal Study allows Dr. Ryan to examine important clinical, neuropsychological, genetic, and environmental factors over time among individuals with bipolar disorder to better understand which factors contribute to problems in everyday life. She finds that the Prechter Longitudinal Study is truly unique because it allows researchers the opportunity to study the naturalistic course of bipolar disorder from many different perspectives with the ultimate goal to find a cure.

Lecture SERIES

6th Annual Prechter Lecture

Stem Cells and Ethics

November 12, 2012

1:00 p.m. – 5:00 p.m.

Rackham Graduate School

Amphitheater, 4th floor

915 East Washington Street

Ann Arbor, Michigan 48109

The program is free and open to the public; however, online registration at www.prechterfund.org/lecture is required.

The Prechter Lecture Series is supported through the generosity of the following sponsors:

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Scan the QR code to find out more about the lecture.

Please join us as we present a scientific summary and discussion on the current status of bipolar disorder research. This year, we are pleased to announce:



Keynote speaker

John R. Kelsoe, M.D.

Professor of Psychiatry
Director, Laboratory of Psychiatric Genomics
Institute for Genomic Medicine,
University of California, San Diego
VA San Diego Healthcare System
Dr. Kelsoe will present "Treatment Horizons in Bipolar Disorder: Stem Cells and Pharmacology."

Sue O'Shea, Ph.D.

Co-Director of the Taubman Consortium for Stem Cell Therapies,
Crosby-Kahn Professor of Cell and Developmental Biology,
University of Michigan
Dr. O'Shea will present "Induced Pluripotent Stem Cell (iPSC) Models to Study Bipolar Disorder."

Edward B. Goldman, J.D.

Associate Professor of Obstetrics and Gynecology,
Head of the Program in Sexual Rights and Reproductive Justice,
University of Michigan
Dr. Goldman will present "Legal and Ethical Issues in Embryonic Stem Cell Research."

Carl Schneider, Ph.D.

Chauncey Stillman Professor of Law,
Professor of Internal Medicine, University of Michigan
Dr. Schneider will present "The Principles of Regulation and the Progress of Research."

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.

Why I Participate in Research

by Catherine Starr, a longtime participant in the Prechter Fund's flagship Longitudinal Study of Bipolar Disorder

“When I think about the course of my life and my experience in this world,

I believe that nothing has affected me more profoundly than bipolar disorder. And when I first began to experience recovery, when I first had a bit of clarity as the medications began to soothe the fires and therapy strengthened my resolve, I realized the greater truth that I was not the only one traveling this road. More time passed and I again felt stability and joy and purpose, states I never believed I could achieve again. It is because of my gratitude for these things that I seek out all ways to give back, all ways to help others who are also suffering.

I do not know if or when a cure will be found for this illness. But I do know this: the medicine I take would not have been possible without research. The therapies that have helped me grow and thrive, they work so well because they have been tested over and over again. A whole system exists to discover what we do not know and to perfect and build upon what we do know.

I participate in research because the only way I can make sense of this life is to spend the rest of it giving back the goodness and kindness and opportunity that has been given to me. I participate because I know that if others had not participated before me, I may not have the life I have now. I participate because I believe that we all have the power to affect change in this world and this is one place where I can step up and use my experience for the betterment of our society. I participate because the more researchers know about the wide range of ways this illness is experienced, the more able they are to develop treatments that are successful for more people.



*Finally, I participate because witnessing research of this magnitude and thoughtfulness gives me so much hope. A few months ago I drove past the Depression Center, home to the Prechter Research Team, early in the morning, just as the sun was rising ... the Rachel Upjohn Building, standing so firmly, its grand windows shining with the sun's reflection, but also graciously letting in all that brilliant light to the rooms inside. How well nature demonstrated the very mission of all the research and treatment programs of the center. The researchers there are dedicated to letting in the light and discovering what has been hidden in shadow. They exist to help individuals living with mood disorders feel warmth and sun and stability again in their lives. **This is why I participate: because this kind of healing is so much larger than any one of us. The results will come from our unity of effort and spirit.***



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

1-877-UM-GENES

PrechterFund.org

bit.ly/Prechter-Facebook



Rachel Upjohn Building
4250 Plymouth Road
Ann Arbor, MI 48109



University of Michigan
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www.umhsgiving.org/opt-out/.

Fundraising EVENT

Nets close to \$70,000

The Prechter Fund's annual fundraiser and educational event this past March was a huge success in raising public awareness of bipolar disorder and funds to support our groundbreaking research into this debilitating illness.

We were very pleased to screen the powerful documentary "Boy Interrupted" and bring filmmaker Dana Perry to Ann Arbor. The feedback from many of the 650 attendees at the Michigan Theater was extremely positive. Those who attended experienced a thought-provoking evening that contributed to reducing stigma and elevating public understanding about those living with bipolar illness and their families.

We exceeded our goal for this event and raised **close to \$70,000**. These funds will be used to pay research participant incentive fees for one year. This incentive is a reimbursement for participation, time and travel. Our flagship research project, the Prechter Longitudinal Study of Bipolar Disorder, has 840 participants enrolled to date, with a goal of reaching 2,000. This study provides the foundation as well as the participants for many additional leading-edge multidisciplinary studies.

Thank you to all who attended and to all our sponsors for joining us in our efforts to combat bipolar disorder and provide hope to the many people whose lives are affected by brain illnesses.



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 and largest privately 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.**

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.

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