Longitudinal Study of Bipolar Disorder yields
NEW SEVEN-FACTOR FRAMEWORK

Nearly six million Americans have bipolar disorder, and most have probably wondered why. After more than a decade of studying over 1,200 research participants in-depth, the Prechter Program has an answer — or rather, seven answers.

No one genetic change, or chemical imbalance, or life event, lies at the heart of every case of the mental health condition once known as manic depression. Rather, every patient’s experience with bipolar disorder varies from that of others with the condition. But all of their experiences include features that fall into seven classes of observable characteristics, or phenotypes.

Disease> Changes in how certain chemicals function in the brain and affect bipolar disorder.

Neurocognitive> Changes in thinking, reasoning, and emotion processing.

Temperament and personality> People with bipolar disorder are frequently more reactive and “temperamental” compared to the average person.

Motivated behaviors> People with bipolar disorder frequently experience substance use disorders and other behavioral patterns.

“There are many routes to this disease, and many routes through it,” says Melvin McInnis, M.D., Prechter Program research director and lead author of the paper. “We have found that there are many biological mechanisms which drive bipolar disorder, and many interactive external influences on it. All of these elements combine to affect the disease as patients experience it.”

Our research finds that bipolar disorder has many causes. Although bipolar disorder tends to run in families, no one gene causes or explains it. Everyone’s experience with bipolar disorder is unique. But all experiences include features that fall into the following seven classes of observable characteristics, or phenotypes.

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Neurocognitive> Changes in thinking, reasoning, and emotion processing.

Temperament and personality> People with bipolar disorder are frequently more reactive and “temperamental” compared to the average person.

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LONGITUDINAL STUDY  Continued from cover

Life story> Trauma and abuse in childhood, unfortunate life experiences and other challenges contribute to bipolar disorder in complex ways.

Sleep and circadian patterns> Patterns of sleep and circadian rhythms are often different among bipolar patients, causing disruptions in daily patterns and routines.

Outcomes and course of illness> Measures of how someone’s symptoms change over time and respond to treatment.

Some of the key findings made in the Prechter cohort by our research team include:

• Migraine headaches are three and a half times more common among people with bipolar disorder than those without. Eating disorders, anxiety disorders and alcohol problems are also more common in those with bipolar, as is metabolic syndrome.

• More people with bipolar disorder have a history of childhood trauma than those without the condition.

• Looking at the microbes living in the gastrointestinal tracts of patients and comparison volunteers, the researchers found lower levels of a key bacteria type, and less diversity of microbes in patients taking antipsychotic medications.

• People with bipolar disorder who have a strong neurotic tendency in their personalities are more likely to have severe illness, especially among men.

• A range of cognitive abilities — including memory, executive functioning and motor skills — were poorer in participants with bipolar than those without, in general.

• Two genes, called CACNA1 and ANK3, appear to play a role in susceptibility to developing bipolar disorder. But many genetic variations have been found to be associated with bipolar risk, and more recent findings have explored the role of having a mix of these variations in the chances a person will develop bipolar disorder.

• Stem cells grown from skin samples taken from participants, and then coaxed to grow into nerve cells called neurons, have proven useful in studying cellular aspects of bipolar disorder. For instance, neurons derived from bipolar patients’ cells were more excitable than comparisons — but calmed down when exposed to lithium, a common treatment for bipolar. Also, the cells show differences in how they interact and function.

• Key features of speech patterns predict mood states and may be useful outcomes measures to predict the need for intervention to prevent episodes of mania or depression.

“Even though bipolar disorder tends to run in families, the Longitudinal Study of Bipolar Disorder and other studies have revealed no one gene that ‘carries the day’ to explain it,” says Dr. McInnis, Prechter Program research director. “This new framework will provide a new approach to understand this disorder, and other complex diseases, by developing models that can guide a management strategy for clinicians and patients, and give researchers consistent variables to measure and assess.”

He adds, “Bipolar disorder has a lot to teach humankind about other illnesses, because it covers the breadths of human mood, emotion and behavior like no other condition. What we can learn in bipolar about all these factors will be directly applicable to monitoring other disorders such as depression and anxiety disorders, and personalizing the approach to managing them.”

Melvin G. McInnis, M.D., FRCPsych

Thomas B. and Nancy Upjohn Woodworth Professor of Bipolar Disorder and Depression
Associate Director, U-M Depression Center
Professor of Psychiatry
Principal Investigator, Heinz C. Prechter Bipolar Research Program

This figure represents the disciplines within the Prechter Program that are generating data to the individual classes.
“Bipolar disorder is best described as a disorder of the energy of the brain,” says Melvin McInnis, M.D., the Prechter Program’s research director. People with bipolar disorder experience unusual and intense changes in mood and behavior. During a manic episode, people feel “up,” and may be much more energetic than usual. During a depressive episode, people feel “down,” have low energy, and neglect obligations.

The frequency of bipolar disorder ranges from 1% for the more serious form of the illness, bipolar 1 disorder, to around 4.5% of the population when all subtypes are included. Bipolar disorder affects men and women equally, and typically begins in early adulthood. **Every person’s experience with bipolar disorder is unique.**

**How is bipolar disorder diagnosed?**
Bipolar disorder is not easy to diagnose. Some people have bipolar disorder for years before the illness is diagnosed. The current manual that doctors use to diagnose and classify mental disorders (DSM-5) highlights the importance of energy change in making a formal diagnosis. People with bipolar disorder experience episodes of extremely low moods that meet the criteria for major depression as well as extremely high moods (mania).

**What are the different types of bipolar disorder?**
There are several types of bipolar disorder, based on the specific duration and pattern of manic and depressive episodes.
- **Bipolar I:** is characterized by one or more extreme manic episodes or mixed episodes. Typically a person will experience periods of depression as well.
- **Bipolar II:** is characterized by episodes of hypomania (a milder form of mania) and depression that may not seem as extreme as in Bipolar I or may not last as long.
- **Bipolar Disorder, unspecified:** is a type of bipolar disorder that does not follow a particular pattern (for example, very rapid shifts between some symptoms of mania and some symptoms of depression).
- **Cyclothymia** is a milder form of bipolar disorder characterized by several hypomanic episodes and less severe episodes of depression that alternate for at least two years.
- **Bipolar disorder with rapid cycling** is diagnosed when a person experiences four or more manic, hypomanic, or depressive episodes in any 12-month period. Rapid cycling can occur with any type of bipolar disorder, and may be a temporary condition for some people.

**How is bipolar disorder treated?**
For most patients with bipolar disorder, ongoing treatment is required to monitor and adjust medications and manage symptoms. **“Mood stabilizing” medications** including lithium and certain anticonvulsant medications, as well as antipsychotics, can be effective in preventing episodes of either depression or mania. Antidepressants should be used cautiously as they may worsen the mood swings.

**Psychotherapy** is used along with medications to help patients cope with stressful life experiences that can bring about episodes. Certain kinds of therapy, such as those that focus on ways that thoughts and behaviors affect mood, how relationships are affecting mood, and monitoring daily structure, are thought to be the most effective kinds of psychotherapy. **Learning how to recognize early warning symptoms of a relapse is a key skill for preventing relapses.** However, psychotherapy can never replace medication.

**Exercise and nutrition** are important lifestyle strategies for managing bipolar disorder and **support** of family members, friends and co-workers is crucial.
SELF-MANAGEMENT APPS FOR BIPOLAR DISORDER

The primary goal of this study is to disseminate two innovative smartphone applications, PRIORI and Life Goals, to Medicaid consumers with bipolar disorder who use community mental health organizations for their care. **The apps are designed to enhance the ability of individuals with bipolar disorder to self-manage their symptoms.**

PRIORI is a sensing app that runs in the background on a person’s cell phone and predicts changes in mood by monitoring changes in the acoustic elements of a person’s voice.

Life Goals is an evidence-based psychosocial intervention and self-learning app that may improve symptom management and overall health for individuals with bipolar disorder. The app uses an individualized approach, allowing people with mental health disorders to achieve their personal goals by linking them to tailored health behavior change and coping strategies for the symptoms they are experiencing.

The study will evaluate if individuals with bipolar disorder are interested in and will use self-management apps and if the use of these apps has impact on bipolar disorder symptoms and functioning.

MODELING MOOD COURSE TO DETECT MARKERS OF EFFECTIVE ADAPTIVE INTERVENTIONS

Bipolar disorder is successfully treated by combining medication with psychosocial therapy, but care can prove inadequate in practice. With gaps in coverage and medication, promising psychosocial therapies require adaptive strategies to better address the specific needs of individuals. **The goal of this study is to get a better idea of how technology can help people with bipolar disorder on a day to day basis.**

Research participants download a smartphone app onto their phones, built by the lead researcher of this study, Amy Cochran, Ph.D. This app prompts them twice a day to fill in a questionnaire about their mood. Participants also wear a fitbit (activity tracker) that syncs with the app throughout the course of the six-week-long study. The fitbit measures sleep, heart rate, activity level and circadian rhythm. One of our research associates checks in with the participants via a weekly telephone interview to assess their mood.

This study focuses on testing three engagement strategies:

- using activity trackers rather than self-reports
- reviewing recorded symptoms with another person on a weekly basis
- and synthesizing a person’s data into charts and graphs.

**All participants are recruited out of the Prechter Program’s Longitudinal Study of Bipolar Disorder.** They do not have to be local to participate in this study and may live far away from Michigan. This does not pose a problem since we send them the fitbit in the mail. The technology allows us to track them virtually without face-to-face interactions. We hope that this study will help in the process of developing a way to engage individuals with bipolar disorder in long-term monitoring of their daily symptoms and patterns.
Bipolar disorder is a severe, life-long illness characterized by recurring episodes of mania or hypomania, and depression. Evidence suggests that it is important to identify people at risk for developing bipolar disorder before they develop the full-blown illness.

Recent data indicate that disability associated with bipolar disorder begins increasingly at age 15 to 19 years and becomes increasingly severe up to the age range of 25 to 29 years, suggesting that the presence of psychosocial impairment is an additional dimension that can be used to identify patients who are likely to show a deteriorating course of illness over time.

In this observational study, 15- to 25-year-old children of parents with bipolar disorder will be followed up every three months (either in the clinic or via telephone interviews) for up to 24 months. We will look at the mood symptoms over this time period of two groups of participants:

1. those with at least mild impairment in psychosocial functioning at the beginning of the study, and
2. those with no impairment.

Our goal is to test the hypothesis that having at least mild impairment at baseline, in addition to a family history of bipolar disorder in parents, is associated with more significant illness.

“This is an important study precisely because it can help us learn more about what the development of bipolar disorder looks like, and therefore tailor treatment more specifically to young people’s needs.”

— Lori Stark, M.A., Prechter Program Research Area Specialist

MOODS of Moms

Women with bipolar disorder are often in their teens or early 20s at disease onset, placing them at risk for manic and depressive episodes throughout their reproductive years, especially during pregnancy. Untreated bipolar disorder can bear great risk for mother and child, yet risk of birth defects from medications also concerns prospective mothers. As one woman said, “It’s complicated!”

The initial phase of this research on pregnancy and bipolar disorder identified 246 women within the Prechter database who reported 646 pregnancies with numerous pregnancy complications. These data were presented at a meeting of the International Fetal Medicine and Surgical Society in August of 2017.

In this next phase of research, we designed electronic surveys to send to women of childbearing age in the Prechter Longitudinal Study of Bipolar Disorder and 394 women will be asked to participate. These surveys include details regarding depressive or manic recurrences, treatments, and obstetric results such as miscarriages or birth defects. The surveys also ask about complementary treatments such as yoga, mindfulness, or exercise that may have been used during pregnancies.

Additional funding is needed to continue this portion of our research on bipolar disorder and pregnancy. We plan to design an interventional study informed by the survey results. In that future study, pregnant women with bipolar disorder would participate in additional treatments such as yoga, mindfulness, or exercise. We hope to identify ways to reduce chances of depression or mania during this important time of life.

This research has included faculty input from Psychiatry, Obstetrics, the Prechter Bipolar Research Program, and the Women and Infant Mental Health Program. We hope to reduce the challenges faced by women managing bipolar disorder during pregnancy. These findings will affect not only the lives of these women, but also the lives of their next generation.

THE OFFSPRING STUDY: An observational longitudinal study in offspring of parents with bipolar disorder

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Anna Ryan Drew, BFA, MSW, is a research participant:

“I went through such a struggle figuring out whether I could have a baby with my bipolar diagnosis, not wanting to have another episode. We finally decided to take the risk and I stayed on the lithium. I had an episode right after birth that we were prepared to deal with, and I was treated in a few weeks. I have not had an episode since, and my son is nine years old. Having a plan for the bipolar was equally as important as a birth plan. This research for women is so very important, they need action steps. They deserve to have children in the most peaceful way they can.

I am a contemporary mixed media painter. In my art I have a series about crowns. Maya Angelou says, “Your crown has been bought and paid for. Put it on your head.” I am proud of every aspect of my journey and other women need that, too. I take my lithium like my life depends on it, I get my sleep, I do what I have control of, but at the end of the day if it comes back, it is not my fault, it is disease. I understand that and love myself just the same. If I can be part of demystifying mental illness, sign me up — everyone deserves a crown.”

Anna Ryan Drew, Crown On Beautiful Boy, 2018; Gold leaf, acrylic, canvas, 48x60

Find out more about Anna: ardrewartist.com or follow her on Instagram: @a.r.drew.art or Facebook: @AnnaRyanDrewArt
Decisions. We make them every day. Some are so simple or habitual that they can feel mindless, such as what we put in our tea or coffee in the morning or what we watch on TV in the evening. Some are more complex and periodic and feel much more mindful, such as how much to save for retirement or where to go on vacation. Some are so intricate and intense that they take over our minds, such as whether to buy a home or have a baby.

Decisions can be challenging for a number of reasons, and they can be all the more challenging for people with certain personality profiles or temperaments. For people with bipolar disorder, they can be downright daunting because every decision — even a small one like the coffee example above — creates a ripple in the water of a person’s life. **For people living with bipolar, the little ripples come together to create waves that can potentially lead to episodes.**

For example, I watch how much caffeine, sugar, or alcohol I consume, so the second cup of coffee midday or the second glass of wine when I’m out with friends is a much more careful decision for me than it may be for my peers. I’m not just worried about long-term health effects or a headache the next day; I’m worried about the wrong decision triggering an episode that could last days or weeks, so I have to review all of my other recent “little” decisions to decide if my brain can handle it.

**The big decisions are all the more difficult.**

For example, I am trying to decide about a potential job offer right now that would further my career and give my family more income. It seems like a “no-brainer” in some ways. However, I am currently off in the summer months and stay home with my kids, and the new job would be year-round. On the one hand, these free summer months offer me a chance to slow down, recharge, and put things in order for a very stable life during my “working months.” Would preserving that be better for me? On the other hand, the transitions out of work in the summer and then back to work in the fall both predictably trigger episodes because my routine changes dramatically and new anxieties are presented. Would having a stable routine all year be better for me?

On top of that, we all know that the big decisions have a complicated structure of considerations, and some of them are very particular to living with a chronic mental illness: Which job has better health insurance for mental health care? Would starting a new position add too much stress to my life or would it increase feelings of competency and excitement at work? Is it more important to have a very routine schedule to help prevent episodes, or the flexibility I might need if I experience an episode?

All of this might seem like an extra burden that people with bipolar have to deal with, and in some ways it is. But I consciously choose to look at the positive influence bipolar has on my life, and this is an exemplary area for that. In general, I think most people could benefit from being as mindful about their decisions as people with bipolar have to be. “Am I getting the right amount of sleep?” or “Did I drink too much?” or “Which of these commitments could I let go of to reduce my stress?” are commonplace questions for people living with bipolar, but really should be commonplace for anyone who wants to live his or her best life. Moreover, the reflective habits that a life with bipolar demands are habits that anyone who wants to be truly awake to life needs to cultivate. The fact that our brains are all different and set within different contexts means there is no list of hard-fast rules for every person, so we have to routinely reflect on our lives in order to know ourselves and determine whether or not we are thriving.

Since my diagnosis, my family and I have developed and maintained habits to keep me healthy. **Routine, routine, routine is the...**
cornerstone, and when we choose to break routine, we do it for reasons that are worth it and prepare as much as we can. We get lazy about it sometimes and I usually pay the consequences and am reminded why I watch what I eat, how much I sleep, how much I get to exercise, how much I am meditating, and how much stress I’m under. And because we do this, I am pretty darn healthy, physically, mentally, and spiritually. Since my diagnosis over a decade ago, I have had so many people (who know nothing of my illness) comment on how “together” or “at peace” I seem to them. Funnily enough, I think that is thanks to bipolar. The comparative fragility of health that comes with the condition has given me an impetus for being mindful and reflective when it comes to my decisions.

I remind myself of this commitment to my health with a fortune cookie message taped to my computer: “Doing the best at this moment puts you in the best place for the next moment.” That’s not just true for people with bipolar disorder, but for everyone.

Read more on Rachel’s blog: wordpress99212.wordpress.com

A pilot study of **FUNCTIONAL REMEDIATION** for bipolar disorder

By Joel Peterman, Ph.D., Postdoctoral Neuropsychology Fellow

It is not uncommon for individuals with bipolar disorder to experience difficulty with day-to-day activities such as carrying out tasks at home or at work even when they are not currently in a mood episode. **Many times this functional impairment is due to cognitive deficits (e.g. difficulties with attention, memory, and executive functioning) that make it harder to perform daily tasks.** Because of this continued functional impairment, researchers at the University of Barcelona created a manualized group intervention for individuals with bipolar disorder that focuses on developing skills to compensate for their unique cognitive deficits.

While there has been an initial randomized controlled treatment study of the effects this program has on function in individuals with bipolar disorder, it has yet to be replicated elsewhere. **Therefore, the Prechter research team set out to initially see whether this 21-week program would be beneficial to research participants in our longitudinal bipolar cohort.**

We recently completed our first group which was comprised of eight Prechter research participants working through multiple **modules focused on three cognitive domains: attention, memory, and executive functioning.** Participants attended an hour and a half session each week during which time they were taught compensatory strategies for cognitive deficits, as well as given an opportunity to practice them in session through the use of different exercises. Throughout the sessions, participants were challenged to think of ways in which the strategies that were being taught could be useful in their daily life.

**The overarching goal of the program is to help participants develop skills suited to their difficulties in order for them to live as independently as possible.** Initial responses to the program from our participants appear to be promising and it is our hope that interventions like this one can be provided to a larger population of participants as an added component to their treatment plans.

“I really found the functional remediation class helpful in learning new strategies to overcome common cognitive dysfunctions that are frequently experienced by individuals with bipolar disorder. It was so nice to discuss coping skills with others and know that I am not alone.”

— Lisa G., Research Participant
From our earliest years, humans learn to differentiate happy voices from sad voices. As we grow, we are often able to recognize more complex changes in mood by the cadence and volume of a person’s speech. The PRIORI project, a collaboration between the Prechter Bipolar Research Program and the University of Michigan Department of Engineering, is working to teach computers to discern subtle changes in speech patterns that predict changes in mood. Speech is collected through the PRIORI app, which runs in the background of a smart phone. Our goal is to provide an early warning system for individuals with bipolar disorder to allow for early intervention that may reduce serious outcomes.

This year, the Prechter Bipolar Research Program opened a satellite lab dedicated to work on the PRIORI project. Research technicians listen to hours of short speech snippets and rate them on key characteristics. These ratings are fed into computers, guiding machine learning. A paper resulting from this work has been accepted for publication at the Interspeech Conference (interspeech2018.org). Titled, The PRIORI Emotion Dataset: Linking Mood to Emotion Detected In-the-Wild, this paper outlines the critical steps in developing a pipeline that uses emotion to improve mood state prediction and provides evidence and a working model for the use of emotion as a meta-feature for mood state monitoring.

As our engineers gain accuracy in the use of vocal acoustics to predict mood change in individuals who speak English, the question arises as to whether these acoustical changes remain constant across languages. Last fall, we began a federally-funded study that begins to answer that question. Through collaboration with Balamand University in Beirut, Lebanon, we are testing the PRIORI app on the Arabic language, using the app with Arabic-speaking individuals both in Lebanon and in Michigan.

Our collaboration continues with Brown University on a five-year federally-funded study that uses PRIORI to monitor suicide risk over time. Analysis has begun on 46 subjects with 8,138 calls and over 375 hours of speech data.

The Prechter Bipolar Research Program is energized and excited by the progress made on the PRIORI project this year. Much works lies ahead but through partnering with our research participants and donors, we will achieve our goal of improving care and quality of life for individuals with bipolar disorder.

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Spotlight

On Irene Ruthven, MCS, Data Lead

Irene joined the Prechter team in July 2018. She heads the Prechter data lab that is setting up a research data dashboard to show researchers around the world what data the Prechter team has available for them to use. This dashboard will allow researchers to understand if the Prechter team has the data they want to include in a certain study — data will be made available via formal data requests.
In our stem cell research, under the direction of K. Sue O’Shea, Ph.D., we are establishing induced pluripotent stem (iPS) cell lines from individuals with bipolar disorder and control individuals. Since living brain cells from individuals with bipolar disorder are not available for study, the goal of this study is to compare the characteristics of neurons from individuals with bipolar disorder with those from undiagnosed controls to understand the molecular mechanisms involved in bipolar disorder.

Using the very latest laboratory techniques, researchers isolate skin cells (fibroblasts) from a skin biopsy sample and manipulate, or “induce,” the cells to make them behave and function like stem cells derived from an early embryo. Once cell lines are established, we then coax the stem cells to form neurons similar to those in the brain. These cells will be grown in culture dishes to study how the cells may be affected by factors such as different medications, which could influence the functioning of the neuronal cells. Comparison of the results of cell culture studies with the extensive clinical and physiological data from study participants will help us determine why some individuals respond to specific interventions, or why stressors can affect behavior.

Effects of ECT on bipolar and control brain cells

Electroconvulsive therapy (ECT) is a medical intervention most commonly used in patients with severe major depression who have not responded to other treatments or who are at risk for suicide. ECT involves a brief electrical stimulation of the brain while the patient is under anesthesia. ECT produces substantial improvement in approximately 80 percent of patients.

However, we do not presently know how ECT works. One hypothesis is that the treatment helps brain cells remove toxic proteins from the brain cells that change the function of cells by damaging them.

In this research, we are exposing stem cell-derived brain cells from control individuals and bipolar disorder patients to a series of electroshocks. We then determine what proteins are released by the cells. We will then test if their release can be stimulated with medicines, rather than ECT.

Our lab has already established that astrocytes (a type of support cell in the nervous system) from control patients produce more exosomes (the sacs that transport toxic material out of the cell). We’ve also seen that the quantity and type of materials — proteins and RNA (Ribonucleic acid) — which are removed by exosomes are different in astrocytes from people with bipolar disorder.

We are currently studying the exosomes released passively (without shock) into the culture medium. Next, we will use an electroshock apparatus to apply current to the cells and compare the contents of exosomes released from bipolar and control cells. Finally, we will chemically activate and block this pathway and examine effects on neuronal behavior.

“We hope that research done in our lab will help us understand what changes in the brains of bipolar individuals, so that we can target better treatments to that process. Stem cells are important models, since there is no way to study living brain cells from patients with bipolar disorder.”

— K. Sue O’Shea, Ph.D.

2018 Honorees for the NAMI RESEARCH AWARD

The National Alliance on Mental Illness has announced the selection of the Prechter Program’s research director, Melvin McInnis, M.D., and the director of our pluripotent stem cell research lab, K. Sue O’Shea, Ph.D., as the 2018 honorees for the NAMI Research Award. The award will be presented on November 15, 2018, in Washington, D.C., when NAMI will celebrate the two scientists’ significant achievements and contributions to a better understanding of mood disorders.
Dear Friends:

Last year our family foundation made a matching gift commitment of $5,000,000 to Michigan Medicine. This decision was made to address two priorities of our foundation: 1) to support an endowment to maintain the Prechter Longitudinal Study of Bipolar Disorder and the Bipolar Genetics Repository in perpetuity, and 2) to accelerate the momentum of important research on bipolar disorder by encouraging others to contribute the funding needed to continue and accelerate the research.

I want to thank the many people who have responded to this challenge. Some of you have made your very first gift to support bipolar research in the last year. Others, many who have been loyal donors to bipolar research over the past years, have risen to the challenge by increasing the size of their gifts. We are grateful to all of you.

Since our matching gift challenge has been in place and through July 2018, $2,928,758 has been raised. That means there is over $2,000,000 left in our matching gift fund. We hope you’ll continue to give and that we can reach the $5,000,000 challenge by the end of the next fiscal year.

As we mark the close of yet another fiscal year, it is a good time to reflect on the many significant accomplishments achieved by the Heinz C. Prechter Bipolar Research Program. As you read the articles in this newsletter, please take pride in knowing that you have helped make this progress happen.

Your gifts made it possible for the Prechter Program to come this far. Your future gifts will bring about the breakthroughs that will finally stop severe mood episodes.

Thank you for your continued support.

Waltraud E. Prechter
Founder, Heinz C. Prechter Bipolar Research Program

Richard Tam Foundation Bequest Challenge

I am always encouraged when I read reports from Dr. McInnis and his team — it is great to see that we are making progress toward finding solutions to improve the lives of people with bipolar disorder. I can see that there is truly reason to be hopeful! We have now come to realize that this disease is complex on many levels — with many factors contributing to the expression of symptoms, including the role of genetics, the role of stress, and the course of the illness itself. It seems likely that there isn’t one bipolar illness, but a number of variations, and each may each require different treatments to be successfully managed.

Just because there is no simple solution doesn’t mean we should stop looking. Every severe manic, depressed or mixed episode takes a toll on the individual. Too often, the painful consequences can leave lasting damage. This problem will require a sustained commitment and effort from brilliant scientific minds AND ongoing financial help from everyone who cares about stopping the devastation of this brutal disease.

For this reason, I am happy to say that the Richard Tam Foundation will make a cash gift for every new bequest to bipolar research at the University of Michigan made between now and the end of 2019. The Tam Foundation’s gift will be equal to 10%, up to $50,000, of the value of each new documented bequest of $25,000 or more.

I want to applaud the efforts of the world class bipolar research program that is going on here at the University of Michigan. We are fortunate to be able to provide significant funding through our foundation. But, we need your help to accelerate the research and insure the future of this valuable research program.

You can make a difference in this fight by making a gift now and/or by including a gift to the Heinz C. Prechter Bipolar Research Program in your will or estate plan. Please contact Lisa Fabian at fabianl@umich.edu or 734-763-4895 to learn more.

— Judith Tam, President of the Richard Tam Foundation

Judith Tam,
President of the Richard Tam Foundation
Disorder Translational

Dr. Jenkins is awarded the One Mind Bipolar Disorder Translational Research Award to Paul Jenkins, Ph.D.

In August 2018, One Mind awarded the Rising Star Bipolar Disorder Translational Research Award to Paul Jenkins, Ph.D. Dr. Jenkins is an Assistant Professor of Pharmacology and Psychiatry at the University of Michigan, and part of the Prechter Research Team. To identify and develop more effective treatments for bipolar disorder, Dr. Jenkins will use rodent models and patient-derived cell cultures to test his hypothesis that alterations in a protein (ankyrin-G) play a key role in this disorder. Dr. Jenkins will also investigate whether current treatments effectively target the ankyrin-G protein.

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OUR MISSION
The mission of the Heinz C. Prechter Bipolar Research Program is to discover the mechanisms that contribute to bipolar disorder, predict and improve outcomes, and develop effective, innovative treatments.

OUR VISION
We are building a future where personalized and evidence-based treatments for bipolar disorder will enable every individual with the illness to lead a healthy and productive life.

FEATURING: Kay Redfield Jamison

AUTHOR OF: Robert Lowell, Setting the River on Fire: A Study of Genius, Mania, and Character

Tuesday, October 9, 2018, 6–9 p.m.
University of Michigan
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Kahn Auditorium
109 Zina Pitcher Place, Ann Arbor, MI, 48109

Featured speaker; panel discussion about the present and future of research in bipolar disorder; reception

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