



BRAIN &
BEHAVIOR
RESEARCH FOUNDATION

Awarding **NARSAD** Grants

ANNUAL REPORT 2015

CURES THROUGH RESEARCH

BOARD OF DIRECTORS

OFFICERS

Chairman

Stephen A. Lieber

Vice President

Suzanne Golden

Secretary

John B. Hollister

Treasurer

Arthur Radin, CPA

DIRECTORS

Anne E. Abramson

Donald M. Boardman

J. Anthony Boeckh

Susan Lasker Brody

Paul T. Burke

Bonnie D. Hammerschlag

John Kennedy Harrison II

Carole H. Mallement

Milton Maltz

Marc R. Rappaport

Virginia M. Silver

Kenneth H. Sonnenfeld, Ph.D., J.D.

Barbara K. Streicker

Barbara Toll

Robert Weisman, Esq.

EX-OFFICIO

President & CEO

Jeffrey Borenstein, M.D.

President, Scientific Council

Herbert Pardes, M.D.

PUBLICATION CREDITS

Writers

Lauren Duran

Peter Tarr, Ph.D.

Editor

Lauren Duran

Design

Kim Howie

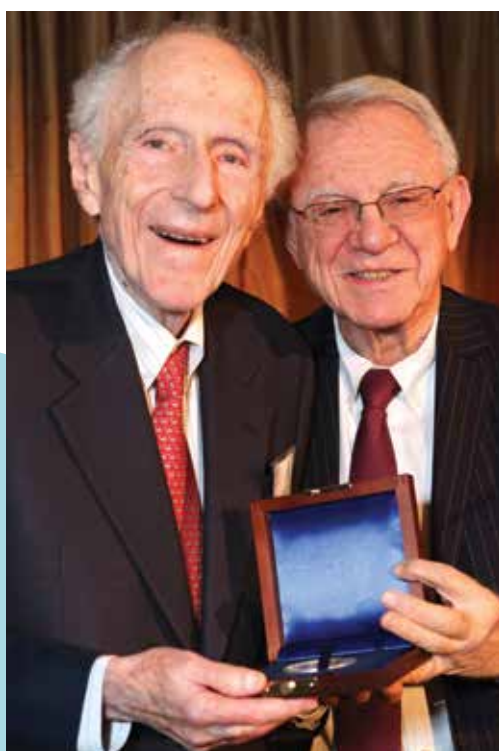




TABLE OF CONTENTS

4	Our Global Footprint
6	Thank You from Our Leaders
8	15 Major Discoveries in 2015
18	2015 Investments in Research Grants
20	Distinguished Investigators
22	Independent Investigators
24	Young Investigators
29	Meet the Scientist Webinar Series
30	Our Scientific Council
32	Our New Scientific Council Members
38	Foundation Events
44	Parenting
48	Stories of Productive Lives
52	Donors
53	Research Partners Program
58	Donor Listings
64	Honor Tributes
66	Memorial Tributes
69	Community Partners
72	2015 Financial Summary

© 2016 The Brain & Behavior Research Foundation

Our Global Footprint

529 Institutions (including subsidiaries and affiliations)

329 In the U.S.

200 Outside of the U.S.

"The reach of the Brain & Behavior Research Foundation's Grants knows no borders. The impact of our effort is not only in the development of promising scientists, but also in the focus it brings to the challenge and urgent need of bringing hope and better lives to all those living with mental illness."

HERBERT PARDES, M.D.

President, Foundation Scientific Council
Executive Vice Chairman of the Board of Trustees
NewYork-Presbyterian Hospital

Institutions Added in 2015

Ghent University
Italian Institute of Technology
University of Vienna, Ferris University
National Scientific Council of Argentina (CONICET)
Second University of Naples
University of Cadiz
University of Kansas
University of Rennes, University of Basque Country
University of Trento
University of Tulsa

Grants

IN 2015

Young Investigators

712 Applications
191 Awarded
179 New Grantees
12 Prior Grantees

Independent Investigators

315 Applications
40 Awarded
16 New Grantees
24 Prior Grantees

Distinguished Investigators

181 Applications
15 Awarded
6 New Grantees
9 Prior Grantees

SINCE 1987

Total Amount Awarded

\$342 Million

Total Grants Awarded

5,000+ In total
4,100+ In the U.S.
900+ Outside of the U.S.

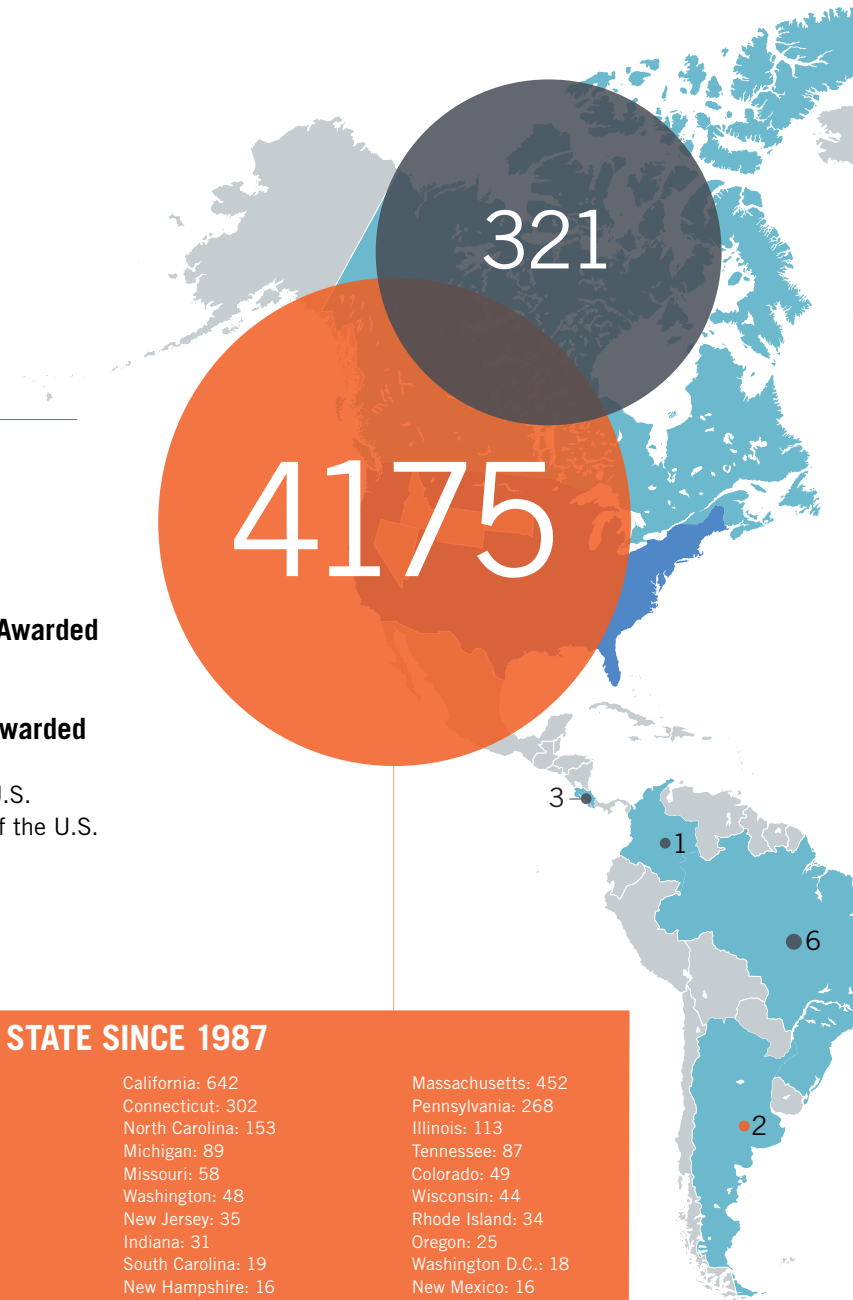
GRANTS BY STATE SINCE 1987

New York: 757
Maryland: 306
Texas: 177
Georgia: 93
Ohio: 82
Iowa: 49
Virginia: 38
Minnesota: 33
Florida: 25
Alabama: 16
Louisiana: 15
Arizona: 10
Arkansas: 7
Kansas: 4
Maine: 1

California: 642
Connecticut: 302
North Carolina: 153
Michigan: 89
Missouri: 58
Washington: 48
New Jersey: 35
Indiana: 31
South Carolina: 19
New Hampshire: 16
Kentucky: 13
Mississippi: 10
Nebraska: 6
Hawaii: 4
Delaware: 1

Massachusetts: 452
Pennsylvania: 268
Illinois: 113
Tennessee: 87
Colorado: 49
Wisconsin: 44
Rhode Island: 34
Oregon: 25
Washington D.C.: 18
New Mexico: 16
Utah: 13
Oklahoma: 7
Vermont: 5
West Virginia: 4

Number of Grants in a Country
Orange indicates a new institution was added in 2015



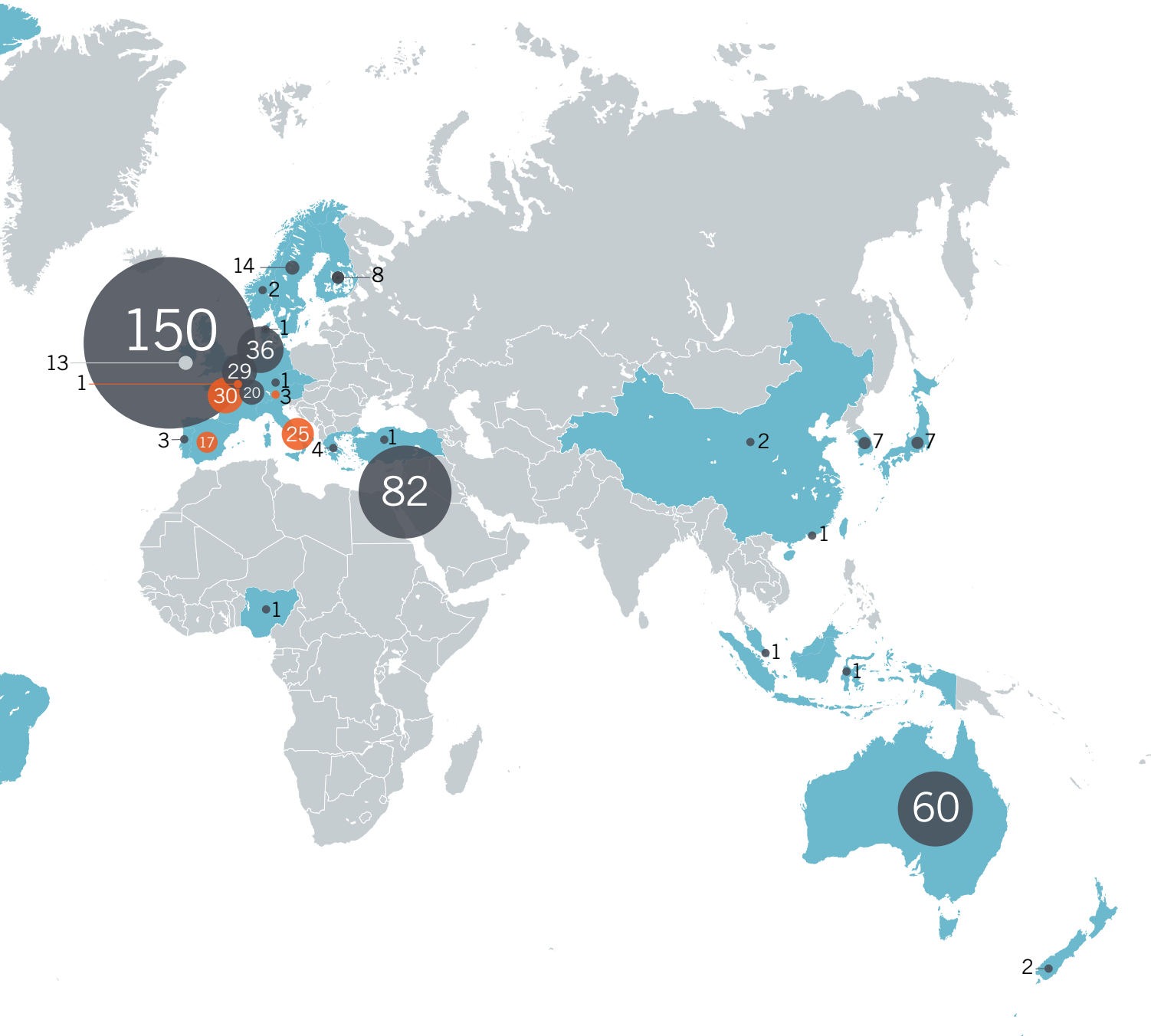
TOTAL NUMBER OF COUNTRIES

34

TOTAL NUMBER OF STATES IN THE U.S.

46

Including Washington, D.C.



DEAR FOUNDATION SUPPORTERS

Beginning in 1987, long before the venture capital tech boom and the Internet Bubble (1995–2000), the Brain & Behavior Research Foundation was providing seed money to neuroscientists to invest in “out of the box” research that the government and other sources were unwilling to fund. That same year the Foundation awarded \$250,000 in NARSAD Young Investigator Grants to its first 10 early career scientists at \$25,000 each to fund their promising research ideas. As of December 2015, we have awarded more than \$342 million in more than 5,000 grants, to more than 4,000 scientists in the United States and 34 other countries, in over 525 universities and medical centers.

The \$342 million in grants awarded by the Foundation since 1987 has resulted in over \$3 billion in additional research funding for these scientists.

We can measure our success through the multiplier effect. A survey of our grantees revealed:

- NARSAD Grants increase researchers ability to secure additional grant support
- NARSAD Grants result in subsequent funding (federal and private) of at least 10 times the amount invested by the Foundation

Government budgets are declining for basic research and many major pharmaceutical companies are backing away from neuropsychiatric research and development. The Foundation is unique in that it relies on private contributions of individuals and family foundations to accelerate funding of the most promising brain research to find better treatments and cures for mental illness. We seek answers in understanding how the brain functions and can malfunction; answers in developing preventative and early intervention techniques and answers in finding improved treatments for those whose illness has progressed. In 2015, the Foundation awarded a total of \$18.5 million to our Young Investigator, Independent Investigator and Distinguished Investigator Grantees.

No other organization outside of the federal government has funded the number of mental health research grants that the Foundation has—or been responsible for more breakthroughs in the field.

An independent measure of the success of our grants is in a recent RAND Europe analysis of the global mental health research funding landscape over the past five years. This report found that we are the top non-government mental health research funder mentioned in published articles.

The Foundation is a driving force in advancing what is known about mental illness and how to better treat, prevent and ultimately cure it. A few examples of research progress in 2015 include:

Gene Expression Analysis Points Toward Pathways Involved in Major Depression

Dr. Patrick Sullivan (2014 Lieber Prizewinner and 2010 Distinguished Investigator) and Dr. Dorret Boomsma (2011 Distinguished Investigator) identified 119 genes whose activity differs significantly in people with major depressive disorder. Whether stemming from inherited genetic factors and/or environmental influences, these gene expression changes help point scientists toward biological pathways likely to be involved in the disorder. The study also pointed to 19 genes whose expression was more likely to have returned to normal if an individual had recovered from an earlier depression.

Hopeful News on Comprehensive Team Treatment of Early Psychosis

Dr. Nina Schooler (Scientific Council Member and 1998 Distinguished Investigator), Dr. Kim Mueser (2003 Distinguished Investigator and 1988 Young Investigator) and five other grant recipients, along with other colleagues, demonstrated that early intervention and coordinated team care can make a real, positive difference in outcomes for first-episode psychosis patients. Over two years, the team treated 223 patients with a protocol called NAVIGATE, a first-episode intervention stressing low-dose antipsychotic medications; cognitive behavioral therapy to support resiliency and illness self-management skills; family psychoeducation and support; and provided employment and educational opportunities. The better outcomes suggest the importance of early and coordinated intervention after a first psychotic episode.

New Compounds Show Promise in Treating Schizophrenia Symptoms

Dr. Marc Caron, (Scientific Council Member, 2013 Lieber Prizewinner and 2005 Distinguished Investigator) found two new small-molecule drugs tested in mice alleviated some symptoms of schizophrenia-like behaviors, including social avoidance and cognitive performance. The team found that drugs called UNC9975 and UNC9994 influence the beta-arrestin communication pathway and reduced hyperactive movements, improved memory for novel stimuli, and made the test mice more social. The work shows that hitting other pathways in schizophrenia has the potential to treat symptoms in more individualized, fine-tuned ways.

We Support Scientists and Research in Its Early Stages

We understand that some outcomes may be groundbreaking, like our early support of the use of Clozaril for schizophrenia, transcranial magnetic stimulation for treatment resistant depression, deep brain stimulation for depression, and optogenetics, the breakthrough technology that uses light to control activity patterns in the brain. But all research generates new findings that can help advance the understanding of the brain. Foundation funded grants are like venture capital support for our scientists.

Most of our grants go to Young Investigators. By funding these scientists, you are supporting a career in brain research. We have a unique arrangement with the universities and institutions in which no overhead costs are taken from the grants given to our Young Investigators—every dollar goes to scientific research. With our Independent Investigators and Distinguished Investigators, institutions may only take up to eight percent maximum per year of overhead costs.

Because of the generous support of two family foundations which cover the Foundation's operating expenses, 100 percent of your contributions for research are invested in our grants leading to advances and breakthroughs in brain and behavior research. Your donations have a tremendous impact.

No other organization outside of the federal government has funded the number of mental health research grants that the Foundation has—or been responsible for more breakthroughs in the field.

Our mission to alleviate the suffering of mental illness through scientific advances and understanding is based upon our steadfast commitment to patients, family members and friends. We believe that this past year more people were able to live happy, productive lives. This progress could not have been accomplished without the extraordinary dedication of our 165-member Scientific Council. Their volunteer effort is at the heart of the Foundation's achievements and the basis for its success in continuing to make advances in research.

But more still needs to be done and we are poised and ready. With your ongoing commitment we will continue to invest your contributions into promising ideas that get results. Results that in turn will improve lives. Thank you for your support.

With sincere thanks and regards,



A handwritten signature in black ink, appearing to read "Jeff Borenstein".

JEFFREY BORENSTEIN, M.D.
President and CEO



A handwritten signature in black ink, appearing to read "Stephen A. Lieber".

STEPHEN A. LIEBER
Chair, Board of Directors



A handwritten signature in black ink, appearing to read "Herb Pardes".

HERBERT PARDES, M.D.
President, Scientific Council



15 **MAJOR** **DISCOVERIES** **in 2015**

2015 was an exciting year in brain and behavior research thanks to you and the many others who generously support our grantees and the groundbreaking discoveries they are making.

Listed in Order of Publication

1

Long-Term Effects of Marijuana on the Brain

2

Lithium Linked to Lower Incidence of Dementia in Older People with Bipolar Disorder

3

Parent's History of Suicide Attempts Helps Predict Suicide Attempts in Their Children

4

Combined Drug Treatment Improved Results in Geriatric Depression

5

Omega-3 Relieves Depression Symptoms in People with Bodily Inflammation

6

Estrogen Drug Improves Cognition in Schizophrenia Patients

7

Gene Expression Analysis Points Toward Pathways Involved in Major Depression

8

Non-Invasive Stimulation Reworks Brain Waves, Improves Cognition

9

New Compounds Show Promise in Treating Schizophrenia Symptoms

10

Drug Helps Mice Respond Normally to Fear After Traumatic Experience

11

Watching Patient-Derived Brain Cells Take Shape in the Lab Reveals Autism Defect

12

Omega-3 Supplements Linked to Reduced Risk of Developing Psychosis

13

Size of Brain Structure May Predict Effectiveness of Ketamine

14

Distinguishing Childhood and Adult Forms of ADHD

15

Hopeful News on Comprehensive Team Treatment of Early Psychosis



Vince D. Calhoun, Ph.D.

The Mind Research Network
2004 NARSAD
Young Investigator Grant

1

BASIC RESEARCH: ADDICTION

Long-Term Effects of Marijuana on the Brain

Marijuana use is on the rise nationally, a fact that is not surprising in view of recent efforts

to legalize the drug in several states. Scientific Council member Nora Volkow, Director of the National Institute on Drug Abuse in Washington, D.C., has repeatedly warned of the harmful impact of heavy marijuana use on the brain, particularly among those who use the drug regularly beginning at a very young age, and among those who happen to be at elevated risk for psychotic illness.

Scientific studies of the long-term effects of marijuana on the brain have generated controversy, providing an inconsistent picture in part due to variations in research methods. With this in mind, a research team that included Vince D. Calhoun, Ph.D., recipient of a NARSAD Young Investigator grant in 2004, set out to perform a comprehensive study to characterize brain alterations associated with chronic marijuana use.

The team, led by Francesca Filbey, Ph.D., of the University of Texas at Dallas, measured the volume of the brain's grey matter brain-wide with structural magnetic resonance imaging, as well as abnormal grey matter regions and the integrity of the brain's white matter via diffusion tensor imaging. Subjects included 48 marijuana users and 62 matched control subjects who did not use the drug.

Reporting in the *Proceedings of the National Academy of Sciences*, the team found changes in grey matter volume and potential functional abnormalities in grey matter as well in connections within white matter. Specifically, they found that chronic use reduces grey matter volume in the brain's orbitofrontal cortex; increases structural and functional connectivity; and leads to neural alterations that are affected by the age of onset and duration of use.

These findings suggest chronic marijuana use results in complex neuroadaptive processes. Future long-term studies will be needed to determine whether there is a reversion to normal following prolonged abstinence from marijuana use.



Tobias Gerhard, Ph.D.

Rutgers University
2010 NARSAD
Young Investigator Grant

*Team included: Davangere P. Devanand, M.D., 1997 Independent Investigator, 1987 Young Investigator and Mark Olfson, M.D., M.P.H., 2005 Distinguished Investigator

2

BASIC RESEARCH/TREATMENT: BIPOLAR DISORDER

Lithium Linked to Lower Incidence of Dementia in Older People with Bipolar Disorder

People with bipolar disorder are thought to be more likely to develop dementia than those who don't have the disorder. Hence the importance of a finding by Tobias Gerhard, Ph.D., of Rutgers University, and colleagues*, who reported in 2015 that regular

treatment with lithium may reduce the risk of dementia in people with bipolar disorder.

Lithium is an effective mood stabilizer for people with bipolar disorder. It was approved by the U. S. Food and Drug Administration in the 1970s, but its use has declined in the last 20 years as alternative treatments, such as the anticonvulsants valproic acid (Depakote and others) and lamotrigine (Lamictal), have become available.

In the January 22, 2015 issue of the *British Journal of Psychiatry* Dr. Gerhard and team set forth the results of their analysis of data from more than 40,000 adults. They had examined Medicare and Medicaid records of patients over 50 years of age diagnosed with bipolar disorder. For those who took lithium more than 300 days during the prior year, dementia occurred less frequently than for those who took the drug less frequently or not at all during the same period. Using lithium sporadically or intermittently did not affect the incidence of dementia, nor did treatment with anticonvulsants regardless of how often they were used.

Lithium blocks an enzyme called GSK3, known to contribute to Alzheimer's disease. Scientists have suspected that the drug might protect broadly against neurodegeneration, but clinical evidence has been inconsistent. The Gerhard team's analysis is the largest to date of dementia among people taking lithium to treat bipolar disorder. According to Dr. Gerhard, the findings "strengthen the hypothesis that lithium exerts a protective effect on the development of dementia in patients with bipolar disorder, and support clinical trials to further investigate the neuroprotective effects of lithium."



J. John Mann, M.D.

Columbia University

Scientific Council Member

2008 NARSAD Distinguished Investigator Grant

***Team included:**

David A. Brent, M.D.,
2001 Distinguished Investigator,
John G. Keilp, Ph.D.,
1998 and 1996 Young Investigator and
Nadine M. Melhem, Ph.D.,
2013 and 2004 Young Investigator

3

PREVENTION/DIAGNOSIS: SUICIDAL BEHAVIOR

Parent's History of Suicide Attempts Helps Predict Suicide Attempts in Their Children

As public health experts debate the best ways to reduce suicides—the 10th leading cause of death in the United States—new research by Foundation Scientific Council member and 2008 Distinguished Investigator grantee J. John Mann, M.D., and colleagues* calls attention to the importance of early intervention based on long-term risk factors.

In a study published in the February 2015 issue of *JAMA Psychiatry*, Dr. Mann and colleagues probed the extent to which suicidal behavior in a parent gets passed on to children. The team tracked 701 children of 334 people diagnosed with mood disorders for an average of six years to identify factors that predicted suicide attempts among the children.

The investigators found that having a parent who had attempted suicide made it nearly five times more likely that one of their children would make an attempt. It has been known that both genetic and non-genetic factors related to the predisposition for suicidal behavior, or to psychiatric illnesses that trigger suicidal behavior, are transmitted in families. This study sought to identify the factors responsible for familial transmission.

Suicide attempts were more likely among those children who, like their parents, were diagnosed with a mood disorder such as major depression or bipolar disorder. Such diagnoses are typically present at least a year before the first attempt. Most people diagnosed with depression do not attempt suicide because they do not have a predisposition to suicidal behavior. Independent of family history of depression, impulsive and aggressive behavioral traits among the children also made it more likely that they will attempt suicide.

The findings highlight the importance of three long-term risk factors: a family history of suicide attempts, a family history of mood disorders, and a personal history of impulsive aggression.



Helen Lavretsky, M.D.

Semel Institute, University of California, Los Angeles

1999 NARSAD Young Investigator Grant

4

NEXT-GENERATION TREATMENTS: DEPRESSION (GERIATRIC)

Combined Drug Treatment Improved Results in Geriatric Depression

Helen Lavretsky, M.D., of the University of Southern California, was first author on an important paper reporting results of the first comprehensive and well-controlled trial to find out if the drug methylphenidate (Ritalin) can enhance clinical and cognitive outcomes in patients with geriatric depression. Their results appeared in *The American Journal of Psychiatry* on February 13, 2015.

The research team specifically set out to discover whether methylphenidate improved patients' response to the widely prescribed antidepressant citalopram (Celexa). They conducted a 16-week randomized double-blind placebo-controlled trial for geriatric depression in 143 older outpatients diagnosed with major depression. They compared results in three treatment groups of equal size: one group received methylphenidate plus placebo; a second, citalopram plus placebo; and a third, citalopram plus methylphenidate.

Daily doses ranged from 20 mg to 60 mg for citalopram and from 5 mg to 40 mg for methylphenidate. All groups showed significant improvement in depression severity and in cognitive performance. However, the improvement was more prominent in the citalopram plus methylphenidate group compared with the other two groups.

Additionally, the rate of improvement in the citalopram plus methylphenidate group was significantly higher than that in the citalopram plus placebo group in the first four weeks of the trial. The groups did not differ in cognitive improvement or number of side effects.

Combined treatment with citalopram and methylphenidate demonstrated an enhanced clinical response profile in mood and well-being, as well as a higher rate of remission, compared with either drug alone. All treatments led to an improvement in cognitive functioning, although augmentation with methylphenidate did not offer additional benefits, the team reported.



Mark H. Rapaport, M.D.

Emory University School of Medicine

1999 NARSAD Independent Investigator Grant



Andrew A. Nierenberg, M.D.

Massachusetts General Hospital
Scientific Council Member

2013 Foundation Colvin Prizewinner

2003 NARSAD Distinguished Investigator Grant

2000 NARSAD Independent Investigator Grant



David Mischoulon, M.D., Ph.D.

Massachusetts General Hospital

2000, 1998 NARSAD Young Investigator Grant

5

NEXT-GENERATION THERAPY: DEPRESSION

Omega-3 Relieves Depression Symptoms in People with Bodily Inflammation

In the March 24, 2015 issue of *Molecular Psychiatry*, Foundation Grantees found that certain fatty acids, including omega-3, worked better to reduce symptoms of depression in people with signs of elevated bodily inflammation, compared to people without those signs. The finding supports the use of fatty acids to treat some people with depression, although the research needs to be replicated in a trial with many more participants.

Omega-3 fatty acids are found in some green vegetables, vegetable oils, and fatty fish. They are recommended by some physicians as a way to protect against heart disease and stroke. In this study, 155 people with major depressive disorder were given either a placebo or one of two types of omega-3s: eicosapentaenoic acid (EPA) or docosahexaenoic acid (DHA), over an 8-week period. They were also tested to see whether they had any of 10 chemicals in their blood

indicating high inflammation levels. People with one or more indicators of high inflammation showed a greater reduction in depressive symptoms if taking EPA compared with DHA. But people who showed no indicators of high inflammation responded *less* to EPA than either DHA or placebo, indicating that taking EPA is not always helpful. While omega-3s like EPA with anti-inflammatory properties may help relieve symptoms in people whose depression is associated with inflammation, omega-3s may in fact interfere with depression treatment in people whose depression has other causes.



Cynthia S. Weickert, Ph.D.

University of New South Wales, Australia

2004 NARSAD Independent Investigator Grant

2001, 1999 NARSAD Young Investigator Grant

Team included:
Rhoshel K. Lenroot, M.D.,
2003 Young Investigator and
Ans Vercammen, Ph.D., 2010
Young Investigator, along with
Jayashri Kulkarni, MBBS,
MPM, FRANZCP, Ph.D., 2000
Independent Investigator, and
her husband and first author
Thomas W. Weickert, Ph.D.

6

NEXT-GENERATION THERAPY: SCHIZOPHRENIA

Estrogen Drug Improves Cognition in Schizophrenia Patients

A team led by University of New South Wales researcher Cynthia S. Weickert, Ph.D., discovered in 2015 that the estrogen-like drug raloxifene—often prescribed for osteoporosis—can improve attention and memory in men and women with schizophrenia.

A growing body of evidence suggests that estrogen plays a beneficial role in the brain, supporting growth and protecting neurons

from damage. From work supported by her NARSAD Young Investigator Grants, Dr. Weickert and her colleagues* found that brain estrogen receptors are altered in some people with schizophrenia, blunting their ability to respond to estrogen's beneficial effects. Raloxifene stimulates estrogen receptors and can help overcome a blunted estrogen response. The drug also stimulates estrogen receptors in the brain and may guard against memory loss in aging, making it potentially useful for cognitive problems in schizophrenia patients.

Dr. Weickert and colleagues reported May 18, 2015 in the journal *Molecular Psychiatry* on the drug's effect in 98 people diagnosed with schizophrenia or schizoaffective disorder (which combines symptoms of schizophrenia and a mood disorder). All of the patients received a daily dose of raloxifene along with their usual antipsychotic medications in one phase of the clinical trial and a placebo in another phase.

After the first six-week period, patients taking raloxifene had improved scores on memory and attention compared to those taking placebo. Raloxifene treatment significantly improved attention and thought processing speed. It did not reduce the severity of schizophrenia symptoms any more than the placebo did, but both groups showed fewer symptoms overall during the study, and none of the patients had severe side effects from the treatment.



Patrick F. Sullivan, M.D.,
FRANZCP

University of North Carolina
School of Medicine and the
Karolinska Institute

2014 Lieber Prizewinner

2010 NARSAD Distinguished
Investigator Grant



Dorret I. Boomsma, Ph.D.

VU University Amsterdam,
Netherlands

2011 NARSAD Distinguished
Investigator Grant

7

BASIC RESEARCH: DEPRESSION

Gene Expression Analysis Points Toward Pathways Involved in Major Depression

While there is good evidence that genetics influences a person's likelihood of developing major depression, scientists have only just begun to uncover specific genetic variations that may increase risk. In a study published May 26, 2015 in *Molecular Psychiatry*, scientists led by Patrick F. Sullivan, M.D., at the University of North Carolina School of Medicine, sought out depression-relevant genes by measuring and comparing gene activity in the cells of more than 1,800 individuals. To date, this is the largest analysis of gene

expression in people with major depression.

Using blood samples collected as part of the Netherlands Study of Depression and Anxiety, Dr. Sullivan and Dr. Dorret Boomsma measured gene expression in the cells of 882 people with depression, 635 people who were not experiencing major depression at the time of the study but had in the past, as well as a control group of 331 people who reported no current or past depression.

They found 119 genes whose activity differed between the control group and people with current depression. Many of these were genes that affect immune function. This was consistent with other research suggesting a link between the immune system and mood disorders.

Two years after their initial analysis, Dr. Sullivan and colleagues collected additional data from a subset of the people in the study. This enabled them to compare gene activity between those who had recovered from their depression and those who didn't. Of the 119 depression-associated genes they had already identified, they found 19 genes whose activity also correlated with changes in depression—in these 19 genes, expression was more likely to have returned to normal among those who had recovered from their depression.



Sohee Park, Ph.D.

Vanderbilt University

2012 NARSAD Distinguished
Investigator Grant

2004 NARSAD Independent
Investigator Grant

1996, 1991 NARSAD
Young Investigator Grant

8

NEXT-GENERATION THERAPY: SCHIZOPHRENIA

Non-Invasive Stimulation Reworks Brain Waves, Improves Cognition

Transcranial direct current stimulation (tDCS) is an affordable and portable way to stimulate the brain. It can help induce normal neural activity and make

thought processes more flexible in people with schizophrenia, according to a study published online June 29, 2015 in *Proceedings of the National Academy of Sciences*.

The study suggests a drug-free and safe way of treating debilitating cognitive problems, for which antipsychotics are not completely effective.

Among the cognitive impairments present in schizophrenia are problems with learning from mistakes and adapting to changing conditions. In lab tests, people with schizophrenia may stick with wrong answers or strategies even if the outcome is not successful. They do not tend to slow down to reconsider their responses after making a mistake. These difficulties can interfere with learning at all levels.

"In order to optimally interact with our complicated environment, we constantly adjust our behavior," explains Dr. Sohee Park. "People with schizophrenia have difficulty adjusting. This results in inflexibility of actions and thoughts. Importantly, they may not even notice their errors when they make them."

Twenty minutes of low-voltage tDCS applied to the scalp over the medial prefrontal cortex improved error-monitoring and accuracy in a test of adaptive control in people with schizophrenia. After stimulation, specific brain waves measured by scalp electrodes were observed to "normalize," by showing greater synchrony—in this respect more resembling patterns seen in healthy controls.

Scientific Council Member Cameron Carter, M.D. wrote: "these findings reinforce our growing understanding that the disordered brain is not locked away inside the skull but is indeed within our reach and accessible for neuromodulation."



Marc G. Caron, Ph.D.

Duke University

Scientific Council Member

2013 Lieber Prizewinner

2005 NARSAD Distinguished Investigator Grant

9

NEXT-GENERATION THERAPY: SCHIZOPHRENIA

New Compounds Show Promise in Treating Schizophrenia Symptoms

Two new small-molecule drugs tested in mice can alleviate some symptoms of schizophrenia-like behaviors, including

movement abnormalities, social avoidance, and cognitive performance. This preliminary success in work toward better treatments for schizophrenia, was reported July 1, 2015 in *Neuropsychopharmacology*.

Currently used antipsychotic drugs block the dopamine D2 receptor, an important communication port for some neurons in the brain. These drugs are used mainly to treat schizophrenia's "positive" symptoms such as delusions and hallucinations. They are less effective, and often ineffective, in treating "negative" symptoms such as a lack of pleasure in everyday life, or concentration and memory problems (schizophrenia's "cognitive symptoms").

The research team, which included Marc G. Caron, Ph.D., and William C. Wetsel, Ph.D., a 1998 NARSAD Independent Investigator, both of Duke University Medical Center, decided to look for drug candidates that would block signaling pathways related to the dopamine D2 receptor that are not affected by existing antipsychotic medicines, in the hope that this might reveal novel ways to treat a wider variety of schizophrenia symptoms.

They tested two dopamine D2 receptor-targeting compounds called UNC9975 and UNC9994 that influence the beta-arrestin communication pathway. The research showed that the compounds could normalize schizophrenia-like symptoms in mice by reducing their hyperactive movements, improving their memory for novel stimuli and making them more social around other mice.

The new compounds also produced a much lower level of catalepsy—a rigid muscle side effect of schizophrenia treatment—than traditional antipsychotic drugs. Targeting different pathways connected to the dopamine D2 receptors may facilitate treating patients in more individualized, fine-tuned ways.



Kerry J. Ressler, M.D., Ph.D.

McLean Hospital,

Harvard Medical School

Scientific Council Member

2005, 2002 NARSAD

Young Investigator Grant

10

NEXT-GENERATION THERAPY: ANXIETY, POST-TRAUMATIC STRESS DISORDER

Drug Helps Mice Respond Normally to Fear After Traumatic Experience

In treating post-traumatic stress disorder (PTSD), the goal is to find

ways to help patients "extinguish" abnormal and exaggerated fear responses that can continue long after a traumatic event. In a new study with mice, Kerry J. Ressler, M.D., Ph.D., and his colleagues showed that treatment with the corticosteroid drug dexamethasone can help the animals lose their PTSD-related fear response, possibly through the drug's effects on a gene called *Fkbp5*.

The findings, published online July 15, 2015 in the journal *Neuropsychopharmacology*, may reveal an opportunity to halt the disorder soon after people experience a traumatic event. Dr. Ressler, of Emory University, who in 2002 and 2005 received NARSAD Young Investigator Grants, and colleagues, trained a group of mice using sounds and mild electrical shocks to learn and then to inhibit a specific fear. Animals that had experienced a traumatic event before the fear training were more likely to inhibit or extinguish the fear if they were given a low dose of dexamethasone four hours beforehand to suppress the internal stress response. The fear was also more likely to remain "extinguished" 24 hours later in those same animals.

Dr. Ressler and colleagues also showed that the dexamethasone dose affected how *Fkbp5* is expressed in the amygdala, a part of the brain involved in regulating fear and anxiety. They suggest that dexamethasone may help to extinguish fear learning after a trauma through its effects on *Fkbp5*, specifically in that gene's role in helping regulate the response to stress.

The study adds to the body of research implicating *Fkbp5* in PTSD, including earlier reports by Dr. Ressler and others that have indicated certain mutations in the gene may be related to whether childhood victims of trauma grow up to develop PTSD as adults.



Flora M. Vaccarino, M.D., Ph.D.

Yale University

2011 NARSAD Distinguished Investigator Grant

2003, 2000, 1993, 1990
NARSAD Young Investigator Grant

Gianfilippo Coppola, Ph.D.,
2013 Young Investigator,
was also a member of the
scientific team.

11

NEXT-GENERATION TECHNOLOGY/ BASIC RESEARCH: AUTISM

Watching Patient-Derived Brain Cells Take Shape in the Lab Reveals Autism Defect

Scientists using a new technology that involves reprogramming stem cells reported July 16, 2015 in *Cell* that overproduction of certain cell types during early development could lead to faulty wiring in the brains of people with autism. The study was led by Flora

M. Vaccarino, M.D., Ph.D., of Yale University and included Gianfilippo Coppola, Ph.D.*

To follow early brain development in cells with the same genetic makeup as those in people with autism, Dr. Vaccarino's team sampled skin cells from four people with the disorder and then reprogrammed them to redevelop as neurons. The scientists watched as the reprogrammed cells divided, became more specialized, and organized themselves into structures called organoids, composed of neurons at a developmental stage equivalent to the first trimester of human fetal development.

The team compared organoids derived from the cells of people with autism to a set derived from cells of the patients' fathers, who did not have autism. In the patient-derived organoids, they found an overabundance of inhibitory neurons which dampen the signals of other cells. Cells in the autism-derived organoids also divided more quickly than those in the organoids derived from the cells of unaffected individuals.

The researchers linked excessive numbers of inhibitory neurons at least in part to the over activity of a gene called FOXG1. When they grew new brain-like organoids from the same autistic individuals but this time artificially *decreasing* the activity of the FOXG1 gene, some of the key developmental defects did not appear. The normal balance of excitatory and inhibitory neurons was restored.

The findings suggest that measuring FOXG1 activity could help clinicians more accurately diagnose autism spectrum disorders. They also suggest that targeting FOXG1 may be an effective strategy for developing new drugs to treat autism.



Patrick McGorry, M.D.,
Ph.D., FRCP, FRANZCP

University of Melbourne,
Australia

2015 Lieber Prizewinner

1998 NARSAD Distinguished Investigator Grant

12

NEXT-GENERATION TREATMENTS: PSYCHOSIS, SCHIZOPHRENIA, BIPOLAR DISORDER

Omega-3 Supplements Linked to Reduced Psychosis Risk

The Foundation's 2015 Lieber Prizewinner for schizophrenia research, Patrick McGorry, M.D.,

Ph.D., of the University of Melbourne, Australia, along with study leader Dr. G. Paul Amminger and colleagues, reported that a 12-week course of omega-3 polyunsaturated fatty acid (PUFA) supplements reduced the risk that young adults would develop schizophrenia or other psychiatric illnesses.

A decade ago, the same team conducted the first trial showing that omega-3 PUFAs prevented a first episode of psychotic disorder for up to one year. On August 11, 2015 they reported results of their new research in *Nature Communications*.

Several controlled trials have shown that supplementation with omega-3 PUFAs can reduce psychotic symptoms. Since these have no clinically relevant adverse effects and are considered beneficial to health, they are ideal candidates for prevention of psychosis," the team said.

The new study looked at the longer-term impact of the supplements, among 81 people aged 13 to 25 with early psychosis. After following the patients for an average of 6.7 years after treatment, 9.8% who received the omega-3 PUFAs had at some point developed a psychotic disorder, compared to 40% of those who received placebos.

The team investigated whether omega-3 PUFA supplementation reduced need for antipsychotic medication. The proportion of individuals who reported having been prescribed antipsychotic medication at follow-up was 29.4% (10/34) in the omega-3 PUFA group and 54.3% (19/35) in the placebo group.

It's not clear exactly how omega-3 PUFAs affect the development of psychosis. It has been postulated to reduce inflammation in the brain and aid the growth of new neurons.



Chadi Abdallah, M.D.

Yale University

2015 Klerman Prize
Honorable Mention

2014, 2012 NARSAD
Young Investigator Grant

Including:
Sanjay Mathew, M.D.,
2009 Independent
Investigator, 2006, 2001
Young Investigator and
Ramiro Salas, Ph.D., 2012
Young Investigator

13

NEXT-GENERATION DIAGNOSTIC/ TREATMENT: DEPRESSION

Size of Brain Structure May Predict Effectiveness of Ketamine

Among the symptoms experienced by people who develop post-traumatic stress disorder (PTSD) is “anxious arousal”—feeling tense or easily startled much of the time. New research published in the April 2015 issue of the journal *JAMA Psychiatry* linked these symptoms to a reduction in

the size of the amygdala, a structure deep in the brain that is associated with fear processing and emotion.

The team, led by Robert H. Pietrzak, Ph.D., of the Department of Veterans Affairs National Center for PTSD in Connecticut and included Chadi Abdallah, M.D. of Yale University, wanted to evaluate whether amygdala size correlates with certain clusters of symptoms, rather than the overall disorder.

The scientists used magnetic resonance imaging to assess the size of the hippocampus and the amygdala in 48 combat veterans who served in Iraq or Afghanistan, 23 of whom had been diagnosed with PTSD.

For each patient, the team correlated the size of the amygdala and hippocampus to the severity of each of five categories of symptoms: 1) anxious arousal; 2) dysphoric arousal (sleep difficulties), 3) re-experiencing (through dreams, flashbacks, or frightening thoughts), 4) avoidance (of reminders of the traumatic event) and 5) emotional numbness.

There was one significant correlation: in veterans with the most severe anxious arousal symptoms, the right amygdala was smaller than it was in other study participants. They also found that the right amygdala was smallest in veterans who had been exposed to the most severe combat.

The findings suggest that combat exposure may contribute to shrinking of the amygdala, which is in turn associated with increased anxious arousal.



Avshalom Caspi, Ph.D.

Duke University

2010 Ruane Prizewinner



Terrie E. Moffitt, Ph.D.

Duke University

2010 Ruane Prizewinner



Guilherme V. Polanczyk,
M.D., Ph.D.

University of São Paulo School
of Medicine, Brazil

2008 NARSAD
Young Investigator

14

BASIC RESEARCH/ NEXT-GENERATION DIAGNOSIS: ADHD

Distinguishing Childhood and Adult Forms of ADHD

Despite assumptions that adult ADHD is a childhood-onset neurodevelopmental disorder, no long-term study has described the childhood period of *adults* diagnosed with ADHD. A team led by Avshalom Caspi, Ph.D., the 2010 Ruane Prize winner, performed retrospective analyses of people with ADHD diagnosed in adulthood and compared them with analyses of people diagnosed in childhood.

The team, which also included Terrie E. Moffitt, Ph.D., co-winner with Dr. Caspi of the 2010 Ruane Prize, and Guilherme V. Polanczyk, M.D., Ph.D., of the University of São Paulo School of Medicine, Brazil, reported results in the *American Journal of Psychiatry* on October 1, 2015.

They found that during childhood, six percent of the group, mostly boys, was diagnosed with ADHD. But in adulthood, only three percent received an ADHD diagnosis, with males and females affected about equally. The great surprise was that almost none of those with adult ADHD were among the portion of the group that had been diagnosed during childhood. Ninety percent of adult ADHD cases lacked a history of childhood ADHD.

If this finding is replicated in other studies, i.e., if a childhood ADHD group and a demographically comparable adult ADHD group are found to comprise virtually non-overlapping sets, then it is possible, the researchers say, that adult ADHD is not a neurodevelopmental disorder that begins in childhood, as is widely believed, but may in fact be a separate condition with other causes.



Nina R. Schooler, Ph.D.

State University of New York
Downstate Medical Center

Scientific Council Member

1998 NARSAD Distinguished
Investigator Grant



Kim T. Mueser, Ph.D.

Boston University

2003 NARSAD Distinguished
Investigator Grant

1989, 1988 NARSAD
Young Investigator Grant

*Including
Mary F. Brunette, M.D., 2000
Young Investigator; Christoph
U. Correll, M.D.,
2007 Young Investigator;
Jennifer D. Gottlieb, Ph.D.,
2009 Young Investigator;
Robert K. Heinsen, Ph.D.,
1990 Young Investigator;
Delbert G. Robinson, M.D.,
2005 Independent
Investigator

NEXT-GENERATION TREATMENT: PSYCHOSIS, SCHIZOPHRENIA

Hopeful News on Comprehensive Team Treatment of Early Psychosis

There was hopeful news in 2015 for people suffering from psychosis. Early intervention and coordinated team care can make a real, positive difference in outcomes for first-episode psychosis patients; and there is a way of delivering such care that has been demonstrated to work effectively in a series of randomly selected community-based mental health clinics located in various places across the U.S.

These and other important related results are based on two years of treating patients in the NAVIGATE program, which was evaluated in the RAISE Early Treatment Program (ETP), organized by the National Institute of Mental Health (NIMH).

The research team, reporting October 20, 2015 in the *American Journal of Psychiatry*, was led by John M. Kane, M.D., of Hofstra North Shore-LIJ School of

When compared with 181 people with a similar history (a single episode of psychosis) who received the usual care offered in community care settings, 223 people who received the NAVIGATE treatment approach: 1) remained in treatment longer; 2) experienced greater improvement in quality of life, including interpersonal relationships; 3) experienced greater relief from overall symptoms as well as depression; and 4) improved more in involvement in work and school.

Two important observations based on two years of clinical testing of the NAVIGATE approach merit special attention. One was that earlier implementation of the full, coordinated treatment approach following a first episode of psychosis correlated directly with better outcome. A second notable observation: patients who received the full coordinated treatment needed lower doses of antipsychotic medication, on average, to maintain a good quality of life.

Medicine, and included seven recipients of NARSAD Grants, including Nina R. Schooler, Ph.D. and Kim T. Mueser, Ph.D.

At the heart of the program studied were comprehensive first-episode psychosis intervention that emphasizes low-dose antipsychotic medications, cognitive-behavioral therapy to increase resiliency and illness self-management skills for the patient, family psychoeducation and support and supported employment and education.

2015 INVESTMENTS in NARSAD Research Grants

Many of our grantees go on in their careers to serve in leadership positions in the mental health field.

Since 1987, the Foundation has awarded more than \$342 million to fund more than 5,000 grants to more than 4,000 leading scientists around the world.

NARSAD Grants Support The Most Promising Ideas in Brain Research:

- **Basic Research** to understand what happens in the brain to cause mental illness.
- **New Technologies** to advance or create new ways of studying or understanding the brain.
- **Next Generation Therapies** to reduce symptoms of mental illness and ultimately cure and prevent brain and behavior disorders.

In 2015 a record number of grant applications (more than 1,200) were submitted to the Foundation for consideration.

NARSAD Distinguished Investigator Grants

- Initiated in 1988.
- Enable outstanding scientists to pursue new, cutting edge ideas with the greatest potential for breakthroughs.
- \$100,000 for one year.
- More than \$38 million funded.

NARSAD Independent Investigator Grants

- Initiated in 1995.
- Support mid-career scientists during the critical period between initiation of research and receipt of sustained funding.
- Up to \$100,000 for two years.
- More than \$74 million funded.

NARSAD Young Investigator Grants

- Initiated in 1987.
- Help researchers launch careers in neuroscience and psychiatry and gather pilot data to apply for larger federal and university grants.
- Up to \$70,000 for two years.
- More than \$230 million funded.

OUR IMPACT: NARSAD Grant recipients have gone on to receive more than \$3 billion in additional research funding in next stage NIMH and NIH grants.

Distinguished INVESTIGATORS

181 Applications

15 Grants

\$1.5M Awarded

The NARSAD Distinguished Investigator Grants provide support for experienced investigators (full professor or equivalent) conducting neurobiological and behavioral research. One-year grants of \$100,000 each are provided for established scientists pursuing particularly innovative project ideas.

Distinguished Investigator Grants fund talented, established scientists with a record of outstanding research accomplishments. These research projects might provide new approaches to understanding or treating severe mental illness. If successful, the grants could result in later funding from other sources. These grants are among the most competitive in mental health research and demonstrate the power of investigator-initiated research to bring out new and creative ideas.



“We received a large number of outstanding proposals. Some deal with a specific research problem in one area of mental illness; many are relevant for a number of illnesses; some involve basic research that will serve as the basis of clinical or translational research; and others start from a translational or clinical foundation. We are able to see the growth of the field and the manifestations of the enhanced power of research related to mental illness that have come about with the remarkable support of the Brain & Behavior Research Foundation.”

JACK D. BARCHAS, M.D.

Chair, Distinguished Investigator Selection Committee

Founding Member of the Foundation's Scientific Council

Chair and Barklie McKee Henry Professor of Psychiatry
Weill Cornell Medical College

Psychiatrist-in-Chief

Weill Cornell Medical Center, NewYork-Presbyterian Hospital and Payne Whitney Clinic

Basic Research

ADDICTION

Yavin Shaham, Ph.D.

National Institute on Drug Abuse

AUTISM SPECTRUM DISORDER

Daniel H. Geschwind, M.D., Ph.D.

University of California, Los Angeles

Nahum Sonenberg, Ph.D.

McGill University, Canada

DEPRESSION

Michel Barrot, Ph.D.

Centre National de la Recherche
Scientifique and University of
Strasbourg, France

Catherine G. Dulac, Ph.D.

Harvard University

BIPOLAR DISORDER

Alan Stewart Brown, M.D., M.P.H.

Columbia University

MENTAL ILLNESS: GENERAL

Bernice Ann Pescosolido, Ph.D.

Indiana University

SCHIZOPHRENIA

Moses V. Chao, Ph.D.

New York University

Paul J. Kenny, Ph.D.

Icahn School of Medicine at
Mount Sinai

Anthony John Koleske, Ph.D.

Yale University

Jonathan S. Mill, Ph.D.

University of Exeter, United Kingdom

David L. Sulzer, Ph.D.

Columbia University

Next Generation Therapies

DEPRESSION

Jeffrey H. Meyer, M.D., Ph.D., FRCP(C)

University of Toronto, Canada

POST-TRAUMATIC STRESS DISORDER (PTSD)

Ismene L. Petrakis, M.D.

Yale University

SCHIZOPHRENIA

Edwin S. Levitan, Ph.D.

University of Pittsburgh

Independent INVESTIGATORS



ROBERT M. POST, M.D., PH.D.

Chair, Independent Investigator
Selection Committee

Foundation Scientific Council Member

Head, Bipolar Collaborative Network

Professor of Psychiatry
George Washington School of Medicine

315 Applications

40 Grants

\$3.9M Awarded

Ground-breaking scientists already proven in their field receive the NARSAD Independent Investigator Grant. These scientists seek to produce experimental results that will put them in a position to initiate major research programs. This support comes at the critical middle period in the investigators' careers—the phase between the initiation of research and the receipt of sustained funding. With proven success as highly productive scientists, they seek to make clinically relevant advances in the study and treatment of a range of brain and behavior disorders.

Independent Investigator Grants provide each scientist with up to \$50,000 per year for two years to support their work during the critical period between the start of the research and the receipt of sustained funding.

Basic Research

ATTENTION-DEFICIT HYPERACTIVITY DISORDER (ADHD)

Satinder K. Singh, Ph.D.
Yale University

BIPOLAR DISORDER (BD)

Tomas Hajek, M.D., Ph.D.
Dalhousie University, Nova Scotia

DEPRESSION

Chadi A. Calarge, M.D.
Baylor College of Medicine

Ming-Hu Han, Ph.D.

Icahn School of Medicine at Mount Sinai

Yingxi Lin, Ph.D.

Massachusetts Institute of Technology

MOOD DISORDERS

Samer Hattar, Ph.D.
Johns Hopkins University

Gregg D. Stanwood, Ph.D.

Florida State University

POST-TRAUMATIC STRESS DISORDER (PTSD)

Tanja Jovanovic, Ph.D.
Emory University

Bo Li, Ph.D.

Cold Spring Harbor Laboratory

Rajesh Narendran, M.D.

University of Pittsburgh

SCHIZOPHRENIA

Alan Anticevic, Ph.D.
Yale University

Murray J. Cairns, Ph.D.

University of Newcastle, Australia

Ana Luisa M. Carvalho, Ph.D.

University of Coimbra, Portugal

Michael Andrew Fox, Ph.D.

Virginia Tech

Wen-Jun Gao, M.D., Ph.D.

Drexel University College of Medicine

Jacob M. Hooker, Ph.D.

Massachusetts General Hospital,
Harvard University

Christopher Barnaby Nelson, Ph.D.

Orygen Youth Health Research Centre (OYHRC),
University of Melbourne, Australia

Francesco Papaleo, Ph.D.

Italian Institute of Technology

Kevin M. Spencer, Ph.D.

VA Boston Healthcare System, Brockton,
Harvard University

Joseph Ventura, Ph.D.

University of California, Los Angeles

Stanislav S. Zakharenko, M.D., Ph.D.

St. Jude Children's Research Hospital

Karen Zito, Ph.D.

University of California,
Davis Medical Center

SUICIDE

Daniel Paul Dickstein, M.D.
Brown University

TIC DISORDERS

Christopher J. Pittenger, M.D., Ph.D.
Yale University

New Technologies

DEPRESSION

Gilles R.C. Pourtois, Ph.D.
Ghent University, Belgium

Laura Rachel Stroud, Ph.D.

The Miriam Hospital, Brown University

MULTIPLE DISORDERS

Adam Kepecs, Ph.D.
Cold Spring Harbor Laboratory

Kirsty Millar, Ph.D.

University of Edinburgh, Scotland

Jason James Radley, Ph.D.

University of Iowa

SCHIZOPHRENIA

Judith Gault, Ph.D.
University of Colorado, Denver

Next Generation Therapies

AUTISM SPECTRUM DISORDER

Suzanne Paradis, Ph.D.
Brandeis University

BIPOLAR DISORDER

Jean-Martin Beaulieu, Ph.D.
Laval University, Québec

Christopher E. Ramsden, M.D.

National Institute of Neurological Disorders
and Stroke

DEPRESSION

Venetia Zachariou, Ph.D.
Icahn School of Medicine at Mount Sinai

MULTIPLE DISORDERS

Jay A. Gottfried, M.D., Ph.D.
Northwestern University

Sachin Patel, M.D., Ph.D.

Vanderbilt University

POST-TRAUMATIC STRESS DISORDER (PTSD)

Adriana Feder, M.D.
Icahn School of Medicine at Mount Sinai

Ilan Harpaz-Rotem, Ph.D.

Yale University

SCHIZOPHRENIA

Raymond Y. Cho, M.D., M.Sc.
University of Texas Health Science Center
at Houston

Dean Francis Salisbury, Ph.D.

University of Pittsburgh School of Medicine

Young INVESTIGATORS



HERBERT Y. MELTZER, M.D.

Chair, Young Investigator Grant
Selection Committee

Founding Member of the Scientific Council

Professor of Psychiatry and Behavioral
Sciences and of Physiology
*Northwestern University, Feinberg School
of Medicine*

Dr. Meltzer has reviewed more than
14,784 grant applications since 1987.

712 Applications

191 Grants

\$13.1M Awarded

NARSAD Young Investigator Grants cover a broad spectrum of mental illnesses and serve as catalysts for additional funding, providing researchers with “proof of concept” for their work. The Foundation awarded a total of \$13 million to its 2015 Young Investigators, strengthening its investment in the most promising ideas to lead advancements in understanding and treating brain and behavior disorders.

Young Investigator Grants provide each scientist with up to \$35,000 per year for two years totaling \$70,000 to enable promising investigators to either extend research fellowship training or begin careers as independent research faculty. Every Young Investigator gets support and guidance from a scientific mentor designated by the Scientific Council.

Basic Research

ADDICTION

Amit Agarwal, Ph.D.

Johns Hopkins University

Stephan Lammel, Ph.D.

University of California, Berkeley

Jocelyn Margaret Richard, Ph.D.

Johns Hopkins University

Benjamin Thomas Saunders, Ph.D.

Johns Hopkins University

Lucas Sjulson, M.D., Ph.D.

New York University

ATTENTION-DEFICIT HYPERACTIVITY DISORDER (ADHD)

Lisa Anne Briand, Ph.D.

Temple University

Joseph Stephen Ralker, Ph.D.

Florida International University

Shona Lee Ray-Griffith, M.D.

University of Arkansas for Medical Sciences

Karen E. Seymour, Ph.D.

Johns Hopkins University School of Medicine

Robert Whelan, Ph.D.

University College Dublin, Ireland

ANXIETY

Jiook Cha Ph.D.

Columbia University

Jacek Debiec, M.D., Ph.D.

University of Michigan

Edward Korzus, Ph.D.

Neuropsychiatric Institute & Hospital at the University of California, Los Angeles

Sabine Krabbe, Ph.D.

Friedrich Miescher Institute, Switzerland

Ekaterina Likhtik, Ph.D.

Columbia University

Dean Mobbs, Ph.D.

Columbia University

Ilya E. Monosov, Ph.D.

Washington University

AUTISM SPECTRUM DISORDER

Brendon M. Nacewicz, M.D., Ph.D.

University of Wisconsin-Madison

Kimberly Lynn Hills Carpenter, Ph.D.

Duke University Medical Center

Daniel H. Ebert, M.D., Ph.D.

Johns Hopkins University School of Medicine

Min Fu, Ph.D.

Duke University

Theofanis Karayannis, Ph.D.

New York University

Miranda M. Lim, M.D., Ph.D.

Portland VA Medical Center and Oregon Health and Science University

Olga Penagarikano, Ph.D.

University of the Basque Country, Spain

Susan B. Perlman, Ph.D.

University of Pittsburgh

Tyler K. Perrachione, Ph.D.

Boston University

Caroline Elizabeth Robertson, Ph.D.

Massachusetts Institute of Technology

Stephan J. Sanders, BMBS, Ph.D.

University of California, San Francisco

Nasim Vasli, Ph.D.

Centre for Addiction and Mental Health, University of Toronto, Canada

BIPOLAR DISORDER

Ezra Wegbreit, Ph.D.

Brown University

DEPRESSION

Agustin Anastasia, Ph.D.

Weill Cornell Medical College

David Bulkin, Ph.D.

Cornell University

Ramesh Chandra, Ph.D.

University of Maryland

Revathy U. Chottekalapanda, Ph.D.

The Rockefeller University

Esther M. Berrocso, Ph.D.

University of Cadiz, Spain

George Dragoi, M.D., Ph.D.

Yale University

Fernando S. Goes, M.D.

Johns Hopkins University

Olivia Engmann, Ph.D.

Icahn School of Medicine at Mount Sinai

Liisa Hantsoo, Ph.D.

University of Pennsylvania

Poornima A. Kumar, Ph.D.

McLean Hospital and Harvard University

Tara Anne LeGates, Ph.D.

University of Maryland School of Medicine

Kathryn M. Lenz, Ph.D.

Ohio State University

Byungkook Lim, Ph.D.

University of California, San Diego

Brittany Leigh Mason, Ph.D.

University of Texas Southwestern Medical Center at Dallas

Bradley Ress Miller, M.D., Ph.D.

Columbia University

Veronica Musante, Ph.D.

Yale University

Sarah Ordaz, Ph.D.

Stanford University

Jodi Lynn Pawluski, Ph.D.

University of Rennes, France

Marta Pecina, M.D., Ph.D.

University of Michigan

Joaquin Piriz, Ph.D.

National Scientific and Technical Research Council (CONICET), Argentina

Peter Rudebeck, Ph.D.

Icahn School of Medicine at Mount Sinai

Jonathan B. Savitz, Ph.D.

Laureate Institute for Brain Research

Neil Schwartz, Ph.D.

University of California, San Francisco

Desiree Rosa Maria Seib, Ph.D.

University of British Columbia, Canada

Marisa S.P. Toups, M.D.

University of Texas Southwestern Medical Center at Dallas

MULTIPLE DISORDERS

Todd Hancock Ahern, Ph.D.
Quinnipiac University

Samuel Alan Barnes, Ph.D.
University of California

Anna Verena Beyeler Ph.D.
Massachusetts Institute of Technology

Gwendolyn Gabrielle Calhoon, Ph.D.
Massachusetts Institute of Technology

Daniel Cavanaugh, Ph.D.
University of Pennsylvania

Catherine Christian, Ph.D.
University of Illinois

Joanna Molly Dragich, Ph.D.
Columbia University

Monica Dus, Ph.D.
University of Michigan

Christina Marie Gremel, Ph.D.
University of California, San Diego

Michael M. Halassa, M.D., Ph.D.
New York University

Gretchen L. Hermes, M.D., Ph.D.
Yale University

Kathryn Leigh Humphreys, Ph.D.
Tulane University

Katherine M. Nautiyal, Ph.D.
Columbia University

Ramin Pashale, Ph.D.
University of Wisconsin-Milwaukee

Robert Mark Richardson, M.D., Ph.D.
University of Pittsburgh

Nicolas W. Simon, Ph.D.
University of Pittsburgh

Nien-Pei Tsai, Ph.D.
University of Illinois at Urbana-Champaign

Taehong Yang, Ph.D.
University of California, San Francisco

Erika Yeh, Ph.D.
University of California, San Francisco

OBSESSIVE COMPULSIVE DISORDER

Patricia A. Gruner, Ph.D.
Yale University

Joshua L. Plotkin, Ph.D.
State University of New York at Stony Brook

POST-TRAUMATIC STRESS DISORDER (PTSD)

Mark Paul Brandon, Ph.D.
McGill University/Douglas Mental Health University Institute, Canada

Nikolaos P. Daskalakis, M.D., Ph.D.
Icahn School of Medicine at Mount Sinai

Diasynou Fioravante, Ph.D.
University of California, Davis Medical Center

Talya Greene, Ph.D.
University of Haifa, Israel

Dmitri Young, Ph.D.
University of California, San Francisco

Moriel Zelikowsky, Ph.D.
California Institute of Technology

SCHIZOPHRENIA

Renata Batista-Brito, Ph.D.
Yale University

Estefania Pilar Bello, Ph.D.
Columbia University

Francois Bourque, M.D.
McGill University/Douglas Mental Health University Institute, Canada

Michael Edward Cahill, Ph.D.
Icahn School of Medicine at Mount Sinai

Alana May Campbell, Ph.D.
University of North Carolina at Chapel Hill

Francesco Errico, Ph.D.
Ceinge Biotechnologie Avanzate, Italy

Ragy R. Girgis, M.D.
Columbia University

Jill R. Glausier, Ph.D.
University of Pittsburgh

Jacob Gratten, Ph.D.
University of Queensland, Australia

John A. Gray, M.D., Ph.D.
Davis Medical Center, University of California

Stephanie Mary Groman, Ph.D.
Yale University

Marc Aaron Heiser, M.D., Ph.D.
University of California, Los Angeles

Jonathan D. Hommel, Ph.D.
University of Texas Medical Branch at Galveston

Shantanu P. Jadhav, Ph.D.
Brandeis University

Abigail Susan Kalmbach, Ph.D.
Columbia University

Said Kourrich, Ph.D.
University of Texas Southwestern Medical Center at Dallas

Viviane Labrie, Ph.D.
Centre for Addiction and Mental Health, University of Toronto, Canada

Hanmi Lee, Ph.D.
Stanford University

Hiroshi Makino, Ph.D.
University of California, San Diego

Amanda McCleery, Ph.D.
University of California, Los Angeles

Alex S. Nord, Ph.D.
University of California, Davis

Gaurav H. Patel, M.D., Ph.D.
New York State Psychiatric Institute/Columbia University

Albert R. Powers, M.D.
Yale University

Matthew David Puhl, Ph.D.
McClean Hospital/Harvard University

Stephen Ripke, M.D., Ph.D.
Charité—University Medicine Berlin, Freie Universität Berlin, Germany

Antonio Sanz-Clemente, Ph.D.
Northwestern University

Jeffrey N. Savas, Ph.D.
Northwestern University

Shushruth Shushruth, M.B.B.S., Ph.D.
Columbia University

Katharine Natasha Thakkar, Ph.D.
University Medical Center Utrecht, Holland

Marie-Eve Tremblay, Ph.D.
Laval University, Quebec, Canada

Christiaan H. Vinkers, M.D., Ph.D.
University Medical Center Utrecht, Holland

Gemma Margaret Williams, MBCh
Cardiff University, UK

Ki-Jun Yoon, Ph.D.
Johns Hopkins University

OTHER DISORDERS EATING DISORDERS

Summer Fontaine Acevedo, Ph.D.
*Southwestern Medical Center of the
University of Texas in Dallas*

Elisa S. Na, Ph.D.
University of Michigan

NEW TECHNOLOGIES

AUTISM SPECTRUM DISORDER (ASD)
Kwanghun Chung, Ph.D.
Massachusetts Institute of Technology

DEPRESSION
Priti Balchandani, Ph.D.
Icahn School of Medicine at Mount Sinai

George M. Slavich, Ph.D.
University of California, Los Angeles

Mariano Soiza-Reilly, Ph.D.
INSERM, France

Amber Leaver, Ph.D.
University of California, Los Angeles

MULTIPLE DISORDERS
Renato Pollmanti, Ph.D.
Yale University

Daniel Schmidt, Ph.D.
University of Minnesota

POST-TRAUMATIC STRESS DISORDER (PTSD)

Tracy A. Butler, M.D.
New York University School of Medicine

SCHIZOPHRENIA
Jose Alejandro Cortes-Briones, Ph.D.
Yale University

Erik Michael DeBoer, Ph.D.
University of Pennsylvania

Edmund Lalor, Ph.D.
Trinity College Dublin, Ireland

Aviv Abraham Mezer, Ph.D.
Hebrew University, Israel

SUICIDE PREVENTION
Megan Lee Fitzgerald, Ph.D.
Columbia University

**OTHER DISORDERS
FRAGILE X**
Manish Saggar, Ph.D.
Stanford University

NEXT GENERATION THERAPIES

ADDICTION
David Louis Pennington, Ph.D.
*Northern California Institute for
Research and Education
University of California, San Francisco*

James J. Prisciandaro, Ph.D.
Medical University of South Carolina

**ATTENTION-DEFICIT HYPERACTIVITY
DISORDER (ADHD)**
Merideth Alice Addicott, Ph.D.
Duke University

Hadi Hosseini, Ph.D.
Stanford University

ANXIETY

Dylan Grace Gee, Ph.D.
Weill Cornell Medical College

Catherine Alexandra Hartley, Ph.D.
Weill Cornell Medical College

Emily Sue Kappenman, Ph.D.
University of California, Davis Medical Center

Stephen Eric Nybo, Ph.D.
Ferris State University

Lauren M. Osborne, M.D.
Johns Hopkins University

Laura Sagliano, Ph.D.
Second University of Naples, Italy

Simona Scaini, Ph.D.
San Raffaele Vita-Salute University, Italy

Shari A. Steinman, Ph.D.
*New York State Psychiatric Institute, Columbia
University*

Richard Michiel van Rijn, Ph.D.
Purdue University

AUTISM SPECTRUM DISORDER
Marta Biagioli, Ph.D.
University of Trento, Italy

Julien Christian Roger Dubois, Ph.D.
California Institute of Technology

BIPOLAR DISORDER
Alexis Estelle Whitton, Ph.D.
Maclean Hospital/Harvard University

DEPRESSION

Melynda Diane Casement, Ph.D.
University of Pittsburgh

Evangelia G. Chrysikou, Ph.D.
University of Kansas

Laura K. Fonken, Ph.D.
University of Colorado

Brian M. Iacoviello, Ph.D.
Icahn School of Medicine at Mount Sinai

Dawn F. Ionescu, M.D.
*Massachusetts General Hospital and
Harvard University*

Clare Kelly, Ph.D.
Trinity College Dublin, Ireland

Donel M. Martin, Ph.D.
University of New South Wales, Australia

Mark J. Niciu, M.D., Ph.D.
National Institute of Mental Health

Darren Michael Opland, Ph.D.
Yale University

Leah H. Somerville, Ph.D.
Harvard University

Marie Spies, M.D.
University of Vienna, Austria

Oren Tene, M.D.
Tel Aviv University, Israel

Erin Christine Tully, Ph.D.
Georgia State University

Ryan Van Lieshout, M.D., Ph.D.
McMaster University, Canada

Christian Anthony Webb, Ph.D.
Maclean Hospital/Harvard University

MULTIPLE DISORDERS

Satoru Ikezawa, M.D., Ph.D.
*National Center of Neurology & Psychiatry,
Japan*

Nicole Rachel Kozloff, M.D.
*St. Michael's Hospital and the University of
Toronto, Canada*

Timothy Y. Mariano, M.D., Ph.D., M.Sc.
Brown University

Andrada Delia Neacsu, Ph.D.
Duke University Medical Center

Ueli Rutishauser, Ph.D.
*Cedars-Sinai Medical Center at the University
of California Los Angeles*

Antonios S. Zannas, M.D.,
Max-Planck Institute for Psychiatry, Germany

OBSESSIVE-COMPULSIVE DISORDER
George McConnell, Ph.D.
Duke University

**POST-TRAUMATIC STRESS DISORDER
(PTSD)**
Lynnette Astrid Averill, Ph.D.
Yale University

Isaac Galatzer-Levy, Ph.D.
New York University School of Medicine

Jamie Lynn Peters, Ph.D.
Medical University of South Carolina

Basant K. Pradhan, M.D.
*Cooper University Hospital & Cooper Medical
School of Rowan University*

SUICIDE PREVENTION
Emily B. Ansell, Ph.D.
Yale University

Haggai Sharon, M.D.
Tel Aviv University, Israel

SCHIZOPHRENIA

Anthony Olufemi Ahmed, Ph.D.
Weill Cornell Medical College

Lisa Anne Buchy, Ph.D.
University of Calgary, Canada

Sasja Noriko Duijff, Ph.D.
University Medical Center of Utrecht, Holland

Anne-Kathrin J. Fett, Ph.D.
Vrije Universiteit, Holland

Daniel John Foster, Ph.D.
Vanderbilt University Medical Center

David Gyllenberg, M.D., Ph.D.
University of Turku, Finland

Carol Jahshan, Ph.D.
University of California, Los Angeles

Heeyoung Lee, Ph.D.
University of Pittsburgh

Shupeng Li, M.D., Ph.D.
*Centre for Addiction and Mental Health,
University of Toronto, Canada*

Rachel L. C. Mitchell, Ph.D.
King's College London, UK

Nigel Craig Rogasch, Ph.D.
Monash University, Australia

Jerri M. Rook, Ph.D.
Vanderbilt University Medical Center

Douglas Ruderfer, Ph.D.
Icahn School of Medicine at Mount Sinai

OTHER DISORDERS
ANOREXIA
Sahib Khalsa, M.D., Ph.D.
University of Tulsa

Pei-an (Betty) Shih, Ph.D.
University of California

BORDERLINE PERSONALITY DISORDER
Vanessa Nieratschker, Ph.D.
University of Tübingen, Germany

Meet *the* Scientist



A Free Monthly Q&A Webinar Series

Join By Phone or On The Web Tuesdays at 2:00PM EST

Our cutting edge educational programs are a resource to hundreds of individuals each year.

2016



JULY 12

Life Elevated: Examining Altitude-Related Effects on Mental Illness

Perry F. Renshaw, M.D., Ph.D.

University of Utah School of Medicine



AUGUST 9

Autism: Understanding the Causes and Developing Effective Treatments

Jacqueline N. Crawley, Ph.D.

University of California, Davis School of Medicine, Sacramento



SEPTEMBER 13

Living Well with ADHD: Scientific Guideposts to Improved Outcomes

Francisco Xavier Castellanos, M.D.

New York University Child Study Center



OCTOBER 18

A Beautiful Mind: John Nash, Schizophrenia, Game Theory and Recovery from Schizophrenia With and Without Medication

Herbert Y. Meltzer, M.D.

Northwestern University Feinberg School of Medicine



NOVEMBER 8

Could We Someday Prevent Schizophrenia Like We Prevent Cleft Palate?

Robert R. Freedman, M.D.

University of Colorado School of Medicine



DECEMBER 13

Neuroinflammatory Hypotheses of Depression

Yvette I. Sheline, M.D.

University of Pennsylvania



MODERATOR

Jeffrey Borenstein, M.D.

President & CEO, Brain & Behavior Research Foundation

Host of the Public Television Series *Healthy Minds*

OUR SCIENTIFIC COUNCIL

165 MEMBERS

- 2 Nobel Prize Winners
- 4 Former Directors of the National Institute of Mental Health
- 4 Recipients of the National Medal of Science
- 13 Members of the National Academy of Sciences
- 21 Chairs of Psychiatry & Neuroscience Departments
at Leading Medical Institutions
- 47 Members of the Institute of Medicine

President

Herbert Pardes, M.D.

Vice President Emeritus

Floyd E. Bloom, M.D.

Anissa Abi-Dargham, M.D.
George K. Aghajanian, M.D.
Schahram Akbarian, M.D., Ph.D.
Huda Akil, Ph.D.
Susan G. Amara, Ph.D.
Stewart A. Anderson, M.D.
Nancy C. Andreasen, M.D., Ph.D.
Amy F.T. Arnsten, Ph.D.
Gary S. Aston-Jones, Ph.D.
Jay M. Baraban, M.D., Ph.D.
Jack D. Barchas, M.D.
Samuel H. Barondes, M.D.
Francine M. Benes, M.D., Ph.D.
Karen F. Berman, M.D.
Wade H. Berrettini, M.D., Ph.D.
Randy D. Blakely, Ph.D.
Pierre Blier, M.D., Ph.D.
Robert W. Buchanan, M.D.
Peter F. Buckley, M.D.
William E. Bunney, Jr., M.D.
Joseph D. Buxbaum, Ph.D.
William Byerley, M.D.
Marc G. Caron, Ph.D.
William T. Carpenter, Jr., M.D.
Cameron S. Carter, M.D.
BJ Casey, Ph.D.
Dennis S. Charney, M.D.
Bruce M. Cohen, M.D., Ph.D.
Jonathan D. Cohen, M.D., Ph.D.
Peter Jeffrey Conn, Ph.D.
Richard Coppola, D.Sc.
Joseph T. Coyle, M.D.
Jacqueline N. Crawley, Ph.D.
John G. Csernansky, M.D.
Karl Deisseroth, M.D., Ph.D.
J. Raymond DePaulo, Jr., M.D.
Ariel Y. Deutch, Ph.D.
Wayne C. Drevets, M.D.
Ronald S. Duman, Ph.D.
Jan A. Fawcett, M.D.
Stan B. Floresco, Ph.D.
Judith M. Ford, Ph.D.
Alan Frazer, Ph.D.
Robert R. Freedman, M.D.
Fred H. Gage, Ph.D.
Aurelio Galli, Ph.D.
Mark S. George, M.D.
Elliot S. Gershon, M.D.
Mark A. Geyer, Ph.D.
Jay N. Giedd, M.D.

Jay A. Gingrich, M.D., Ph.D.
David Goldman, M.D.
Frederick K. Goodwin, M.D.
Joshua A. Gordon, M.D., Ph.D.
Elizabeth Gould, Ph.D.
Anthony A. Grace, Ph.D.
Paul Greengard, Ph.D.
Suzanne N. Haber, Ph.D.
Philip D. Harvey, Ph.D.
Stephan Heckers, M.D.
Nathaniel Heintz, Ph.D.
René Hen, Ph.D.
Fritz A. Henn, M.D., Ph.D.
Robert M.A. Hirschfeld, M.D.
L. Elliot Hong, M.D.
Steven E. Hyman, M.D.
Robert B. Innis, M.D., Ph.D.
Jonathan A. Javitch, M.D., Ph.D.
Daniel C. Javitt, M.D., Ph.D.
Lewis L. Judd, M.D.
Peter W. Kalivas, Ph.D.
Eric R. Kandel, M.D.
Richard S.E. Keefe, Ph.D.
Samuel J. Keith, M.D.
Martin B. Keller, M.D.
John R. Kelsoe, M.D.
Kenneth S. Kendler, M.D.
James L. Kennedy, M.D.
Robert M. Kessler, M.D.
Kenneth K. Kidd, Ph.D.
Mary-Claire King, Ph.D.
Rachel G. Klein, Ph.D.
John H. Krystal, M.D.
James F. Leckman, M.D.
Francis S. Lee, M.D., Ph.D.
Ellen Leibenluft, M.D.
Robert H. Lenox, M.D.
Pat Levitt, Ph.D.
David A. Lewis, M.D.
Jeffrey A. Lieberman, M.D.
Irwin Lucki, Ph.D.
Robert C. Malenka, M.D., Ph.D.
Anil K. Malhotra, M.D.
Husseini K. Manji, M.D., FRCP
J. John Mann, M.D.
John S. March, M.D., M.P.H.
Helen S. Mayberg, M.D.
Robert W. McCarley, M.D.
Bruce S. McEwen, Ph.D.
Ronald D.G. McKay, Ph.D.

James H. Meador-Woodruff, M.D.
Herbert Y. Meltzer, M.D.
Richard J. Miller, Ph.D.
Karoly Mirnics, M.D., Ph.D.
Bita Moghaddam, Ph.D.
Dennis L. Murphy, M.D.
Charles B. Nemeroff, M.D., Ph.D.
Eric J. Nestler, M.D., Ph.D.
Andrew A. Nierenberg, M.D.
Patricio O'Donnell, M.D., Ph.D.
Steven M. Paul, M.D.
Godfrey D. Pearlson, MBBS, M.D.
Daniel S. Pine, M.D.
Robert M. Post, M.D.
James B. Potash, M.D., M.P.H.
Steven G. Potkin, M.D.
Pasko Rakic, M.D., Ph.D.
Judith L. Rapoport, M.D.
Perry F. Renshaw, M.D., Ph.D., M.B.A.
Kerry J. Ressler, M.D., Ph.D.
Carolyn B. Robinowitz, M.D.
Bryan L. Roth, M.D., Ph.D.
John L.R. Rubenstein, M.D., Ph.D.
Bernardo Sabatini, M.D., Ph.D.
Akira Sawa, M.D., Ph.D.
Alan F. Schatzberg, M.D.
Nina R. Schooler, Ph.D.
Robert Schwarcz, Ph.D.
Philip Seeman, M.D., Ph.D.
Yvette I. Sheline, M.D.
Pamela Sklar, M.D., Ph.D.
Solomon H. Snyder, M.D., D.Sc., D.Phil.
(Hon. Causa)
Murray Stein, M.D., M.P.H.
John S. Strauss, M.D.
J. David Sweatt, Ph.D.
John A. Talbott, M.D.
Carol A. Tamminga, M.D.
Laurence H. Tecott, M.D., Ph.D.
Ming T. Tsuang, M.D., Ph.D., D.Sc.
Leslie G. Ungerleider, Ph.D.
Rita J. Valentino, Ph.D.
Jim van Os, M.D., Ph.D., MRCPsych
Nora D. Volkow, M.D.
Mark von Zastrow, M.D., Ph.D.
Karen Dineen Wagner, M.D., Ph.D.
Daniel R. Weinberger, M.D.
Myrna M. Weissman, Ph.D.
Jon-Kar Zubieta, M.D., Ph.D.

OUR NEW SCIENTIFIC COUNCIL Members

Led by Dr. Herbert Pardes, the founding President of our Scientific Council, the all-volunteer group of preeminent mental health researchers review more than 1,000 NARSAD Grant applications each year and select the most promising research ideas with the greatest potential to lead to breakthroughs.

The Foundation's Scientific Council is composed of 165 world renowned scientists representing every major discipline in brain and behavior research including two Nobel Prize winners, four former directors of the National Institute of Mental Health, four recipients of the National Medal of Science, 13 members of the National Academy of Sciences, 21 Chairs of Psychiatry and Neuroscience Departments at leading medical institutions, and 47 members of the National Institute of Medicine.

The Scientific Council guides the Foundation to fund creative and impactful research relevant to the whole spectrum of mental health.

We welcome our newest members.



TED ABEL, PH.D. is the Brush Family Professor of Biology in the School of Arts and Sciences at the University of Pennsylvania. Dr. Abel is also Co-Director of the Biological Basis of Behavior Program and he directs an NIMH-funded pre-doctoral training program in behavioral and cognitive neuroscience. His laboratory's primary focus is on understanding the molecular and cellular basis of learning and memory as well as the role of sleep in memory storage. Using mouse models, Dr. Abel seeks to identify novel therapeutic approaches to treat cognitive deficits associated with many psychiatric and neurodevelopmental disorders. Dr. Abel has been a leader in applying molecular and genetic approaches to define how neural circuits mediate behavior, making creative use of genetically modified mouse lines to study the biological basis of behavior. He has published widely in journals that include *Nature*, *Neuron*, *Journal of Clinical Investigation* and *Journal of Neuroscience*. He is a Fellow of the American College of Neuropsychopharmacology, Editor-in-Chief of *Neurobiology of Learning and Memory*, and an Associate Editor of *Behavioral Neuroscience*.



DEANNA M. BARCH, PH.D. is the Gregory B. Couch Professor of Psychiatry and the Chair of the Department of Psychological & Brain Sciences at Washington University in Saint Louis, MO. She was the Editor of *Cognitive, Affective and Behavioral Neuroscience*, is currently Deputy Editor at *Biological Psychiatry* and is on the Editorial Boards of *Schizophrenia Bulletin*, *Current Directions in Psychological Science*, *Journal of Abnormal Psychology*, and *Clinical Psychological Science*. Dr. Barch is immediate past President of the Society for Research in Psychopathology, is on the DSM-V Revision Committee, is on the Steering Committee for the NIMH Research Domain Criteria initiative, and is a member of the NIMH Scientific Council. Her research is focused on understanding the interplay among cognition, emotion, and brain function to better understand the deficits in behavior and cognition found in illnesses such as schizophrenia and depression. She uses functional MRI, structural MRI, and cognitive neuroscience methods to examine neural basis of disturbances in cognitive control and emotional processing in individuals with schizophrenia and those at risk for the development of schizophrenia, as well as in individuals with mood disorders.

1995 & 2000 Young Investigator
2006 Independent Investigator
2013 Distinguished Investigator



EDWIN H. COOK, JR., M.D. is interested in the genetics of autism, attention-deficit hyperactivity disorder, obsessive-compulsive disorder, and the development of improved pharmacologic treatments of these disorders. As Director of The Laboratory of Developmental Neuroscience and Professor, Department of Psychiatry at The Conte Center for Computational Neuropsychiatric Genomics based at The University of Chicago, Dr. Cook and his team are dedicated to studying the developmental neurobiological basis of pediatric-onset neuropsychiatric disorders. They use neurochemical and molecular genetic research tools to develop new knowledge that may lead to improvement in clinical pharmacology. They began as a neurochemistry lab studying the relationship between hyperserotonemia and autistic disorder. The team is now working with collaborators on molecular genetic and clinical pharmacological studies of autism, attention-deficit hyperactivity disorder, childhood-onset obsessive-compulsive disorder, stuttering, adolescent depression, and pediatric and early onset bipolar mood disorder.



RAQUEL E. GUR, M.D., PH.D. is Professor of Psychiatry, Neurology and Radiology at the University of Pennsylvania's Perelman School of Medicine where she directs the Neuropsychiatry Section and the Schizophrenia Research Center and is Vice Chair of Research Development in the Department of Psychiatry. Her combined training in Neurology and Psychiatry has provided the tools to pursue an academic career working with basic and clinical neuroscientists to advance the understanding of schizophrenia. In directing these research endeavors, she has interacted with scientists of diverse backgrounds, conducted collaborative interdisciplinary research, mentored junior faculty and trainees, and has come to know many patients and their families. She is a member and has served in organizations including the Institute of Medicine of the National Academy of Sciences, the NIMH Council and the American Psychiatric Association task forces including the DSM-5 Psychosis work group. She is Past President of the Society of Biological Psychiatry and President of the American College of Neuropsychopharmacology. NIMH has supported her research efforts and she has over 440 publications in peer-reviewed journals.

1999 Distinguished Investigator
2009 Lieber Prize



TAKAO K. HENSCH, PH.D. is a joint professor of Neurology at Harvard Medical School at Boston Children's Hospital, and Professor of Molecular and Cellular Biology at Harvard's Center for Brain Science. Dr. Hensch's research focuses on critical periods in brain development. By applying cellular and molecular biology techniques to neural systems, his lab identified pivotal inhibitory circuits that orchestrate structural and functional rewiring of connections in response to early sensory experience. His work affects not only the basic understanding of brain development, but also therapeutic approaches to devastating cognitive disorders later in life. He currently directs the NIMH Silvio O. Conte Center for Basic Mental Health Research at Harvard. He serves on the editorial board of various journals, including *Journal of Neuroscience*, *Journal of Neurodevelopmental Disorders*, *Neural Development*, *Neuroscience Research*, *Frontiers in Neural Circuits* and *Neuron*.



AMANDA J. LAW, PH.D. is a Professor in the Departments of Psychiatry and Cell and Developmental Biology, the Dr. Nancy L. Gary Chair in Children's Mental Disorders Research and Director, Neurodevelopmental and Neuropsychiatric Genetics Lab at the University of Colorado, School of Medicine. The primary goal of Dr. Law's research is to identify and understand the role of genetic factors in psychiatric, neurodevelopmental and behavioral disorders. Her research focuses on understanding the molecular, cellular and biochemical mechanisms underlying genetic susceptibility to severe neurodevelopmental disorders, including schizophrenia; with a view to identifying affected neurobiological processes and cellular pathways for the development of next generation treatments. Dr. Law has focused her research on a multidisciplinary, translational neuroscience approach to understanding neurocognitive and neurodevelopmental disorders, combining studies of human postmortem brain tissue, human peripheral cell systems, primary cell culture models and transgenic animal models with neuropharmacology and clinical genetics.

2006 Young Investigator
2011 Sidney R. Baer, Jr. Prize



GARY LYNCH, PH.D. is a Professor, Psychiatry & Human Behavior and a Professor, Anatomy & Neurobiology at the School of Medicine at the University of California, Irvine. Dr. Lynch is one of the most cited authors in neuroscience, holds 25 patents, and co-founded two publicly traded companies. Dr. Lynch's work led the way to the modern theory of how synapses encode memory. This involves a change in the shape, and thus potency, of connections that is stabilized by a reorganization of the subsynaptic cytoskeleton. He is also the co-inventor of ampakines, a class of drugs that enhance memory and stimulate the production of growth factors. He is currently using ampakines in an attempt to reverse the negative effect of aging on the anatomy and physiology of brain cells.



KATHLEEN R. MERIKANGAS, PH.D. is a Senior Investigator and Chief of the Genetic Epidemiology Research Branch in the Intramural Research Program at the National Institute of Mental Health. The major areas of her research are: studies of the patterns and components of familial aggregation of mental disorders and familial mechanisms for comorbidity of mental and medical disorders; identification of early signs and risk factors for psychiatric disorders among high and low risk youth using prospective longitudinal high risk studies; and large-scale population-based studies of mental disorders including high risk designs and prospective longitudinal research. The major project underway in her research group is a community-based family study of affective spectrum disorders and their overlap with other mental disorders, especially anxiety disorders, and medical disorders such as migraine and cardiovascular disease. The goal of this research is to identify the endophenotypes that are closer to the biologic expression of genes underlying these disorders and environmental moderators of genetic expression. Findings from this research are likely to have important implications for targets of prevention and treatment of affective illness.



DOST ÖNGÜR, M.D., PH.D. is a native of Istanbul, Turkey. Dr. Öngür is currently Associate Professor of Psychiatry at Harvard Medical School and Chief of the Psychotic Disorders Division at McLean Hospital. His research is funded by the NIMH and focuses on MRI studies of brain abnormalities in individuals with schizophrenia, bipolar disorder, and related conditions as well as on the cardiovascular health of these patients. In recent years he has had a special focus on abnormal brain bioenergetics and white matter integrity as pathophysiologic factors in these common and severe conditions. In addition to his clinical responsibilities and research, Dr. Öngür has received awards for his teaching and mentorship and holds a K24 award from the NIMH.

2004 Young Investigator

2013 Independent Investigator



MARINA R. PICCIOTTO, PH.D. is the Charles B. G. Murphy Professor of Psychiatry and Professor in the Child Study Center, of Neuroscience and of Pharmacology; Deputy Chair for Basic Science Research, Department of Psychiatry at Yale University. Her research focuses on defining molecular mechanisms underlying behaviors related to psychiatric illness, with a focus on the function of nicotinic acetylcholine receptors in the brain. Her laboratory uses molecular genetic strategies to identify the role of individual molecules in behaviors related to depression, addiction, cognitive function and food intake. Dr. Picciotto is Treasurer of the Society for Neuroscience, Interim Editor in Chief of the *Journal of Neuroscience*, and serves as handling editor on the editorial board of several journals. She is a fellow of AAAS and a member of the National Academy of Medicine.

1996 Young Investigator
2004 Independent Investigator



GERARD SANACORA, M.D., PH.D. is currently a Professor of Psychiatry at Yale University and the Director of the Yale Depression Research Program. His work has concentrated largely on elucidating the pathophysiological mechanisms associated with mood and other neuropsychiatric disorders, and using this information to guide future treatment development. His basic science laboratory explores the effects of chronic stress on brain function, and examines the molecular, cellular and behavioral effects of newly developed treatment strategies. His clinical laboratory employs novel imaging methodologies to investigate the pathophysiology of neuropsychiatric disorders and is very active in clinical trial research. Dr. Sanacora has received the Anna-Monika Stiftung International Award for the investigation of the biological substrate and functional disturbances of depression in 2009 and the Joel Elkes Research Award for Outstanding contributions to Psychopharmacology from the American College of Neuropsychopharmacology in 2011.

1999 & 2001 Young Investigator
2007 Independent Investigator
2014 Distinguished Investigator
2003 & 2005 Klerman Honorable Mention



MATTHEW W. STATE, M.D., PH.D. is the Oberndorf Family Distinguished Professor and Chair of the Department of Psychiatry at the University of California, San Francisco School of Medicine. Dr. State is a child psychiatrist and human geneticist studying pediatric neuropsychiatric syndromes. His lab focuses on gene discovery as a launching point for efforts to illuminate the biology of these conditions and to develop novel and more effective therapies. He co-leads several international genomics collaborations, including the NIH-funded Autism Sequencing Consortium and has been the recipient of multiple awards, including recent induction into the Institute of Medicine and The AACAP George Tarjan Award for Contributions in Developmental Disabilities.

2012 Ruane Prize



SUSAN M. VOGLMAIER, M.D., PH.D. is an Associate Professor in the Psychiatry Department at the University of California, San Francisco School of Medicine. Dr. Voglmaier's lab has developed precise optical tools to investigate the mechanisms that control neurotransmitter release over the course of synapse development. The long-term goal of this line of research is to target specific differences in the membrane trafficking of synaptic vesicle proteins to normalize the balance of excitatory and inhibitory inputs in autism; and of subcortical pathways that carry sensory information that is compared with information about meaning, conveyed by cortical pathways, in schizophrenia circuits.

2007 Young Investigator



JARED W. YOUNG, PH.D. is an Assistant Professor of Psychiatry at the University of California San Diego. He is also affiliated with the Stein Institute for Research on Aging at UCSD. Dr. Young's primary interest is understanding causes of cognitive and behavioral dysfunction in serious mental illness with relevance to real world functioning. He developed and uses several cognitive and behavioral tests that can be conducted in rodents and humans so that mechanisms underlying deficient behaviors in humans can be disentangled using rodent studies. His primary interests include developing methodologies to assess putative cognitive therapeutics for schizophrenia patients, but he also collaborates with groups modeling behavior in bipolar disorder patients, as well as identifying genetic contributions to successful aging. Using these paradigms in both humans and animals provides the opportunity for bench-to-bedside translational research, increasing the likelihood of clinical success for treating the numerous behavioral and cognitive abnormalities seen in psychiatric disorders.

2008 & 2012 Young Investigator



L. TREVOR YOUNG, M.D., PH.D. is the Dean, Faculty of Medicine and Vice Provost, Relations with Health Care Institutions Centre for Addiction and Mental Health at the University of Toronto. He is a clinician-scientist who studies the molecular basis of bipolar disorder and its treatment. In his lab Dr. Young is focused on the processes that lead to long-term changes in brain structure and function in patients with bipolar disorder, and how mood-stabilizing drugs can alter those changes. He has supervised more than 30 research and clinical trainees. Dr. Young has received many awards including the Douglas Utting Award for outstanding contributions in the field of mood disorders, and the Canadian College of Neuropsychopharmacology Heinz Lehmann Award. He is a Distinguished Fellow of the American Psychiatric Association and he has led several large clinical programs including the Mood Disorders Program at Hamilton Psychiatric Hospital, which received the American Psychiatric Services Gold Achievement Award.

1989 Young Investigator
1995 Independent Investigator
2015 Colvin Prize

2015 FOUNDATION EVENTS

Our Resilient Brain: Coping with Stress, Anxiety & Memory Loss

January 23, 2015

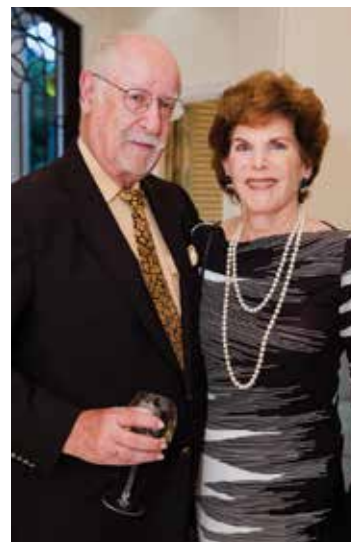
Dr. Kafui Dzirasa led a lively discussion about how stress and anxiety affect memory and how to best manage them in everyday life. Following his talk was an opportunity for questions and answers.



Drs. Kafui and Erika Dzirasa, Sandy and Jill Sirulnick, Dr. Jeff Borenstein



John and board member Suzanne Golden



Board member Bob and Fran Weisman

Discovery to Recovery: A Path to Healthy Minds Mental Health Conference

LOS ANGELES

March 10, 2015

This conference was designed to educate caregivers, family members, and people living with mental illness about the most innovative ideas, research and breakthroughs in neuroscience and psychiatry to better understand the causes and develop new ways to effectively treat brain and behavior disorders. A keynote address on living with bipolar disorder was given by Keith O'Neil, Former NFL Player & Super Bowl Champion.



Roberta Gundersen and Shelley Miller, co-chairs the L.A. Committee



Dr. Fabio Macciardi



Dr. Lisa Monteggia

Women Breaking the Silence About Mental Illness

NEW YORK

June 15, 2015

The women's luncheon featured a conversation between Hearst Magazine's Editorial Director Ellen Levine and advocate, and author Lee Woodruff about depression, anxiety and the importance of removing the stigma from mental illness. The luncheon attracted more than 300 people and was held at the Metropolitan Club. More than \$150,000 was raised for brain and behavior research.



Above: Back Row: Haley Barrows, Carole Mallement (Committee Co-Chair), Harvey Mallement, Margaret Flanagan, Ellen Levine, Dr. Richard Levine, Melinda Fager
Front Row: John Golden, Suzanne Golden (Committee Co-Chair), Caroline Hirsch, Lee Woodruff



Ellen Levine and Lee Woodruff



Renee Steinberg and Dr. Jeff Borenstein

Klerman & Freedman Awards

NEW YORK

July 24, 2015

This evening honored the hallmark program of the Brain & Behavior Research Foundation—the NARSAD Young Investigator Grant program—that enables aspiring young scientists with innovative ideas to garner pilot data and generate “proof of concept” for their work. The Annual Klerman & Freedman Prizes recognize exceptional clinical and basic research conducted by NARSAD Young Investigator Grantees.

Six Young Investigator Grantees were honored for their outstanding contributions to mental health research at Le Parker Meridien Hotel. These researchers were chosen by a committee of the Foundation's Scientific Council for their exceptional NARSAD Grant projects in terms of insight and potential new approaches to the treatment of mental illness. Each investigator has demonstrated exceptional promise in the pursuit of deeper understanding of the human brain to ultimately result in *cures through research*.



Klerman & Freedman Awards

NEW YORK

July 24, 2015



Dr. Herbert Pardes and Dr. Alan Anticevic



Dr. Carrie McAdams



Dr. Michael Halassa



Above: Dr. Kristen Brennand
Below: Dr. Nandakumar Narayanan

Klerman Prizewinner

Alan Anticevic, Ph.D., of Yale University for his 2012 Grant Research Project: *Working Memory Dysfunction in Schizophrenia and in a Ketamine Model of Psychosis: Translating Computational Modeling to Neuroimaging*

Honorable Mentions

Chadi G. Abdallah, M.D., of Yale University, for his 2012 Grant Research Project: *Examining Glutamate/ Glutamine Cycling in the Frontal Brain of Depressed Patients During Ketamine Infusion*

Carrie J. McAdams, M.D., Ph.D., of the University of Texas Southwestern Medical Center at Dallas, for her 2012 Grant Research Project: *Neurodevelopment of Identity in Adolescent Anorexia Nervosa*

Freedman Prizewinner

Michael M. Halassa, M.D., Ph.D., of New York University, for his 2012 Grant Research Project: *Systematic Optogenetic Dissection of the Link Between Spindle Expression and Schizophrenia Etiology*

Honorable Mentions

Kristen J. Brennand, Ph.D., of the Icahn School of Medicine at Mount Sinai, for her 2012 Grant Research Project: *Modeling Schizophrenia Using Human Induced Pluripotent Stem Cells: Assessing the Contribution of Glutamatergic and Dopaminergic Neurons to Disease*

Nandakumar Narayanan, M.D., Ph.D., of the University of Iowa, for his 2012 Grant Research Project: *Prefrontal Dopamine and Temporal Control*

New York Mental Health Research Symposium

October 23, 2015

The 27th Annual New York Mental Health Research Symposium featured presentations by the nine 2015 Outstanding Achievement Prizewinners and two exceptionally promising Young Investigator Grantees and was held at The Kaufman Music Center.

Presentations Included



Rethinking Schizophrenia—from the Beginning
Robert R. Freedman, M.D.



Fetal Origins of Mental Illness and Wellness
Camille Hoffman, M.D., MSCS



Clinical Staging and Personalized Mental Health Care
Patrick McGorry, M.D., Ph.D., FRCP, FRANZCP



Prediction and Prevention of Psychosis in Clinical High Risk Young People
Barnaby Nelson, Ph.D., MPsy



Pathways to The Development of Novel Therapies for Psychiatric Disorders
Michael Berk, Ph.D., MBBCh, MMed, FF(Psych)SA, FRANZCP



Gloria Neidorf Memorial Lecture: Looking Inside the Cell to Understand Bipolar Disorder and its Treatment
L. Trevor Young, M.D., Ph.D., FRCP



Treating the Developing Versus Developed Brain
BJ Casey, Ph.D.



Deconstructing the Neurobiology of ADHD Via Open Neuroscience Approaches
Francisco Xavier Castellanos, M.D.



Exploring the Higher Brain Circuits Altered in Schizophrenia: Hope for Future Treatments
Amy F.T. Arnsten, Ph.D.



Personalized Medicine in The Genomic Era: Treating Schizophrenia with Precision
Jianping Zhang, M.D., Ph.D.



New Technologies to Monitor How Brain Cells Communicate—and Sometimes Miscommunicate
Markita Patricia Landry, Ph.D.



Symposium Moderator
Robert M.A. Hirschfeld, M.D.

The Outstanding Achievement Awards

NEW YORK

October 23, 2015

The Foundation celebrated its 28th Annual Awards Dinner at The Pierre Hotel in New York City. The evening's honorees included two remarkable humanitarians, one of the world's most prominent mental health advocates and nine exceptional scientists for their significant contributions to the advancement of our understanding of schizophrenia, mood disorders, child and adolescent psychiatry and cognitive neuroscience.

Lieber Prize for Schizophrenia Research

Robert Freedman, M.D.

Patrick McGorry, M.D., Ph.D., FRCP, FRANZCP

Colvin Prize for Mood Disorders Research

Michael Berk, Ph.D., MBBCh, MMed, FF(Psych)SA, FRANZCP

L. Trevor Young, M.D., Ph.D., FRCP

Ruane Prize for Child & Adolescent Psychiatric Research

BJ Casey, Ph.D.

Francisco Xavier Castellanos, M.D.

Goldman-Rakic Prize for Cognitive Neuroscience

Amy F. T. Arnsten, Ph.D.

Sidney R. Baer, Jr. Prize for Innovative & Promising Schizophrenia Research

M. Camille Hoffman, M.D., MSCS

Barnaby Nelson, Ph.D.

The Pardes Humanitarian Prize in Mental Health

This international Prize recognizes a physician, scientist or public citizen whose extraordinary contribution has made a profound and lasting impact by improving the lives of people suffering from mental illness and by advancing the understanding of mental health.

Honorees

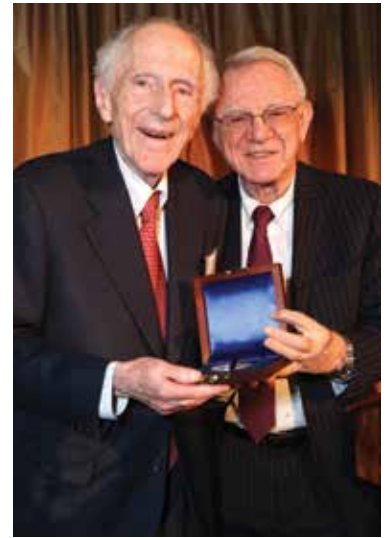
Beatrix A. Hamburg, M.D. and David A. Hamburg, M.D.

Honorary Prize

Rosalynn Carter, former First Lady of the United States



Pardes Humanitarian Prize



Drs. David A. Hamburg and Herbert Pardes



Dr. Barnaby Nelson, Marilyn Ann Hawke and Dr. Patrick McGorry and Drs. Michael and Lesley Berk



Drs. BJ Casey and Jeff Borenstein



Dr. Amy F. T. Arnsten

PARENTING

For the families of young people diagnosed with psychiatric disorders, it can be frightening, bewildering, and frustrating. The Brain & Behavior Research Foundation strives to provide helpful information and insights to those parents and family members who may be caring for children with mental illnesses. Beginning in 2015, the Foundation included in its *Quarterly* publication information that can be of practical use to families coping with the diagnosis of a behavioral disorder or mental illness.



Childhood Mental Illness

JUDITH L. RAPOPORT, M.D.

Chief, Child Psychiatry Branch
National Institute of Mental Health
Foundation Scientific Council Member

“Children have all sorts of experiences that can worry a parent,” said Judith L. Rapoport, M.D., a Foundation Scientific Council Member and Chief of the NIMH Child Psychiatry Branch. “[But] there’s an important rule of thumb: there is no ‘disorder’ until a problem begins to significantly interfere with a child’s quality of life. When fear or sadness or an inability to concentrate takes over and starts to interfere with the child’s life, either at home or at school, that’s when you should take action.”

Dr. Rapoport said parents can turn to local psychiatrists, psychologists, psychiatric social workers and family physicians if they think their child has a mental illness, which could include attention-deficit hyperactivity disorder (ADHD), anxiety, depression, or schizophrenia, among other conditions. She noted that there are a growing number of behavioral and pharmaceutical treatments that should be tailored to each child. “However, parents should know that they are not locked in to any one approach,” Dr. Rapoport added. “If a few months after you begin a therapy it doesn’t seem that you are getting anywhere you should reconsider and be open to trying a different approach.”

Dr. Rapoport also sought to reassure parents on some of the more common fears about childhood mental illness, such as the possibility of addiction to ADHD medication, or the likelihood of developing childhood-onset schizophrenia. Studies show that the ADHD medicine Ritalin, for example, is not addictive in children with ADHD and does not lead to a tendency to abuse drugs later in life, she said. Similarly, she noted that childhood-onset schizophrenia and bipolar disorder are extremely rare.

Rapoport acknowledged that a child’s mental illness can affect the family as a whole. “Following a diagnosis, the first thing parents need to do is make sure that everyone in the family gets on the same page,” she said, adding that occasional meetings with a family therapist can help. And as the stigma of these illnesses lessens, parents are finding more support groups, school district officials and other community caretakers who can join them in helping children with psychological disorders.



Misconceptions about Childhood Suicide

DAVID SHAFFER, M.D.

Irving Philips Professor of Child Psychiatry
The College of Physicians & Surgeons, Columbia University

Chief, Division of Child and Adolescent Psychiatry
Columbia University Medical Center

2006 Ruane Prize for Outstanding Achievement in Child and Adolescent Psychiatric Research

Parents may worry about a stray remark about suicide or dangerous behavior among pre-pubescent children, but suicidal thoughts and completed suicides are very rare among young children, said David Shaffer, M.D., Chief of the Division of Child and Adolescent Psychiatry at Columbia University Medical Center. Instead, parents should consider the risk factors for suicide among adolescents, while avoiding some common misconceptions about suicide in this age group.

“...Here are things that you do worry about: risk factors that exist within the family—a family history of suicide; if the kid is drinking a lot, getting drunk—alcohol is a major stimulus of suicide; if there are available methods in the household—a gun collection for example; if there’s any evidence that the child has poor emotional control—if he loses his temper very frequently, or easily gets upset; further, if there are crises, or significant ‘challenges’—it could be an examination, or having to appear in court, or it could be a planned separation by the parents. Such looming events often serve as a marker for a planned suicide,” Dr. Shaffer explained.

There are widespread misconceptions that suicidality “is a permanent mood state,” or that people intending to commit suicide can’t be stopped, Dr. Shaffer said, noting that studies do not support either contention. There is some evidence that adolescents may be influenced to consider suicide in emulation of a famous person or someone in their peer group, he noted, but most people do not act on these feelings.

“But when you have a role model, a famous person who commits suicide, and the press coverage depicts it as a tragedy, and not a crime, it glamorizes the act,” Dr. Shaffer suggested. “I think the moral is, the less talk about suicide, the better. Rather than the reverse. I think most of our work on press coverage supports that.”

Dr. Shaffer said the most important thing parents can do when their child is talking about or threatening suicide “is not to immediately start a dialogue on life and death, but to try and get some understanding of the event that is either looming or has taken place, that is worrying the kid. And then try to work through some options and also to demonstrate support.”



Coping with Anxiety Disorders

DANIEL S. PINE, M.D.

Chief, Section on Development and Affective Neuroscience
National Institute of Mental Health Intramural Research Program
Foundation Scientific Council Member

Although there is “no convincing evidence” that rates of anxiety disorders among children and teens are on the rise, pediatricians and therapists have become increasingly better at identifying and treating the disorders, said Daniel S. Pine, M.D., Chief of the Section on Development and Affective Neuroscience at the NIMH Intramural Research Program.

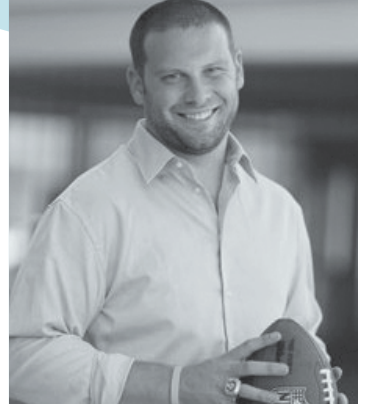
Like everyone else, children experience some anxiety as a normal part of life, but Dr. Pine said parents should look for three things to know whether their child’s anxiety has become abnormal. “The first and probably the most important thing we look at is whether there is impairment— anxiety that interferes with a person’s ability to function and leads to avoidance,” he said. After that, parents and physicians should look to whether the anxiety causes extreme stress or lasts for weeks or months. There are “no firmly established mechanisms” linking substance abuse and anxiety, Dr. Pine added, but the two disorders may occur together in some teens.

Cognitive behavioral therapy (CBT) and selective serotonin reuptake inhibitor (SSRI) medications seem to be equally effective in treating childhood anxiety, Pine said. “The best study that compared them directly in kids found one is no better than the other, and that combining the two works better than using one or the other alone.” He cautioned, however, that CBT should be delivered by a trained therapist.

Encouraging parents are the key in helping children with anxiety disorders manage their condition, Pine said. “These are parents who can help their kids face the situations that make their children most afraid, and encourage their kids to not avoid the things they’re afraid of. They are parents who look for situations and circumstances and experiences where kids are going to have to deal with their anxiety,” he noted. “Those kids tend to do better with their anxiety compared to kids whose parents are doing absolutely everything they can to prevent their kids from ever getting anxious.”

DISCOVERY TO RECOVERY STORIES OF PRODUCTIVE LIVES

People living with mental illness often face numerous challenges in managing their day to day life. Inspired by their unique stories of grace and determination, we acknowledge these challenges and recognize the capacity for families and individuals to persevere and often live productive lives. With the help of both science and the unwavering support of family and friends voice is given to the often silent, closeted and misunderstood illnesses of the brain.





Battling the Dragon of Mental Illness

Instilling Hope in Others and in Themselves

Madelin Weiss and Cory Gould have devoted their careers to helping people with mental illness. The two women have never met; their backgrounds and home towns are very different. But both have walked in the shoes of the people they serve. Since childhood, Madelin and Cory have dealt with harrowing mental illnesses that threatened to destroy any hope of a fulfilling future for either.

From age 8, Madelin experienced paralyzing anxiety and depression. Panic attacks made her fearful of going out, “afraid she wouldn’t be able to get back home.” Diagnosed with bipolar disorder at age 11, Cory had completed high school by age 16, but “my smarts didn’t save me from depression,” she says.

Madelin was first misdiagnosed with schizophrenia and given medications that didn’t work. She barely made it through high school and failed twice to get through college. “I spent most of two years in bed,” she says, “getting up only to go to therapy.” She finally found a wonderful therapist and a psychiatrist who prescribed medications that helped her.

For Cory a serious suicide attempt at age 20 turned out to be a “life changer.” She swallowed three times the dose of phenobarbital that should have been lethal. But instead of dying, she woke up a couple of days later, itching all over and thinking how grossly incompetent she was; she couldn’t even kill herself. Then she concluded that there must be mysteries in the universe, and decided to live.

For Madelin and Cory, mental illness is a life-long challenge. Cory pictures her illness as “this ugly little dragon on a chain sleeping in a corner of her brain. Every once in a while, it pulls on the chain, and her vision clouds. I have to pay attention to the early warning signs. I’ve become expert at managing my illness.” As recently as two years ago, Madelin—who calls depression “an outside force from within”—suffered symptoms severe enough for her to have to stop work. But despite the setbacks and constant vigilance, both women are grateful for the advances in research that have made it possible for them to live productive lives.

Today, Madelin, 64, holds a master’s degree in social work. She is the Associate Executive Director of PIBLY Residential Programs, in the Bronx, New York, where she oversees rehabilitative and support services for several hundred people with mental illnesses. Cory, 58, has a master’s degree in psychology and psychotherapy. She is the go-to mental health professional at Gifford Medical Center in Randolph, Vermont, and a co-founder of the Vermont chapter of the American Foundation for Suicide Prevention.



A Downward Spiral Leads to Uplift

Former NFL Player Helps Others After Facing His Diagnosis

Dreams and reality were always at odds for Keith O'Neil. With a former NFL player for a father and an early love for the game, he always longed to play professional football. But severe anxiety clouded that vision. "I couldn't sleep at night," he recalls. "My mind would just keep going." Around age 12, he began having suicidal thoughts. His parents knew he was moody, but because he would snap out of it, they never suspected an underlying illness. His symptoms receded in high school and resumed in college, while playing college football. Keith turned to alcohol to cope.

Post college his NFL dream came true when he joined the Dallas Cowboys and an old reality resurfaced—constant anxiety. When the Indianapolis Colts picked him up in 2005, Keith realized another dream: playing under revered coach Tony Dungy. But his anxiety worsened. He couldn't stop thinking about the playbook, yet kept forgetting plays. He worried about days ahead and days past. Keith spoke to Coach Dungy not only about his present mental state but also his lifelong anxiety. Dungy rallied his staff to help. Keith began taking anti-anxiety medication and played on the 2006 Colts Championship Super Bowl team.

His new reality soon came crashing down. In 2010 his wife's miscarriage triggered a severe manic episode. Following a few days of euphoria, he became paranoid and delusional. Friends and family urged him to seek psychiatric help. Within a week, he was diagnosed with bipolar 1 disorder and began medication. He still faced an uphill battle. Coping with the reality of his illness and medication side effects, Keith sank into an 18-month-long depression that persisted even after the birth of his son in 2012. That summer, Keith met Dr. Steven Dubovsky, a psychiatrist at the University of Buffalo. Dr. Dubovsky prescribed lithium, oxcarbazepine (Trileptal) and aripiprazole (Abilify), which "really made all the difference in the world," says Keith. "I still deal with my moods but I'm as healthy as I can get."

In October 2013, he founded 4th And Forever, a nonprofit organization dedicated to raising awareness, providing education, and funding research for mental illness. Through 4th And Forever, Keith is realizing a new dream—easing the way for others and reducing the stigma surrounding mental illness. "I want to do something to help, to say 'I went through this and it is okay to talk about it.'"

DONORS

We are truly grateful for the generosity of caring individuals, foundations, and members of the community that make our work possible.

Research Partners Program

Our Research Partners Program enables donors to select and support a scientist's project from amongst the most promising, cutting-edge proposals in mental illness research. Sponsoring one year of support for a Young Investigator is \$35,000; an Independent Investigator, \$50,000; and a Distinguished Investigator, \$100,000.

Our Research Partners Program has continued to grow and provide a unique opportunity for critical philanthropic support.

We are deeply grateful to all Research Partners for their vision and leadership.

JAN AND STEFAN ABRAMS

Jan and Stefan Abrams Investigators

YOUNG INVESTIGATOR

Marta Biagioli, Ph.D.

University of Trento, Italy

YOUNG INVESTIGATOR

Yongsoo Kim, Ph.D.

Pennsylvania State University

ANNE AND RON ABRAMSON

Abramson Family Foundation Investigators

DISTINGUISHED INVESTIGATOR

John R. Kelsoe, M.D.

University of California, San Diego

YOUNG INVESTIGATOR

Sharmin Ghaznavi, M.D., Ph.D.

*Massachusetts General Hospital
Harvard University*

ANONYMOUS

YOUNG INVESTIGATOR

Chadi Abdallah, M.D.

Yale University

YOUNG INVESTIGATOR

Gianfilippo Coppola, Ph.D.

Yale University

ANONYMOUS

Haddie Investigators

YOUNG INVESTIGATOR

Solange P. Brown, M.D., Ph.D.

Johns Hopkins University

YOUNG INVESTIGATOR

Julie S. Haas, Ph.D.

Lehigh University

YOUNG INVESTIGATOR

Theodoros Tsetsenis, Ph.D.

University of Pennsylvania

ATHERTON FOUNDATION

Atherton Investigators

YOUNG INVESTIGATOR

Lior Brimberg, Ph.D.

The Feinstein Institute for Medical Research

YOUNG INVESTIGATOR

Peter G. Enticott, Ph.D.

Monash University, Australia

YOUNG INVESTIGATOR

Brian J. O'Roak, Ph.D.

Oregon Health and Science University

YOUNG INVESTIGATOR

Latha Soorya, Ph.D.

Rush University

YOUNG INVESTIGATOR

Kaustubh Satyendra Supekar, Ph.D.

Stanford University

DIANA AND DAN ATTIAS

Attias Family Foundation Investigators

YOUNG INVESTIGATOR

Kelly Anne Barnes, Ph.D.

Baylor College of Medicine

YOUNG INVESTIGATOR

Martin Debbané, Ph.D.

University of Geneva

YOUNG INVESTIGATOR

Sebastien Delcasso, Ph.D.

Massachusetts Institute of Technology

YOUNG INVESTIGATOR

Lauren Celia Faget, Ph.D.

University of California, San Diego

YOUNG INVESTIGATOR

Jennifer H. Foss-Feig, Ph.D.

Connecticut Mental Health Center

Yale University

YOUNG INVESTIGATOR

Allyson Kimberly Friedman, Ph.D.

Icahn School of Medicine at Mount Sinai

YOUNG INVESTIGATOR

Avniel S. Ghuman, Ph.D.

University of Pittsburgh

YOUNG INVESTIGATOR

Mira Alexandra Jakovcevski, Ph.D.

Max Planck Institute for Psychiatry

YOUNG INVESTIGATOR

David L. Roberts, Ph.D.

*University of Texas Health Science Center at
San Antonio*

SIDNEY R. BAER, JR. FOUNDATION

Sidney R. Baer, Jr. Investigators

INDEPENDENT INVESTIGATOR

Stephen J. Glatt, Ph.D.

*State University of New York, Upstate Medical
University*

YOUNG INVESTIGATOR

Brian P. Brennan, M.D.

*McLean Hospital
Harvard University*

YOUNG INVESTIGATOR

Mark Christian Eldaief, M.D.

*Beth Israel Deaconess Medical Center
Harvard University*

YOUNG INVESTIGATOR

Mei-Hua Hall, Ph.D.

*Harvard Medical School
Harvard University*

YOUNG INVESTIGATOR

William B. Ruzicka, M.D., Ph.D.

*McLean Hospital
Harvard University*

YOUNG INVESTIGATOR

Eli Ayumi Stahl, Ph.D.

Icahn School of Medicine at Mount Sinai

YOUNG INVESTIGATOR

Gordana D. Vitaliano, M.D.

*McLean Hospital
Harvard University*

JANET AND DONALD BOARDMAN

Janet and Donald Boardman Investigator

YOUNG INVESTIGATOR

Jessica A. Bernard, Ph.D.

Texas A&M University

MR. AND MRS. EVERETT DESCHNER

Katherine Deschner Family Investigators

YOUNG INVESTIGATOR

Shannon Leigh Gourley, Ph.D.

Emory University

YOUNG INVESTIGATOR

Leah H. Somerville, Ph.D.

Harvard University

ESSEL FOUNDATION

Essel Investigators

INDEPENDENT INVESTIGATOR

Julia A. Chester, Ph.D.

Purdue University

INDEPENDENT INVESTIGATOR

Wen-Jun Gao, M.D., Ph.D.

Drexel University College of Medicine

INDEPENDENT INVESTIGATOR

Kirsty Millar, Ph.D.

University of Edinburgh, Scotland

YOUNG INVESTIGATOR

Wesley Brian Asher, Ph.D.

Columbia University

YOUNG INVESTIGATOR

Javier Contreras, M.D.

Universidad de Costa Rica

YOUNG INVESTIGATOR

Santhosh Girirajan, M.B.B.S., Ph.D.

Pennsylvania State University

YOUNG INVESTIGATOR

Laura M. Harrison, Ph.D.

Louisiana State University Health Sciences Center, Shreveport

YOUNG INVESTIGATOR

Charles Albert Hoeffler, Ph.D.

University of Colorado, Boulder

YOUNG INVESTIGATOR

Tija Carey Jacob, Ph.D.

University of Pittsburgh

YOUNG INVESTIGATOR

Roosbeh Kiani, M.D., Ph.D.

New York University

YOUNG INVESTIGATOR

Markita Patricia Landry, Ph.D.

Massachusetts Institute of Technology

YOUNG INVESTIGATOR

David James Margolis, Ph.D.

Rutgers University

YOUNG INVESTIGATOR

Jacqueline Morris, Ph.D.

University of Pennsylvania

YOUNG INVESTIGATOR

Todd F. Roberts, Ph.D.

University of Texas Southwestern Medical Center at Dallas

FAMILY OF JOSEPH M. EVANS

Family of Joseph M. Evans Investigators

INDEPENDENT INVESTIGATOR

Alessandro Bertolino, M.D., Ph.D.

University of Bari, Italy

YOUNG INVESTIGATOR

Eric A. Epping, M.D., Ph.D.

University of Iowa

YOUNG INVESTIGATOR

David P. Gavin, M.D., M.Sc.

University of Illinois at Chicago

YOUNG INVESTIGATOR

Sebastien Parnaudau, Ph.D.

Columbia University

YOUNG INVESTIGATOR

Sarah I. Tarbox, Ph.D.

Yale University School of Medicine

FAMILIES FOR BORDERLINE PERSONALITY DISORDER RESEARCH

Families For Borderline Personality Disorder Research Investigators

YOUNG INVESTIGATOR

Emily B. Ansell, Ph.D.

Yale University

YOUNG INVESTIGATOR

D. Bradford Reich, M.D.

McLean Hospital

Harvard University

YOUNG INVESTIGATOR

Anthony Charles Ruocco, Ph.D.

Centre for Addiction and Mental Health

University of Toronto, Canada

YOUNG INVESTIGATOR

Kate Eleanor Anne Saunders, B.M.,

B.Ch., M.A.

University of Oxford, England

YOUNG INVESTIGATOR

Edward A. Selby, Ph.D.

Rutgers University

SUZANNE AND JOHN GOLDEN

Suzanne and John Golden Investigator

INDEPENDENT INVESTIGATOR

Peng Jin, Ph.D.

Emory University

GOLDEN RULE FAMILY FOUNDATION

Golden Rule Family Foundation Investigator

YOUNG INVESTIGATOR

Chun Hay Alex Kwan, Ph.D.

Yale University

BONNIE AND ALAN HAMMERSCHLAG PHILANTHROPIC FUND

Hammerschlag Family Investigator

YOUNG INVESTIGATOR

Shinichi Kano, M.D., Ph.D.

Johns Hopkins University

JOHN KENNEDY HARRISON

John Kennedy Harrison Investigator

YOUNG INVESTIGATOR

Chung Sub Kim, Ph.D.

University of Texas at Austin

HOFMANN TRUST

Hofmann Trust Investigators

DISTINGUISHED INVESTIGATOR

Angelique Bordey, Ph.D.

Yale University

DISTINGUISHED INVESTIGATOR

Sohee Park, Ph.D.

Vanderbilt University

THE RONA JAFFE FOUNDATION

The Rona Jaffe Foundation Investigator

YOUNG INVESTIGATOR

June Gruber, Ph.D.

University of Colorado, Boulder

KAPLEN FOUNDATION

Michael F. Kaplen Investigator

YOUNG INVESTIGATOR

Mariana Pereira, Ph.D.

University of Massachusetts, Amherst

MIRIAM KATOWITZ AND ARTHUR RADIN
Katowitz/Radin Investigators

YOUNG INVESTIGATOR

Ioana Carcea, M.D., Ph.D.

New York University School of Medicine

YOUNG INVESTIGATOR

Frederick Charles Nucifora, Ph.D., D.O., M.H.S.

Johns Hopkins University School of Medicine

CAROLE AND MARVIN LEICHTUNG
Leichtung Family Investigators

YOUNG INVESTIGATOR

Danai Dima, Ph.D.

Institute of Psychiatry/King's College London

YOUNG INVESTIGATOR

Jacob C. Garza, Ph.D.

*Massachusetts General Hospital
Harvard University*

YOUNG INVESTIGATOR

Kanchna Ramchandran, Ph.D.

University of Iowa

LAUREN LEVINE
Levine Investigator

YOUNG INVESTIGATOR

Paul Siegel, Ph.D.

State University of New York, Purchase College

CONSTANCE AND STEPHEN LIEBER
Lieber Investigators

DISTINGUISHED INVESTIGATOR

Claes Wahlestedt, M.D., Ph.D.

University of Miami

DISTINGUISHED INVESTIGATOR

Suzanne Zukin, Ph.D.

Albert Einstein College of Medicine, Inc.

INDEPENDENT INVESTIGATOR

Stanislav S. Zakharenko, M.D., Ph.D.

St. Jude Children's Research Hospital

YOUNG INVESTIGATOR

Gemma Modinos, Ph.D.

Institute of Psychiatry/King's College London

YOUNG INVESTIGATOR

Jess Nithianantharajah, Ph.D.

*Florey Neuroscience Institutes
University of Melbourne*

YOUNG INVESTIGATOR

Edwin C. Oh, Ph.D.

Duke University

YOUNG INVESTIGATOR

Krishnan Padmanabhan, Ph.D.

Salk Institute for Biological Studies

YOUNG INVESTIGATOR

Krystal Lynn Parker, Ph.D.

University of Iowa

YOUNG INVESTIGATOR

Marta Ribases, Ph.D.

Vall d'Hebron Research Institute VHIR

YOUNG INVESTIGATOR

Panagiotis Roussos, M.D., Ph.D.

Icahn School of Medicine at Mount Sinai

YOUNG INVESTIGATOR

Jingchun Sun, Ph.D.

*University of Texas Health Science Center at
Houston*

YOUNG INVESTIGATOR

Simon Trent, Ph.D.

Cardiff University

YOUNG INVESTIGATOR

Carmen Varela, Ph.D.

Massachusetts Institute of Technology

YOUNG INVESTIGATOR

Qi Wang, Ph.D.

Columbia University

YOUNG INVESTIGATOR

Joshua D. Woolley, M.D., Ph.D.

University of California, San Francisco

YOUNG INVESTIGATOR

Nan Yang, Ph.D.

Stanford University

YOUNG INVESTIGATOR

Wenchi Zhang, Ph.D.

Johns Hopkins University

**MILTON & TAMAR MALTZ FAMILY
FOUNDATION**

Maltz Investigators

DISTINGUISHED INVESTIGATOR

Bruce M. Cohen, M.D., Ph.D.

Harvard University

YOUNG INVESTIGATOR

Antti S. Alaräsänen, M.D.

University of Oulu

YOUNG INVESTIGATOR

Stefan Ehrlich, M.D.

Dresden University of Technology

YOUNG INVESTIGATOR

Herman B. Fernandes, Ph.D.

Northwestern University

YOUNG INVESTIGATOR

George Foussias, M.D, M.Sc.

*Centre for Addiction and Mental Health
University of Toronto*

YOUNG INVESTIGATOR

Anna Francesconi, Ph.D.

Albert Einstein College of Medicine, Inc.

YOUNG INVESTIGATOR

Karen J. Gregory, Ph.D.

Vanderbilt University

YOUNG INVESTIGATOR

Sarah J. Hart, Ph.D.

University of North Carolina at Chapel Hill

YOUNG INVESTIGATOR

Jason K. Johannesen, Ph.D.

Yale University

YOUNG INVESTIGATOR

Sangwon F. Kim, Ph.D.

University of Pennsylvania

YOUNG INVESTIGATOR

Janghoo Lim, Ph.D.

Yale University School of Medicine

YOUNG INVESTIGATOR

Edward O. Mann, D.Phil.

University of Oxford

YOUNG INVESTIGATOR

Frederick Charles Nucifora, Ph.D., D.O., M.H.S.

Johns Hopkins University School of Medicine

YOUNG INVESTIGATOR

Arun K. Tiwari, Ph.D.

*Centre for Addiction and Mental Health
University of Toronto*

YOUNG INVESTIGATOR

Lingjun Zuo, M.D., Ph.D.

Yale University

**EUNICE K. MEYER CHARITABLE
FOUNDATION**

Eunice K. Meyer Charitable Foundation
Investigators

YOUNG INVESTIGATOR

Corinna Haenschel, Ph.D.

City University London

YOUNG INVESTIGATOR

Tara A. Niendam, Ph.D.

University of California, Davis

YOUNG INVESTIGATOR

Fiza Singh, M.D.

University of California, San Diego

YOUNG INVESTIGATOR

Jared W. Young, Ph.D.

University of California, San Diego

NAMI MICHIGAN

NAMI Michigan Investigator

YOUNG INVESTIGATOR

George McConnell, Ph.D.

Stevens Institute of Technology

NARSAD ARTWORKS

NARSAD Artworks Investigator

YOUNG INVESTIGATOR

Carol Jahshan, Ph.D.

Brentwood Biomedical Research Institute

NARSAD RESEARCH FUND

Domenici Investigator

YOUNG INVESTIGATOR

Megan Lee Fitzgerald, Ph.D.

Columbia University

NARSAD RESEARCH FUND

Stephen G. Doochin Memorial Investigator

YOUNG INVESTIGATOR

David Louis Pennington, Ph.D.

*Northern California Institute for Research
and Education*

University of California, San Francisco

NARSAD RESEARCH FUND

Daniel X. Freedman Investigator

YOUNG INVESTIGATOR

Christiaan H. Vinkers, M.D., Ph.D.

Utrecht University

NARSAD RESEARCH FUND

Gwill Newman Memorial Investigator

YOUNG INVESTIGATOR

Rachel L. C. Mitchell, Ph.D.

King's College London

NEW YORK WOMEN'S COMMITTEE

Women Breaking the Silence About Mental
Illness Investigators

YOUNG INVESTIGATOR

Lynnette Astrid Averill, Ph.D.

Yale University

YOUNG INVESTIGATOR

Estefania Pilar Bello, Ph.D.

Columbia University

YOUNG INVESTIGATOR

Laura K. Fonken, Ph.D.

University of Colorado, Denver

YOUNG INVESTIGATOR

James J. Prisciandaro, Ph.D.

Medical University of South Carolina

MARION G. NICHOLSON

Marion G. Nicholson Investigator

DISTINGUISHED INVESTIGATOR

Bonnie L. Firestein, Ph.D.

Rutgers University

OXLEY FOUNDATION

Oxley Foundation Investigator

YOUNG INVESTIGATOR

Haggai Sharon, M.D.

Tel Aviv Sourasky Medical Center

Tel Aviv University

P&S FUND

P&S Fund Investigators

INDEPENDENT INVESTIGATOR

Chadi A. Calarge, M.D.

Baylor College of Medicine

YOUNG INVESTIGATOR

Priti Balchandani, Ph.D.

Icahn School of Medicine at Mount Sinai

YOUNG INVESTIGATOR

Mounira Banasr, Ph.D.

Yale University

YOUNG INVESTIGATOR

Becky Catherine Carlyle, Ph.D.

Yale University

YOUNG INVESTIGATOR

Ramesh Chandra, Ph.D.

University of Maryland, Baltimore

YOUNG INVESTIGATOR

Christine Ann Denny, Ph.D.

Columbia University

YOUNG INVESTIGATOR

Miguel Angel Garcia-Cabezas, M.D., Ph.D.

Boston University

YOUNG INVESTIGATOR

Dawn F. Ionescu, M.D.

Massachusetts General Hospital

Harvard University

YOUNG INVESTIGATOR

Clare Kelly, Ph.D.

Trinity College, Dublin

YOUNG INVESTIGATOR

Yevgenia Kozorovitskiy, Ph.D.

Northwestern University

YOUNG INVESTIGATOR

Joelle LeMoult, Ph.D.

Stanford University

YOUNG INVESTIGATOR

Veronica Musante, Ph.D.

Yale University

YOUNG INVESTIGATOR

Karen M. Ryan, Ph.D.

Trinity College, Dublin

YOUNG INVESTIGATOR

Giulia Treccani, Ph.D.

University of Milan

PROJECT HOPE

Project Hope Investigator

YOUNG INVESTIGATOR

Yingwei Mao, Ph.D.

Pennsylvania State University

MARC RAPPAPORT

Rappaport Family Investigator

YOUNG INVESTIGATOR

Theodore D. Satterthwaite, M.D., M.A.

University of Pennsylvania

WILLIAM RISSE CHARITABLE TRUST

William Risser Charitable Trust Investigators

YOUNG INVESTIGATOR

Katie Lynn Nugent, Ph.D.

Maryland Psychiatric Research Center

University of Maryland

YOUNG INVESTIGATOR

Erik B. Oleson, Ph.D.

University of Colorado, Denver

MR AND MRS. CURT ROBBINS

Let The Sun Shine Run Investigator

YOUNG INVESTIGATOR

Ricardo E. Carrion, Ph.D.

Zucker Hillside Hospital, Feinstein Institute for

Medical Research

LINDA AND MARIO ROSSI

Chrissy Rossi Investigators

YOUNG INVESTIGATOR

Martine M. Mirrione, Ph.D.

Cold Spring Harbor Laboratory

YOUNG INVESTIGATOR

Anne Schaefer, M.D., Ph.D.

The Rockefeller University

SCOTT-GENTLE FOUNDATION
Scott-Gentle Foundation Investigator

YOUNG INVESTIGATOR
Kazue Hashimoto-Torii, Ph.D.
Children's Research Institute (CRI)
Children's National Medical Center

ELLEN SCHAPIRO & GERALD AXELBAUM
Ellen Schapiro & Gerald Axelbaum
Investigators

YOUNG INVESTIGATOR
Christine Elizabeth Gould, Ph.D.
Palo Alto Veterans Institute for Research (PAVIR)
Palo Alto Health Care System (VA)

YOUNG INVESTIGATOR
Johanna Molly Jarcho, Ph.D.
Stony Brook University School of Medicine

YOUNG INVESTIGATOR
Ting Lu, Ph.D.
University of Illinois at Urbana-Champaign

YOUNG INVESTIGATOR
Carolyn I. Rodriguez, M.D., Ph.D.
Stanford University

YOUNG INVESTIGATOR
Yen-Yu Ian Shih, Ph.D.
University of North Carolina at Chapel Hill

VIRGINIA SILVER
Silver Investigator

YOUNG INVESTIGATOR
Eleonore Beurel, Ph.D.
University of Miami

BARBARA AND JOHN STREICKER
Barbara and John Streicker Investigator

YOUNG INVESTIGATOR
Thomas J. Whitford, Ph.D.
University of Melbourne

LASZLO N. TAUBER
FAMILY FOUNDATION, INC.
Dylan Tauber Researchers

INDEPENDENT INVESTIGATOR
Alon Chen, Ph.D.
Weizmann Institute of Science

YOUNG INVESTIGATOR
Michael L. Lutter, M.D., Ph.D.
University of Iowa

YOUNG INVESTIGATOR
Douglas J. Sheffler, Ph.D.
Sanford Burnham Medical Research Center

YOUNG INVESTIGATOR
Karuna Subramaniam, Ph.D.
Northern California Institute for Research and Education
University of California, San Francisco

EVELYN TOLL FAMILY FOUNDATION
Evelyn Toll Family Foundation Investigators

YOUNG INVESTIGATOR
Lot de Witte, M.D., Ph.D.
University Hospital Utrecht
Utrecht University

YOUNG INVESTIGATOR
Ragy R. Girgis, M.D.
Columbia University

YOUNG INVESTIGATOR
R. Matthew Hutchison, Ph.D.
Harvard University

YOUNG INVESTIGATOR
Jianping Zhang, M.D., Ph.D.
Zucker Hillside Hospital, Feinstein Institute for Medical Research

VAN AMERINGEN FOUNDATION, INC.
van Ameringen Investigators

INDEPENDENT INVESTIGATOR
Ramin V. Parsey, M.D., Ph.D.
Stony Brook University School of Medicine

YOUNG INVESTIGATOR
Sofya Abazyan, Ph.D.
Johns Hopkins University

YOUNG INVESTIGATOR
Chihye Chung, Ph.D.
Konkuk University

YOUNG INVESTIGATOR
Lara C. Foland-Ross, Ph.D.
Stanford University

YOUNG INVESTIGATOR
Milena Girotti, Ph.D.
University of Texas Health Science Center at San Antonio

YOUNG INVESTIGATOR
Ramiro Salas, Ph.D.
Baylor College of Medicine

YOUNG INVESTIGATOR
Eric Floyd Schmidt, Ph.D.
The Rockefeller University

VITAL PROJECTS FUND INC.
Vital Projects Fund Inc. Investigators

YOUNG INVESTIGATOR
Chadi Abdallah, M.D.
Yale University

YOUNG INVESTIGATOR
Irina Esterlis, Ph.D.
Yale University

YOUNG INVESTIGATOR
Jieun E. Kim, M.D.
Ewha W. University

YOUNG INVESTIGATOR
Wendy K. Marsh, M.D.
University of Massachusetts Medical School, Amherst

WAREHAM FAMILY
Wareham Family Investigator

YOUNG INVESTIGATOR
Stephanie Dunkel Smith, Ph.D.
University of Southern Mississippi

WEISMAN FAMILY FOUNDATION
Adam S. Weisman Investigator

YOUNG INVESTIGATOR
Danielle M. Andrade, M.D.
University Health Network
University of Toronto

Donors

We are truly grateful for the generosity of caring individuals, foundations, and members of the community that make our work possible.

DISTINGUISHED \$250,000+

ANONYMOUS (1)
Mr. Gerald Axelbaum and
Ms. Ellen J. Schapiro
The Carmel Hill Fund
The Essel Foundation
Flora Gotz 1998 Trust
Gloria Harootunian Revocable Trust
The Flora P. Klein Trust
Mr. and Mrs. Stephen A. Lieber
The Estate of Nicholas Major
Maltz Family Foundation
The Dana Marin Trust
P&S Fund
Estate and Trust of Jane H. Rowen
The Walter Kenneth Sartory Family Trust
The Estate of David Schwartz
The Estate of Jeanne Ellen Skalsky-Carter
The Estate of Jay Reed West

BENEFACTORS \$100,000+

The Anne and Ronald Abramson Family Foundation
The Attias Family Foundation
Sidney R. Baer, Jr. Foundation
The Roger D. Clark Discretionary Trust
Suzanne and John Golden
The Estate of Greta Horn
van Ameringen Foundation, Inc.
Vital Projects Fund, Inc.

PACESETTERS \$50,000+

ANONYMOUS (2)
Estate of Iris Baranof
The Mary A. Del Moro Estate
Beth and Rob Elliott
EOS Foundation
Drs. Adam P. and Carol Geballe
HIKE for Mental Health
Independent Charities of America
The Estate of Lawrence C. Kastin
Carole and Harvey Mallement
Mr. Arthur J. Radin and Ms. Miriam Katowitz
Renate, Hans & Maria Hofmann Trust
William Risser Charitable Trust
The Alice L. Robbins Trust
f/b/o Elizabeth Nichols
Roy H. and Natalie C. Roberts
Family Foundation
The R. David Schreiber Amended Trust
The Estate of Shirley Shuster
The Evelyn Toll Family Foundation
Dr. and Mrs. Douglas A. Treco
The Estate of Wylla Vogelgesang
The Weisman Family Foundation

LEADERS \$25,000+

Mr. and Mrs. Stefan D. Abrams
Mr. and Mrs. Donald M. Boardman
Mr. and Mrs. E. Everett Deschner
Mr. Michael C. Dornan
Dr. and Mrs. Frederick A. Findlen
Golden Rule Family Foundation
Mr. and Mrs. H. Thomas Grimes
Mr. and Mrs. Alan Hammerschlag
Mr. and Mrs. John K. Harrison
The Rona Jaffe Foundation
The Kaplen Foundation
Barbara T. Leeds Revocable Living Trust
Mr. and Mrs. Marvin Leichtung
Mr. and Mrs. Milton Maltz
The Carolyn M. Nagel Trust
Otsuka America Pharmaceutical, Inc.
The Oxley Foundation
Mr. and Ms. Curt Robbins
Scott-Gentle Foundation
Dr. and Mrs. Mark Silver
Mr. Russell Spangler
Mr. and Mrs. John H. Streicker
Mr. and Mrs. Christopher Wallis
The John P. and Lois C. Wareham Foundation

PATRONS \$10,000+

The Helen E. Austin
Charitable Remainder Trust
Mr. and Mrs. Robert T. Blanchard
The Blue Oak Charitable Fund
Bradshaw Construction Corporation
Gilbert & Ildiko Butler Family Foundation, Inc.
Columbia University
Mr. and Mrs. Richard A. Edwards
Mr. and Mrs. Gary Furness
Mr. and Mrs. George W. Gephart, Sr.
Neal and Marlene Goldman Foundation
Mrs. Jean Gollay
D.W. Gore Family Foundation
Graham Boeckh Foundation
Leona M. Hanselman Trust
Mr. and Mrs. Cannon Y. Harvey
Marilyn G. Harwood Fund
Mr. David Hansson and
Ms. Jamie Heinemeier-Hansson
The Henry Foundation
Mr. and Mrs. Larry Hinman
Hope Foundation
Mr. and Mrs. Martin B. Jacobs
Jewish Federation of Metropolitan Chicago
JMT Charitable Foundation
Quentin J. Kennedy Foundation
The Jan M. & Eugenia Krol
Charitable Foundation
Mrs. Helen Lowenstein

The Rose Mackenzie Trust
Mr. and Mrs. Wesley McDonald
Mr. Robert A. McDonald
The Emil and Toby Meshberg
Family Foundation
Mr. and Mrs. Mario Montoya
Mr. and Mrs. Rodger L. Nelson
NewYork-Presbyterian Hospital
The Estate of Arthur Ninomiya
The Irene P. Norell Estate
The Estate of Alfred H. Noren
The Portmann Family Charitable Fund
Prentice Foundation, Inc.
Professional Risk Management Services, Inc.
(PRMS)
The Kenneth Rainin Foundation
Discretionary Award
Mr. Marc R. Rappaport
Mr. and Mrs. Mario J. Rossi
Ms. Marylou Selo
Mr. and Mrs. Sanford Sirulnick
Mrs. Patricia B. Specter
The Starr Foundation
Mr. Jason Stipanov
Sunovion Pharmaceuticals, Inc.
Supreme Council Benevolent Foundation
Ms. Marilyn Waldman

SPONSORS \$5,000+

ANONYMOUS (8)
Eugene and Carol Atkinson Family Foundation
Auto Mall Nissan, Inc.
The Benevity Community Impact Fund
Dr. Scott C. Berk and Ms. Kathryn A. Cannon
Dr. and Mrs. Jeffrey Borenstein
Mr. and Mrs. Louis M. Borowicz, Jr.
Ms. Sharon E. Bowyer
Jeffrey J. and Mary E. Burdge Charitable Trust
Ms. Sally Cameron
Dr. and Mrs. Thomas B. Coles
Command Financial Press Corporation
Mary Cooney & Edward Essl Foundation
Will & Ann Eisner Family Foundation, Inc.
Envato Pty., Ltd
Flaxman Family Charitable Trust
Mrs. Luisa Francoeur and Mr. Jim Goodrich
The Joseph and Anna Gartner Foundation
Mr. and Mrs. Robert W. Geyer
Mr. and Mrs. Thomas G. Gillis
Mrs. Roberta C. Gundersen
Mr. and Mrs. Arthur W. Hills
Horizon Group Properties
Mrs. Suzanne C. Hoyt
Mr. and Mrs. Thomas C. Israel
Mr. James P. Jamilkowski
Janssen Pharmaceuticals, Inc.

King & Spalding, LLP
 Mrs. Gertrude Kornfein
 Lavin Family Foundation, Inc.
 Mr. and Mrs. Howard Levine
 Beth Maher Family Foundation
 Ms. Florence C. Mahoney
 Thomas G. and Andrea Mendell Foundation
 Dr. Irving Jacobs and Ms. Jeanette Matye
 Mr. and Mrs. Daniel Mueller
 Gloria Neidorf Charitable Foundation
 Gertrude B. Nielsen Charitable Trust
 Mr. and Mrs. L. David Ricci II
 The Toby and Nataly Ritter Family Foundation
 Mr. and Mrs. Daniel G. Rodgers
 Mr. and Mrs. Eric Rothfeld
 Mr. Dan Ryckert
 Ms. Sheila Scharfman
 Mr. and Mrs. Steve Schoolman
 Ms. Cheryl Schweighardt
 Ms. Yvonne De C. Segerstrom
 Seremet Family Foundation
 Shortlidge Charitable Trust
 Elinor Beidler Siklosy Foundation
 The Estate of Eleanor B. Slater
 Mr. and Mrs. Daniel A. Small
 Kenneth H. Sonnenfeld, Ph.D., J.D.
 Mrs. Lynn G. Straus
 Team Daniel Running for Recovery
 from Mental Illness, Inc.
 Ms. Barbara Toll
 Mr. and Mrs. David Trainer
 Warren County Foundation Depository
 Weill Medical College of Cornell University
 Ms. Karen Zimmer

ASSOCIATES \$1,000+

Mrs. Virginia A. Aaron
 Mr. and Mrs. Celso C. Aberin
 Mr. Howard and Dr. Hinda Abramoff
 Mr. and Mrs. Robert Abrams
 Mr. and Mrs. Ron D. Abramson
 Ms. Mayuree D. Adams
 Dr. David Adler
 Mr. Bruce Ahern
 Huda Akil, Ph.D.
 Ms. Amy L. Alexander
 Mr. Peter Alexander and Ms. Alison Starling
 Ms. Rebecca Amatangelo
 Ms. Ruth A. Rydstedt and Mr. Ted T. Amsden
 Ms. Mary R. Anderson
 Mr. and Mrs. Edwin F. Anderson
 The Nancy Andrews Family Foundation
 ANONYMOUS (9)
 Mr. and Mrs. Kurt Apen
 The Nathan Z. Armour Foundation, Inc.
 Mr. Daniel M. Axelbaum
 Ms. Marta K. Bach
 The Bachmann Strauss Family Fund, Inc.
 Mr. and Mrs. Walt Bachman
 Ms. Arleen Baez
 Mr. Stephen Balek
 Ms. Marybeth Barraclough
 Mr. and Mrs. Richard A. Bartlett
 Mrs. Jackie Baumgartner
 Bayberry Family Foundation
 Mr. and Mrs. Michael Becker
 Mr. and Mrs. Mitchell Becker
 Mr. and Mrs. Robert Belyea
 Mr. and Mrs. P. Bruce Benzler
 Mr. and Mrs. Brian Berger
 Mr. and Mrs. Thomas M. Bergers
 Mr. Nathan Betnun
 Mrs. Marilyn M. Bever
 Mr. and Mrs. Stephen Binckes
 Ms. Gail A. Binderman
 Mrs. Anne L. Bird
 Mr. and Mrs. Michael F. Bishay
 Mrs. Michelle Blaskowski
 Heather Bleick Memorial Fund
 Dr. and Mrs. Harold Bloom
 Bonardi Construction Service, Inc.
 Dr. and Mrs. Andrew S. Boral
 Boston Financial Data Services, Inc.
 Mr. Claude Accum and
 Ms. Diana D. Bradley-Accum
 Mrs. and Mr. Donna L. Braun
 Mr. Matthew K. Breitman and
 Ms. Meredith Lawrence-Breitman
 Mr. Richard Bretz
 Bridgehampton National Bank
 Mr. and Mrs. Peter M. Briscoe
 Bronx Westchester Medical Group
 Mr. James Brook and
 Ms. Isabelle Pinzler-Brook
 Ms. Lisa Brown
 The Elise and Andrew Brownstein
 Charitable Trust
 Mr. and Mrs. John E. Bryson
 Dr. Katherine E. Burdick
 Burke Family Foundation
 Mr. and Mrs. Paul T. Burke
 The Irving T. Bush Foundation, Inc.
 William F. Byerley, M.D.
 Mark Bynum Foundation
 Ms. Gretchen S. Cahn
 Mr. James M. Call
 PJ Callahan Foundation, Inc.
 Law Office of Eileen Caplan Seaman
 Mr. and Mrs. Paul Carothers
 Mr. and Mrs. Steven L. Carson
 Mr. and Mrs. Daniel J. Castellani
 Castles In the Sky, Inc.
 Mr. and Mrs. Daniel P. Cervelli
 Mr. and Mrs. Gene Cervelli
 Mr. James O. Shaver and Ms. Christine J. Chao
 Charlottesville Area Community Foundation
 Mr. Bradley Green and
 Ms. Jennifer Chou-Green
 Mr. Randolph F. Christen
 Mr. Lloyd Christiansen
 Ms. Barbara L. Chuko
 Mr. Mark W. Chutter and Ms. Lorna B. Ellis
 Citigroup Business Services
 CJR Foundation, Inc.
 Ms. Lillian Clagett
 Mr. and Mrs. Craig Clendening
 Mr. and Mrs. Michael G. Coles
 Collins Building Services, Inc. (CBS)
 Mr. and Mrs. John C. Colman
 Mr. George K. Cooney
 Corona Lions Universal Foundation, Ltd
 Ms. Judith M. Craig
 Mr. and Mrs. Alan R. Crebo
 Mr. and Mrs. Denis F. Cronin

Mr. and Mrs. Stephen Cummings
 Ms. Betty A. Cuniberti
 Ms. KeriAnn Currlln
 Mr. and Mrs. Hugh P. Curtis
 Mr. John W. Curtis and
 Ms. Margaret A. Sarkela
 Dammann Fund, Inc.
 Mr. and Mrs. Aaron Daniels
 Mr. Trenton A. Davis
 Mr. Robert J. de Rothschild
 The Estate and Trust of Mary A. DeLeuw
 The Depressive and Bipolar Disorder
 Alternative Treatment Foundation
 Ms. Lynn Derman
 Mr. and Mrs. Richard K. Descherer
 Mr. and Mrs. Richard DeStefano
 Mr. David Diffley
 The John D. & Jean E. Dinan Foundation
 Mr. and Mrs. William R. Dodds, Jr.
 Mrs. Evangeline Douris
 Reverend and Mrs. Richard L. Dowling
 Mr. Jamie Drake
 Dr. Eric M. Dreyfuss
 Mr. and Mrs. Thomas H. Duncan
 Eagles 3208 Gambling Fund
 Dr. and Mrs. Bennett Edelman
 Julian I. and Hope R. Edison Foundation
 Mr. and Mrs. Stephen Ehrlich
 The Estate of Howard Eklind
 Ms. Annikki H. Elkind
 Mr. Robert C. Elmen
 Dr. and Mrs. Bulent Ender
 Bonnie Englehardt Family Charitable Trust
 EUE/Screen Gems, Ltd.
 Richard B. Evans, M.D.
 Mr. and Mrs. Preston Everdell
 Mr. and Mrs. Ralph M. Everitt
 Fair Lawn High School
 Mrs. Stephanie Feinland
 Ms. Patricia Fernandez
 Mrs. Eugenia W. Ferrell
 The Fine Foundation
 Ms. Laura Finn
 FirstGiving
 Mr. and Mrs. Gregory Fischbach
 Dr. and Mrs. Roger L. Fischer
 Rabbi Lyle A. Fishman and
 Ms. Debra A. Rosenman
 Mr. Kenneth Flanders
 Florida Amateur Driving Club, Inc. (FADC)
 The Framingham Foundation
 Mr. and Mrs. Lewis L. French
 Ms. Helen Friedman
 Mr. and Mrs. Robert A. Funk
 Mr. and Mrs. Robert W. Gadsden
 Ms. Catherine B. Gardner
 Mr. Charles Dale and Ms. Laura Gardner-Dale
 Mrs. Nancy S. Geller
 Mr. and Mrs. Kirk Gellin
 Mrs. Jessica Gellineau
 Mrs. Betty B. Giles
 Mr. and Mrs. Thomas Gilroy
 Give with Liberty - Employee Donations
 Mr. and Mrs. Ted S. Gladstone
 Goldberg Rhapsody Foundation, Inc.
 Dr. Alan J. Wasserman and
 Ms. Susan E. Golick
 Gordon Family Charitable Foundation

The Gould-Shenfeld Family Foundation
 Mrs. Martha S. Graham
 Mr. and Mrs. David A. Gramlich
 Granat Family Foundation
 Ms. Sheila Grant
 Mr. and Mrs. Bennett G. Grau
 Mrs. Helen M. Gray
 David E. Green Memorial Scholarship Fund
 Mr. and Mrs. Kevin M. Greene
 Mr. and Mrs. Jesse J. Greene, Jr.
 Mrs. Margaret E. Grube
 Ms. Renee M. Cassidy and
 Mr. Jordan D. Gushurst
 Mr. and Mrs. Rob Gushurst
 Diane Acker Haber, M.D.
 Ms. Jennifer M. Haddox-Schatz
 Mr. and Mrs. Roscoe O. Hambric, Jr.
 Mr. and Mrs. Carl S. Hammer
 Mr. and Mrs. Norm Harper
 Ms. Mary Jo S. Harrison
 Mr. James M. Harshman
 Ms. Harriet M. Hart
 Mrs. Esther M. Hartman
 Mr. Jason Hawk
 Dr. Samuel E. Hazen
 Mr. Joseph P. Cothrel and Ms. Linda A. Heban
 Mr. and Mrs. Albert P. Hegyi
 Mr. Michael K. Herman
 Mr. and Mrs. Richard W. Hillon
 Ms. Mary P. Hines
 Mr. and Mrs. David A. Hirsch
 Mr. and Mrs. Ralph J. Hitchcock
 Mr. and Mrs. Hal B. Hollister
 Mr. Tyler Holt
 Honokohau Properties
 Mr. Steven J. Hopp and Ms. Palmer Robinson
 Barry H. Horowitz, C.P.A., M.S.T.
 J.S. Howe Family Foundation
 M.S. Howells Foundation
 Anne S. Howells Charitable Trust
 Mr. and Mrs. George H. Hume
 Mr. and Mrs. Scot W. Humphrey
 Mrs. Hazel Hundert
 Rita G. Hungate, M.D.
 Ms. Sarah M. Hunt
 Mr. and Mrs. Michael J. Hurley, Jr.
 Mrs. Gail J. Hurvitz
 Mr. and Mrs. Craig Hutson
 Ms. Claudia Huzar
 Mrs. Mary T. Ingriselli
 Mr. and Mrs. Louis Innamorato
 The Ironman Foundation, Inc.
 Mr. and Mrs. Norman Isler
 Dr. and Mrs. Mervyn Israel
 Ms. Allyson Izzo
 J Squared Press, Inc.
 J.R. Realty Corporation
 Mrs. Vivian B. Jackson
 John Mary & Bernard Jacobs Foundation
 The Jacobson Family Foundation
 Mr. Niles Jager
 Mr. and Mrs. Thomas B. Jahncke
 Ms. Carolyn R. Jakopin
 Mr. and Mrs. Arthur Janousek
 Mr. and Mrs. Dennis W. Jereb
 Mr. and Mrs. Mitchell Johnson
 Mr. and Mrs. Peter S. Jonas
 The Bevan Jones Memorial Trust

JustGive.org
 Ms. Carol A. Kallen and Mr. Fred Burrell
 Mr. and Mrs. David R. Kampff
 Mr. and Mrs. Allen S. Kaplan
 Fern Karesh Hurst Foundation
 Mr. and Mrs. Michael J. Kastenholz
 Mr. and Mrs. Robert Katz
 Mr. and Mrs. Steven Katz
 Ms. Sandra Kazlow
 Mr. and Mrs. William A. Keller
 Ms. Judith S. Kelly
 Mr. Romel R. Khan
 Mr. Kevin Kielbasa
 Ms. Yvonne S. Kilbourne
 Mr. and Mrs. Ronald D. Killough
 Ms. Elizabeth N. Kimball
 Mrs. Manisha Kimmel
 Mr. and Mrs. Ira D. Kleinman
 Mr. Michael Klingher
 Ms. Miral Kotb
 Ms. Ellen Krantz
 Mrs. Esther W. Krebs
 Mr. and Mrs. Michael Krejci
 Mr. and Mrs. Howard G. Kristol
 Mr. and Mrs. Ted Krolikowski
 Richard J. Kruger Foundation
 The Kupferberg Foundation
 The Kenneth & Harriet Kupferberg
 Family Foundation
 Jack & Dorothy Kupferberg Family Foundation
 The Jesse & Joan Kupferberg
 Family Foundation
 Mr. and Mrs. J. Wesley Kusmaul
 Mr. and Mrs. Jim R. Lahti
 Mr. and Mrs. Alan Landis
 Mr. and Mrs. Guy Lanquetot
 Mr. and Mrs. David Laubach
 Ms. Joan M. Lechner
 Mr. and Mrs. Burton L. Lehman
 Ms. Annie F. Levine
 Mr. and Mrs. Daniel Levy
 Mrs. Ellen F. Levy
 Dr. Edward Libby
 Ms. Devra Lieb
 Ms. Mary M. Lieber
 Robert J. Lieber Charitable Trust
 Lieber Institute, Inc.
 Mr. and Mrs. James Locatelli
 Mr. John Lohmeier
 Mr. and Mrs. Harvey S. Long
 The Lookout Foundation, Inc.
 Mr. Dan C. Lortie
 Mr. Alan Lowry
 Mr. and Mrs. Andy Lueck
 Mrs. Cynthia Luppen
 Ms. Cheryl MacLachlan and
 Mr. Fred S. Gorelick
 Mr. Donald Chin and Ms. Grace Mah
 Mr. and Mrs. Joseph K. Maiuro
 Mr. Robert D. Martin
 Ms. Susan Q. Martin
 Mr. and Mrs. Josiah L. Mason
 Dr. and Mrs. Sanjay Mathew
 Maureen's Kitchen, Inc.
 Helen S. Mayberg, M.D.
 Mr. and Mrs. Thomas R. Mayer
 Ms. Elizabeth M. McCarthy
 Ms. Jolynne McDonald

Ms. Katherine H. McNabb
 Mr. Dennis Ladick and Ms. Karen L. Meadows
 Ms. Ellen C. Meadows
 Mr. William Megowen
 Dr. and Mrs. Herbert Y. Meltzer
 Mr. and Mrs. Robert Meltzer
 Mr. Jeffrey Menick
 Robert and Joyce Menschel Family Foundation
 Merevill Foundation
 Mr. and Mrs. Bernard Meyers
 The Miami Foundation
 Microsoft Matching Gifts Program
 Mr. and Mrs. Paul D. Miller
 Ms. Marianne Miller
 Jean Audrey Miller Estate
 Mr. and Mrs. Michael E. Miller
 Ms. Constance Miller
 Mr. and Mrs. Michael Minikes
 MJS Foundation, Inc.
 Mr. J. Clifford Moos
 The Alfred L. Morse and
 Annette S. Morse Foundation
 Ms. Lauren Morton
 Mr. and Mrs. Marcel Mouney
 The Alfred C. Munger Foundation
 Mr. Eric Murchison
 Mr. James J. Murphy, Jr.,
 Ms. Mary Webster-Murphy and
 Ms. Emily W. Murphy
 NAMI - Genesee County
 NAMI - LAMP / SW Nassau NY, Inc.
 NAMI Newton Wellesley Eastern Mass, Inc.
 Mr. Venicio Navarro
 Network For Good
 Arthur C. Nielsen, Jr. Charitable Trust
 Mrs. Michiko Nielsen
 Mr. and Mrs. David Noack
 Mr. Kenneth G. Witte and Ms. Gail Noah
 Mr. and Mrs. Richard Novick
 Mr. and Mrs. Timothy O'Keefe
 Mr. David O'Keefe
 Once For All Trust, Inc.
 Mrs. Angela N. Palma
 Dr. Herbert Pardes and Dr. Nancy Wexler
 Mrs. Bonnie A. Parker
 Dr. and Mrs. Roderic A. Parnell, Jr.
 Mr. and Mrs. S. Giles Payne
 Ms. Megan J. Paznik
 Dr. Arthur Peck
 Mrs. Mary J. Pedrosa
 Dr. Robert J. Perlmutter and
 Mrs. Rachel M. Perlmutter
 Dr. Bruce D. Perry
 Mr. and Mrs. Seymour Pestronk
 Mr. Jerome W. Pickholz
 Dr. Richard N. Pierson
 Mr. Daniel Pipinich
 Mr. Alex Porter
 Mrs. Pam Pour
 Premier Store Fixtures, Inc.
 Mr. Roger Prior and Dr. Barbara A. Page
 Mr. and Mrs. Grant E. Propper
 Mr. and Mrs. Bradley Provisor
 Ms. Susan P. Quasney
 Mr. and Mrs. Stephen F. Quinn
 Quontic Bank
 Dr. and Mrs. Mohammad E. Qureshi
 Mr. Jordan Raisher

Mr. Anthony R. Rando
Mrs. Margot E. Razziano
Ms. Nancy Reeve
Mr. Gary Reeve
Mr. Duane Reid
Mr. and Mrs. Sheldon M. Rein
Ms. Rebecca A. Rein
Ms. Faye H. Rencher
Mr. and Mrs. William G. Rhoads
Lawrence I. & Blanche H. Rhodes Memorial
Fund, Inc.
Ribbons for Research
Mr. and Mrs. Joseph J. Ricci
Ms. Rhoda G. Rice
Ms. Julie W. Richardson
Ms. Jennifer Ricketts
The Robbins Family Foundation
Max Robinowitz, M.D. and
Carolyn B. Robinowitz, M.D., Ph.D.
Mr. and Mrs. Roland Rofé
Mr. Kevin Rogers
Dr. and Mrs. Alain Roizen
Ms. Kathleen F. Rorick-McNichol and
Mr. James D. McNichol
Mr. and Mrs. Robert B. Rosen
Ms. Raquel Ross
Mrs. Donald I. Roth
The Lewis Roth Family Foundation
Dr. George Rozanski
Mrs. Carol A. Rudder
Mr. Jeffery L. Rutherford
RZ Foundation
Mr. and Mrs. John Safko
Mr. and Mrs. Reuben H. Saideman
Ms. Willmetta P. Saldin
Ms. Mary C. Salpukas
Jack & Anita Saltz Foundation
Jos. T. Samuels, Inc.
Dr. William E. Sanson
Mr. and Mrs. Richard Schaps
Mr. Peter Scheidler
Anthony A. Schmidt Family Foundation
Mr. E. James Morton and
Ms. Matthild C. Schneider
Mrs. Ruth B. Schoenrock
Nina R. Schooler, Ph.D.
Mr. Daniel J. Schreiber
Schwab Charitable Fund
Mr. Marc A. Schwartz
Dr. Lloyd I. Sederer and Ms. Rosanne Haggerty
The Jean and Charles Segal Foundation
Mr. and Mrs. Dennis M. Seremet
Mr. and Mrs. Steven C. Shachat
Dr. and Mrs. Sherman Shapiro
Ms. Barbara H. Shapiro
Mr. and Mrs. John L. Sheldon
Dr. and Mrs. Kenneth Shestak
The Sibley-Saltonstall Charitable Foundation
Mrs. Lilian Sicular
Mr. Kenneth Siegel
Silicon Valley Community Foundation
Ms. Alesha Sim
Mrs. Marcia Simon-Kaplan
Mr. and Mrs. Neil Singla
Mr. and Mrs. John B. Sisk
Mr. Richard M. Smith
Mr. Ian Smith and Ms. Joanna Oltman-Smith
Mrs. Barbara R. Smith

Mr. Jordan Sorensen
Mr. and Mrs. Lawrence I. Sosnow
Mr. and Mrs. Ted Spetnagel
Ms. Cullen Stanley
Ms. Susan E. Stanton
Ms. Elizabeth Steele
Mr. and Mrs. Kenneth T. Steele
Mr. and Mrs. Richard Steinberg
Ms. Claudia C. Stewart
Mr. Gregory Stilwell
Mr. and Mrs. John I. Stites
Mr. and Mrs. Ronald V. Stone
Mr. and Mrs. Richard Strasbaugh
Peggy Straw Advised Fund
Mr. and Mrs. Timothy E. Stutzman
Dr. and Mrs. Myron Susin
The Elaine Swann Estate
Mr. and Mrs. Frank H. Swanson
Ms. Lurline L. Sweet
Mr. and Mrs. Gordon Tagge
Taking Strides Against Mental Illness
Ms. May-Ling Tang
Mr. Charles M. Tatham and
Ms. Joanne Adamko-Tatham
Mr. and Mrs. William B. Tausig
Mrs. Elizabeth J. Taylor
Mr. Jorgen Thelin
Ms. Rita Thrasher
Mr. and Mrs. Glen A. Tobias
Ms. Linda D. Tosti
Travelers Insurance
Ms. Andrea Trewyn-Strom
Mr. and Mrs. Timothy C. Tuff
Ms. Clara M. Ueland and Mr. Walter McCarthy
United Way of Milford
United Way of the Columbia-Willamette
United Way, Inc.
Mr. and Mrs. Leo Urbanske
Vanguard Charitable Endowment Program
Mr. Duane Vermazen
Viking Global Foundation, Inc.
Visa Giving Station / Frontstream
Mr. Robert W. Vogel
Mrs. Florine D. Vrooman
Mr. and Mrs. Steven R. Wagner
Mr. and Mrs. Robert R. Walker III
Ms. Penny Wallerstein
WalMart/Walmart Foundation
Mr. Paul M. Warner
Mr. and Mrs. Richard Warren
Ms. Sherry Warren
Ms. Deanna Watson
Ms. Sheri C. Wechsler
Theodore & Renee Weiler Foundation, Inc.
Mr. and Mrs. Stephen Weinberg
John L. and Sue Ann Weinberg Foundation
Mr. and Mrs. Louis Weisman
Dr. Myrna M. Weissman
Mr. and Mrs. Harvey Wertheim
Mr. and Mrs. Michael B. West
Dr. and Mrs. James D. Westhoven
The Westport Fund
Harold Wetterberg Foundation
Mrs. Phyllis Whisler
Mrs. Virginia J. Whitcombe
Mrs. Beverly A. White
Mr. John P. Wierzba and
Ms. Ruth A. Lane-Wierzba

Dr. and Mrs. Martin S. Willick
Ms. Phoebe Wilson
Mr. and Mrs. John Winter
Mr. and Mrs. Richard Wittenberg
Mr. and Mrs. Kenneth Wood
Dr. and Mrs. Stephen C. Woodward
World Heritage Foundation
Ms. Jean Yim
Mr. Kenneth Young
YourCause, LLC
Mr. and Mrs. James N. Zartman
Mr. and Mrs. David T. Zimmer
Mr. and Mrs. Philip Zimmerman
Mr. and Mrs. Thomas A. Zimmerman

SUPPORTERS \$500+

Mr. and Mrs. Roger S. Aaron
Susan Abbott, M.D.
Mr. and Mrs. Walter S. Abbott
Mr. and Mrs. John S. Abrams
Mr. and Mrs. Salman Ahmed
Mr. Maynard Akkerman
Mr. and Mrs. Edward Albers
Mr. and Mrs. Stuart Albrecht
AmazonSmile
Dr. Audrey S. Amdursky
Ameriprise Financial
Amgen Pac - Matching Gift Program
Mr. David Anderson
Mr. John R. Anderson
Mr. Matthew Anderson
Dr. and Mrs. Michael R. Andreychik
ANONYMOUS (3)
Lauren B. Anthone, LLC
Mr. Andrew K. Antwih
Apple Bank
Mr. Rollin A. Armer
Mr. and Mrs. Frank G. Arnstein
AT&T United Way Employee Giving Campaign
Autism Science Foundation (ASF)
Autism Speaks, Inc.
Mr. Bruce W. Baber
Mr. and Mrs. Thomas J. Bak
Mr. Brian Baker
Mr. James G. Banghart
Bank of America Foundation
Mr. and Mrs. David O. Barrows
Mr. and Mrs. David Barry
Dr. and Mrs. John R. Baudler
Mr. and Mrs. Dennis Baylor
BDO USA, LLP
Mr. and Mrs. William J. Beard
Mr. James Beer
Ms. Clara Bennett
Marilyn B. Benoit, M.D.
Mr. and Mrs. Elliot Berger
Ms. Amy Berko-Iles
Mr. and Mrs. Herbert Bernard
Mr. and Mrs. Gene Bernardoni
Wendy L. Biderman, Ph.D.
Mr. and Mrs. John C. Binder
Mr. David D. Boes and
Ms. Martha Mayes-Boes
Ms. Roberta Bogen
Bondee Enterprises, Inc.
Dr. and Mrs. Benie Boonschaft

Ms. Susan G. Boorse
 Mr. and Mrs. Norman H. Bouton Jr.
 Mr. Jonathon Brandt
 Dr. Glen Brennan
 Ms. Dale L. Brodsky
 Mrs. Pamela G. Brown
 Dr. Carl N. Brownsberger and
 Mrs. Susan Brownsberger
 Dr. and Mrs. William J. Brownstein
 Mr. and Mrs. Craig G. Bruckner
 Mr. and Mrs. James E. Buckman
 Ms. Allison Burke
 Mr. and Mrs. Charles Callahan III
 Ms. Sarah Callender
 Camp Hopson of Newbury Funerals
 Mr. Blayne Cannon
 Mr. and Mrs. Gerald Capodiecici
 Mr. Roderick D. Carroll
 Ms. Jill M. Chapman and Mr. Richard K. Allen
 Ms. Rebecca Chen
 Dr. and Mrs. Michael J. Clune
 Mr. and Mrs. Martin Cohen
 Mr. and Mrs. Michael S. Cohen
 Columbia Association of the Department of
 Sanitation, Inc.
 Mr. and Mrs. William F. Conger
 Mr. and Mrs. John J. Cooney, Sr.
 Ms. Eva Cooper
 Mr. and Mrs. Curtis H. Cornwell
 Mr. Timothy Cosgrove
 Ms. Lisa Coyle
 Dr. Margaret Crastnopol
 Ms. Cynthia J. Crawford
 Ms. Sylvia J. Creamer
 Mr. Daniel E. Cromie
 Ms. Barbara L. Cruse
 Ms. Johanna S. Cummings
 André & Marilyn Danesh Fund
 Mr. Sigmund E. Davidson
 Mr. and Mrs. Gary A. Davis
 Mr. and Mrs. Lawrence E. Davis
 Dr. Jan De Bakker and Mrs. Gerarda De Bakker
 Mr. Henry DeAngelis, Jr.
 DeBartolo Family Foundation, Inc.
 Mr. and Mrs. Dennis F. Deely
 Mr. and Mrs. Gaspare R. DeGaetano
 Dr. José DeLeon and Ms. Victoria Martinez
 Mr. and Mrs. Dale A. Dellutri
 Ms. Drusilla D. Demmy and
 Mr. Henry E. Bowden
 Mr. and Mrs. Robert E. Denham
 Mr. Timothy B. Dewald
 Diligent Board Member Services, Inc.
 Diligent Credit Solutions, Inc.
 Ms. Rose F. DiMartino
 Mr. Nathan Dixon
 Ms. Elsie M. Doss
 Mr. Herman Drabenstott
 Mr. and Mrs. Robert L. Drake
 Mr. Michael S. Dreyer
 Mr. Mathew Drinkwater and
 Dr. Adrienne Drinkwater
 Mr. John Duda
 Mr. and Mrs. Daniel Dugan
 Mr. and Mrs. Josh Duitz
 Dukas Public Relations, Inc.
 Dulinski Family Foundation
 Dr. and Mrs. Ronald S. Duman

Mr. Roy Dykes
 Ms. Mary Eaton
 Ms. Hope A. Egan
 Mr. Davis Einhorn
 Mr. and Mrs. Stephen Eisenstein
 Mr. and Mrs. Michael G. Eller
 Elliott Management Corporation
 Mr. Gary P. Elliott
 Mr. Charles Eng
 Mr. Peter Engeian
 Eye Spy Investigations, Inc.
 Ms. Kate S. Ezra
 Ms. Mary Ellen Falk
 Mr. Pedram Farahnak
 Hyman & Susan Feldman Family Foundation
 Fenwick & West, LLP
 Fidelity Investments Charitable Gift Fund
 Fierce Dragon Martial Arts Academy
 The Fifth Floor Foundation
 Ms. Anne Finestone
 Ms. Jennifer A. Fischer
 Mr. David Fitzgerald
 Mr. Michael Fitzsimmons
 Ms. Jacqueline Flaherty
 Ms. Margaret A. Flanagan
 Mr. Thomas H. Flanders
 Mrs. Margaret A. Flynn
 Ms. Letitia W. Ford
 Mr. and Mrs. Thomas Frayda
 Ms. Colleen A. Frobose
 Diana Furrow, LPC
 Dr. Wen-Jun Gao
 Mr. and Mrs. David L. Gardner
 Ms. Ursula S. Gassner
 Ms. Nancy S. Gear
 Mr. Jeffery Gerbitz
 Ms. Carolyn Gero
 Jay N. Giedd, M.D.
 Givalike.org / Donatic.org
 Mrs. B. Judith Glassman
 Mr. and Mrs. Jack Gold
 Mr. and Mrs. Jay Goldberg
 Mr. Jacob Goldblatt
 Mr. and Mrs. Richard S. Goldman
 Good Samaritan Hospital
 Mr. Mark Gavin and Ms. Jodi Goodman
 Michael and Lola Goodstein Charitable
 Foundation Trust
 Ms. Laurie L. Gordon
 Ms. Laila Gordy
 Mr. Chris Gospodnetich
 Ms. Lorri Grainawi
 Mr. and Mrs. Arthur M. Gray
 Mr. Kevin Gray
 Mr. Francis Green and
 Ms. Barbara Geiger-Green
 Mr. and Mrs. Robert J. Greenberg
 Mr. Andrew Greenhalgh
 Ms. Lynn Griffin
 Dr. and Mrs. John M. Grohol
 Dr. Michael Grunebaum and Ms. Ruth Graver
 Mr. and Mrs. Anthony Guagenti
 Mr. Reggis Guthrey
 Mr. and Mrs. Paul G. Haaga, Jr.
 Mr. and Mrs. William R. Hacker
 Dr. and Mrs. William H. Hague
 Mr. and Mrs. Jerry M. Hamovit
 Ms. Chance Harenza

Mr. Jack Harkins
 Mr. Christopher L. Harper
 Mrs. Claudine M. Harris
 Dr. and Mrs. Michael S. Harrison
 Mr. William P. Harrison
 Mrs. Martha P. Harrison
 Harvard Business Services, Inc.
 Mr. Benjamin J. Haskin
 Ms. Linda J. Havlin
 Mr. John J.H. Phillips and Ms. Carolyn Healy
 Ms. Phyllis Heischuber
 Hempstead Auto Sales, LLC
 Dr. Aude I. Henin
 Ms. Susie Herb
 Mr. and Mrs. Richard W. Herbst
 Mr. and Mrs. Henry L. Herman
 Mr. Richard W. Hewetson
 Mr. and Mrs. Marvin L. Higgins
 David A. Hildalgo, M.D., P.C.
 Mr. and Mrs. Charles Hill
 Ms. Saralee G. Hillman
 Mr. and Mrs. Charles E. Hilton
 Ms. Ruth A. Hodges and Mr. John A. LeClaire
 Mr. Jordan Hoffman
 Mr. Timothy A. Hood
 Ms. Sheryl L. Howe
 Mr. and Mrs. Peter Howell
 HPM Corporation
 Mr. Robert C. Hunter
 Mr. and Mrs. John A. Hurvitz
 Dr. Donald E. Hutchings
 Ms. Emily R. Hyun
 Mr. and Mrs. Robert Ianni
 Mr. and Ms. Gary Ickowicz
 Instinet
 J.M.A. Foundation
 Mr. and Mrs. Jeffrey A. Jackson
 Mr. Eric M. Jackson
 Mr. and Mrs. Thomas A. Jacobs
 Mr. and Mrs. Sidney S. Jacobson
 Mrs. Marion Jamgochian
 Mr. and Mrs. Schuyler W. Johnson
 Mr. and Mrs. Jeffrey S. Johnston
 Mr. David O. Jones
 Mr. and Mrs. Kyle Jones
 Ms. Mary E. Jones
 Mr. Patrick Jones
 Mr. and Mrs. Robert R. Kain
 Mr. and Mrs. Joseph J. Kaminski
 Ms. Kathe Kane
 Mrs. Meenakshi Kanuganti
 Mr. Robert L. Karczewski
 Mr. and Mrs. Peter D. Kaufman
 Hale and Andrea Kell
 Mr. and Ms. Justin R. Kerker
 Mr. Jeffrey Kersten
 Mr. and Mrs. David L. Kieper
 Ms. Sandra K. Killough
 Mr. Robert A. Kindler
 Mr. and Mrs. Lawrence D. Kingsley
 Mr. William H. Kirby and Dr. Lenore S. Kirby
 Mr. and Mrs. Frederick P. Koehler
 Kokomo Urology, Inc.
 Mr. Madhuri Kondepudi
 Mrs. Helen P. Koskinas
 Mr. and Mrs. Boris Kotler
 KPMG - Matching Gifts Program
 Mr. and Mrs. William L. Kring

Mr. and Mrs. Gwilym R. Kroll
 Mr. and Mrs. Werner Kroll
 Drs. John H. Krystal and Bonnie Becker
 Mr. Shane Kucera
 The Estate Kathleen R. Kuehlhorn
 Ms. Rohila Kusampudi
 Mr. Hani Kuttat
 Mr. and Mrs. Walter J. Lafferty
 Drs. Robert S. and Ann C. Laitman
 Mr. and Mrs. George Lantos
 Lardo Hawthorne
 Mr. Paul Larson
 Ms. Dianne C. Leech
 Steven M. Lehmer, M.D.
 Mr. Leif LeLoup
 Ms. Kathryn Lesh
 Ms. Karen Levine
 Mr. and Mrs. Kirk Lider
 Mr. and Mrs. Lewis J. Liman, Esq.
 Mr. and Mrs. Michael D. Logan
 Ms. Clara F. Londoner
 Mr. Leonard Lowengrub and
 Ms. Ilana Goor-Lowengrub
 Ms. Ann Lowry
 Ms. Isabella Lubin
 Mr. and Mrs. Carl A. Lund
 Mr. and Mrs. Richard Lynch
 Mr. and Mrs. Morgan E. Lytle
 Mr. and Mrs. Robert Maggi
 Dolores Malaspina, M.D.
 Mr. and Mrs. Robert Mandel
 Mr. and Mrs. Charles L. Marburg, Jr.
 Mrs. Alison C. Marer
 Mr. and Mrs. William G. Martens III
 Mr. John G. McCarthy
 Mr. and Mrs. Ward McNeilly
 Mr. and Mrs. David B. Merchant
 Mr. Douglas R. Merritt
 Meseron Sales Corporation
 Mr. David J. Metcalf
 Dr. Michele L. Miles
 Ms. Kimberly E. Millen
 Millennium Hyundai, LLC
 Millennium Telemanagement, Inc.
 Mr. and Mrs. Richard Miller
 Dr. and Mrs. William J. Mitchell
 Mr. and Mrs. Michael T. Mitchell
 Mr. and Mrs. Wendell C. Mohr
 Dr. Enrique H. Monsanto and
 Dr. Barbara Winkler-Monsanto
 Ms. Jane V. Montecillo
 Mr. and Mrs. Frank E. Morgan
 Mr. and Mrs. Rob Morrill
 Mrs. Mary V. Mortelette
 Mr. and Mrs. Paul V. Mosher
 Mr. and Mrs. William Muir
 Municipal Credit Union (MCU)
 Mr. John F. Mussman
 Ms. Rita Nalebuff
 NAMI - FACE of Burlington County
 NAMI - Pittsburgh South
 NAMI - Saint Cloud Area
 NAMI - San Joaquin County
 Mr. Steven Nelson
 Ms. Verna M. Nelson
 Newbury Animal Hospital
 Mr. Scott Nocas
 Mr. and Mrs. James M. O'Donoghue

Mr. Henrik S. Olson and
 Ms. Deborah M. Mesmer
 Mr. and Mrs. Richard J. Orr
 Ms. Nancy J. Ouimet
 Mr. and Mrs. Leonard J. Owen
 Mrs. Susan P. Palmer
 Mr. and Mrs. Anthony Pardo
 Mr. Tom Parker
 Ms. Kathie M. Parker
 Mr. and Mrs. George E. Pawlowski
 Mr. Leland R. Payton
 Mr. Jesse M. Abraham and
 Ms. Amy Peck-Abraham
 Mr. Robert F. Perry
 Mrs. Marion F. Phillips
 Mr. Scott R. Pickham
 Dr. Lesli Preuss
 Mr. and Mrs. Brad A. Purifoy
 Mr. and Mrs. Daniel Quiat
 Mr. and Mrs. John J. Quinn
 Ms. Mary A. Radpour
 Ms. Ramya K. Raghavan
 Ms. Elizabeth A. Redmond
 Mr. Charles Reed
 Mr. Eric M. Hershberg and Ms. Judy E. Rein
 Ms. Marleta Reynolds
 Rhythm n' Notes Club
 Ms. Margaret A. Ricketts
 Dr. James F. Riddle
 Mr. and Mrs. Don Rigoni
 Mr. and Mrs. Simran S. Rihal
 Mr. Frederic W. Ripley and Ms. Sharon Kirby
 Ms. Stephanie Riven and Mr. Roger Goldman
 Mr. Brian A. Robbins
 Mr. and Ms. Edward Robinson
 Mr. and Mrs. Andrew Rockett
 Ms. Debra S. Rose
 Dr. and Mrs. Marvin Rosenberg
 Mr. and Mrs. John Ross
 Mr. and Mrs. Michael R. Rothman
 Mr. and Mrs. W. F. Rousseau
 Mr. Joshua Rubin
 Mr. and Mrs. Donald Rully
 Mr. Patrick Ryan
 Mr. James A. Sadewhite
 Mr. and Mrs. Dharmbir Saini
 Salesforce.org - Champion Grants
 Sanitation Officers Association
 Ms. Judith K. Hall and Mr. Donald S. Sargent
 Mrs. Harriet R. Sarkaria
 Dr. Herbert J. Schlesinger and
 Dr. Ann H. Appelbaum
 Mr. and Mrs. Richard J. Schlueter
 Mr. and Mrs. Leonard Schneider
 Ms. Constance Schnuck
 Mr. and Mrs. Edward J. Schoenecker
 Mrs. Linda S. Schwenk
 Ms. Joann Schwentker
 Ms. Laurie Scudder
 Mr. and Mrs. Matthew Seitz
 Mr. Jared N. D. Selengut
 Ms. Tara H. Shani
 Ms. Jean C. Sheller and Mrs. Roberta Fricker
 Mr. Pauline Shender
 Dr. Miriam Shenfeld
 Dr. Ben Shepherd
 Mr. and Mrs. John Shields
 Mr. and Mrs. David B. Shippey

Ms. Alisha Shudy
 Mr. David R. Sicular and
 Ms. Lilian Stern-Sicular
 Mr. Jeffrey M. Siegal
 Mr. Andrew P. Siegler
 Mr. Daniel Simon
 Mr. Dan Simon
 Joseph T. & Helen M. Simpson Foundation
 Dr. Kathryn Smith
 Ms. Margaret E. Sokol
 Sonu Anand Designs
 Mr. John D. Soriano
 Ms. Linda Spielman
 Ms. Maya Spivak
 Mr. Ryan J. Stacklin
 Ms. Julie Stafford
 Mr. Jimmie Stapleton
 Mr. Tod D. Stephens
 Mr. and Mrs. Brent Stewart
 Mr. Michael M. Stoaks
 Sunrise Automall, LLC
 Ms. Marilyn J. Tabor
 Mr. and Mrs. David W. Talsma
 Taylor Survivor's Trust
 Mr. and Mrs. José L. Tellez
 Ms. Judith Tenzer-Benn
 Texas A&M University (TAMU)
 Theatrical Stage Employers
 Mr. Ernest L. Thomas
 Mrs. Esther F. Trachtman
 Ms. Kathy Trembley
 Ms. Fay M. Trowbridge
 Mr. and Mrs. Michael D. Tusiani
 Mr. and Mrs. Barry Uhlich
 Mary C. Uricchio, M.D.
 Mr. Deepak Vaishnav
 We Support Paul Vallone
 Vallone & Vallone, LLP
 Dr. Margaret R. van Horn and
 Mr. Paul E. van Horn
 Ms. Pam Vestal
 Mrs. Virginia Vitarello
 Mr. and Mrs. Kurt J. von Boeselager
 Mr. and Mrs. Gregory von Briel
 Ms. Karen L. Watson
 Mr. Joshua Weier
 Ms. Helene S. Weiss
 Wells Fargo Community Support Campaign
 Mr. and Mrs. Thomas C. White
 Ms. Liesl A. Wiederkehr
 Mr. and Mrs. John Wiegmann
 Mr. and Mrs. Raymond Williams
 Mr. and Mrs. Steven C. Wills
 Mr. and Mrs. Rick Wilson
 Mr. Zachary Wobensmith
 Mr. and Mrs. Richard A. Wolfe
 Mr. Adam Wolfson
 Drs. Michael and Abby Wolk
 Amy J. Worrell, VMD
 Mr. and Mrs. Charles R.B. Wright
 Mr. and Mrs. Joseph Wright, Jr.
 Ms. Joanne C. Yablonsky
 Mr. William Yin
 Ms. Beverly Zabel
 Ms. Judith Zartman
 The Zorn Foundation

Matching Gift Companies

Allstate: The Giving Campaign
American Express Foundation
Amgen Pac Matching Gift Program
Bank of America Foundation
BNY Mellon Community Partnership
Anne E. Casey Foundation
Matching Gift Program
Charles Schwab Foundation
Chubb & Son, Inc.
ConocoPhillips Matching Gifts
Deutsche Bank Americas Foundation
The Duke Energy Foundation
Matching Gifts Program
FM Global Foundation
The GE Foundation Matching Gifts Program
Give with Liberty Employee Donations
GlaxoSmithKline Foundation

Goldman, Sachs & Co. Matching Gift Program
Hudson-Webber Foundation
JMT Charitable Foundation
John Hancock Financial Services
Matching Gifts Program
Eli Lilly & Company Foundation, Inc.
Matching Gifts Program
Matching Gift Center
The Merck Foundation
MFS Investment Management
Matching Gift Program
Microsoft Matching Gifts Program
Mutual of America Foundation
NYSE Euronext Foundation, Inc.
Matching Gifts Program
Pfizer Foundation Matching Gifts Program
Rinet Company, Inc.

Silicon Valley Community Foundation/
eBay, Inc. Foundation
TCF Foundation
The Amgen Foundation Staff Giving Programs
The Benevity Community Impact Fund/
Benevity Social Ventures, Inc./
American Endowment Foundation
Thomson Reuters
UBS
United Way of Tri-State
Truist/Truist Connect
Visa Giving Station/Frontstream
Walmart/Walmart Foundation
Wellington Management Company, LLP
Matching Gift Program
YourCause, LLC

Tributes

Honor Tributes

A loved one
Rose J. Aaron's family
All those dealing with
mental conditions
All those fighting mental illness
All suffering from Schizophrenia
All the Artists of the
Brainwave Music Album
Loved ones affected by
mental illness
Jane L. Allison
Andrew and Nicole
Anna
Carol Ansell
Edward Arvey
Dr. Steven Atlas
Mercedes Austgen
Whitney Avers
Mike Baber
Jeanette Bachtold
Luke Bailey
Michael R. Baker
Anna Balek
Sarah Bancone
Neil Barber
Aida Bardardotti
Greg Barnhart and family
J.P. Barrett
Jessica L. Barry
Susan K. Bass
Adrienne Baumrind
Marsha Baumrind
John C. Bayat
Brenda Beagle
Linda Beer
Jacqueline D. Bellsey-Starr
Clara Bennett
Pauline and Thomas Benson's Son

Alexander Berger
Bernadette (pet)
Ellen Bernstein
Sandie Bernstein
Frederick Bird
John J. Birkenhier
Jenny A. Blanchard, D.O.
Gabriel Bloom
Irene Bodden
The Bodnar Family
Kimberly Boehm
Ann Bolton
Heather L. Bolton
Marilyn Bolton
June Bond
Garrett Boorman
Jeffrey Borenstein, M.D.
Katy Bowen-Campbell
Jon Bowman
Brian Boyer
Jeffrey Braun
Erika Bridges
Adrienne L. Buckla
Linda Budelowsky
David Burkenroad
Layton K. Burnidge
Christine Burrows
Janice Busigó-Cordero
The Cahillane Family
Jessica L. Cain
Shira Caldie
Mary Callahan
Dr. Bruce Campbell
Jason and Michele Canapp
Jim and Denise Cariani
Brandon Carlton
Sherillyn Carr
Ron Carroll

Mr. and Mrs. E.H. Carter
John R. Caruso
Charles and Deanea Causey
Abbey Chakalis
Sho Tin Chen
Ben Chinitz
Molly I. Chodakewitz
Keith and Louise Christensen
CODAC Behavioral Health
Services, Inc.
Nicholas Coffey
Alison Cohen
Jane Moos Cohen
Jonathan D. Cohen, M.D., Ph.D.
Adam Coles
Peter G. Coles, M.D.
Thomas B. Coles, M.D.
Lowell G. Colston
Shana Cooper
Thomas S. Cosentino
Grandma Cotterell
Megan Crilly
Tyler Crouson
Barbara Cypes
Diane D. Davis
Michael De Blois
Joyce A. Dentone's son
J.D. Derby
Amit Desai
Glynn Dickens
Erin E. Dickman
James Diggins
Dr. Nancy Baird and
Mr. Al Dominguez
Elizabeth Dominguez and family
Walt Donahoe
Reed Donat
Bobby Dowling

Lex Doyle
The Drake Family
Gail Drescher
Britney Duffy-Alberto
Lauren R. Duran
Marta Edmisten
Edward
Elaine
Freddie El-Khoury
Habib El-Khoury
The Ernst Family
Farrish Evans
Jennifer M. Evans
Eydis Eystein
Jonathan D. Falk
Jason and Paula Feinstein
Harvey and Sally Fischman
Glen Fishman
Chad Fogelberg
Joanne E. Ford
Luisa Francoeur
Freemman, Sen,
Lone Wolfie and Script Fodder
Austin French
Henry M. Frieden
Bryan Funk
Jonathan S. Furay
Amelia Gagnon's friends
and family
Julian Garfalo
Jacqueline Garrett
David Gassner
Theodore M. Gault
Ann Geiger
Monique Germone
Dr. Anthony J. Giuliano
Marina Gloria
Richard Gokey

Suzanne Golden
 Gregory Goldman
 Brett Goodman
 Sara Goodman
 Lalleh Gordy
 Cheryl Graba
 Charles Gramlich and Ann Horwitz
 Helen M. Gray
 Jonathan Griffin and Maxime Jones
 Michael and Patricia Griffin
 Clara Grossman
 Judith E. Gunther
 Valerie Hadden
 Linda Hahn
 Haley
 Lisa Halpern
 Kai Halsey-Mendez
 Bonnie D. Hammerschlag
 Bryan Hampton
 Don Hampton
 Henry "Hank" Hanau
 Mia Hancock
 John K. Harrison II
 Kristen C. Harrison
 Kenny Hart
 Paul Hart
 Bernard and Mary Healy
 Cass Hemming
 Fritz A. Henn, M.D., Ph.D.
 Samuel Hensley
 The Heyd Family
 Charles G. Hill
 Paul and Julie Hodges
 Mary Hofert and Anna Flaherty
 Peggy Hoffman
 The Hollister Family
 Brianna Holman
 Alexandra Holterman
 Dave Hood
 Hope for Humanity
 Edmund and Victoria Hornstein
 Kim Howie
 Josh Hudson
 Kevin Hughes
 Reagan Hughes
 Ryan Hunt
 Maryellen Hunter
 Joan Hursen
 Angela Hurtado
 Kenneth Hyacinthe
 Chase Iacofano
 Becca Ickowicz
 The Impact Team,
 University of Iowa
 Louis Innamorato
 Thomas R. Insel
 Interstate Hotels & Resorts
 Jill Isenstadt
 Peter Izzo
 Eric T. Jager
 Thomas Jandris
 Chris and Thea Janus
 Joel H. Kaplan
 Dr. Kevin Johns
 Andy Johnson
 Jonathan and Allen

Ed Jones
 Lynnan Jones
 Marsha Jones
 Jim Kalkbrenner and son
 Rochelle Kaper
 Joel H. Kaplan, M.D.
 Daniel Katz
 Kauai Community Mental Center
 Bill Kaung
 Lance Kawesch
 Reverend R. Scott Keehn
 Jason Keener
 Chris Manniso and Dr. Heather A. Kennedy
 Laura Kerch
 Kevin
 Kevin and Joyce
 Jonathan P. King
 Mary Kirby
 Michael Kirsic
 Jack Kiser
 Vivian Kline
 Steven Kofsky
 Marian B. Kohlstedt
 Timothy Krebs
 Howard and Shelley Kristol
 Erika Kruczkiewicz and her loved ones
 Lainie Kuklin
 Rohila Kusampudi
 Daniel Laitman
 The Laitman Family
 Elaine C. Langer
 Martin Langer
 Rachel LaQuercia
 Jenifer T. Laschen
 Paul T. Laun
 David Lavner
 Guneet Kochar and Julie Leber-Kochar
 Brian Lee
 Alice Lehman and Michael Hamburg
 The Team at Lemuel Shattuck Hospital: Unit 9 North
 Harold LeRoy-New
 Howard Lester
 Karen Levin
 Karen Levin
 Carol G. Levinbook
 Daniel and Sherry Levy
 Jack Levy
 Taylor A. Levy
 Bo Li, Ph.D.
 Constance and Stephen Lieber
 Linda
 Jemina Linnama
 Jesse Listernick
 Dennis Loesch
 Shannon Logan
 Anthony Lombardy, Jr.
 Adam Long and Jill Justice
 Spencer Lucas
 Dr. Michael Lynch
 Shaune MacLean
 Dana V. Maggi
 Justin Magleby
 Harvey Mallement

Milton and Tamar Maltz
 Thomas Manning
 Stephen Marks
 Marysol
 Nancy Masopust
 Mark I. Mattern
 June Mattila
 Carol Maurice
 Michele Maurice
 Hilary and Bayard Maybank
 Kaci M. McClure
 Christine McDunn
 Peter McGuffin
 Cheri McLaughlin
 Joseph McMahon III
 Patrick McWilliams
 Jhoanne Mecija
 Avery Beeson and Kimberly Meek
 Herbert Y. Meltzer, M.D.
 Philip S. Mengel
 Elon J. Mesholam
 Jonathan M. Metcalf, LICSW
 Daniel Michaels
 John Michelich
 Ruth Michelich
 The Milbauer Family
 Sylvia Milberg
 Miriam T. Miller, Esq.
 Tali Miller
 Zia Miller
 John M. Mobley
 Regina Moller
 Celeste Moon
 Michael Moore
 Grisel Moreno
 Angelina Morisi and Keith Chapman
 Mark G. Morisi
 Elizabeth S. Morningstar
 Gregory D. Morris
 Anne K. Muellerleile
 James J. Murphy, Jr.
 Stephanie Murphy
 Julie Kindsfater and William Murray
 Daryl Musick
 Kylie Mussay
 Anne Myers
 L. and A. Nadle
 Grace Nagaur
 NAMI: Tucson
 Neil
 Gary Nesenson
 Lee Newton
 David Novick
 Victor Ochoa
 Sarah Ogrin
 David O'Keefe
 Joshua D. Okun
 Matthew Oleszczak
 Amy Ondracek
 Lewis Opler, M.D., Ph.D.
 Nieves A. Ortiz
 Patricia Page
 Chris Palmer
 Drew Panayiotou
 Herbert Pardes, M.D.
 Gary Pardo

Pat
 Jonathan Rischall and Allison Paul-Rischall
 Lester Paznik
 Arthur Peck
 Joel M. Penny
 Daniel Peterson
 Ruth A. Phillips
 W. Scot Phillips
 Dr. Christine Piccora
 Neely Piper
 Carolyn A. Plumer
 Leah Prawda
 Chef Will Price
 Elisabeth Priller
 Spenser Pulley-King
 Arthur J. Radin
 Lois Rafal
 Joel E. Reed III
 Sarah Reed
 Mary A. Reichling
 David A. Reilly
 Rosemarie Reilly
 Rebecca A. Rein
 Sheldon and Edith Rein
 Wayne Reinholt
 Brad Reuling
 Min J. Ro
 David Robertson
 Alex Rodriguez
 Kathleen F. Rorick-McNichol
 Curtis Ross
 Faith Rothblatt
 Kathy L. Rottinghaus
 Gregg Rubin
 Kenneth Ryan
 Celia Rye
 Jia An Sa
 Lori Saltness
 Christina Sanders
 Mark A. Satterthwaite, M.D.
 Lori Savage
 Jacob Saxe
 Anthony E. Schanz
 Kai and Malia Schmelzer
 Joel M. Schneider
 Shayna H. Schor
 David Schwartz
 Aaron Schwirian
 Julia Scullion
 Randal D. Seweryniak
 Bill Sharp and family
 Shelby
 Jacqueline Shelley
 The members of the Shenandoah Club
 Lilian Sicular
 Tessa Sieler
 Carolyn Sienkiewicz
 Dr. and Mrs. Mark Silver
 Eli Silverman
 Gail Silvertown
 Marcia Simon-Kaplan
 Emory Skolkin
 Isabel and Marvin Slomowitz
 Huan Song
 Bernice Spandorf
 Penelope A. Spangler

Michael H. Sproule, Esq.
 Frances B. Stanik
 Steven
 Dr. Desanka Stipic
 Jean Stone
 Sybil Storm
 Russell A. Strobel
 Richard Stuart
 Dean and Kelly Sulimay
 Andrew Sullivan
 Frann Sullivan
 Janet Susin
 Jessica Suttle
 Jennifer Swick
 Hillary Tae-Gomez

Carolyn Taylor
 Bilen Teklezghi
 Diane Temkin
 Laura Terio
 James C. Thies
 Vittorio and Maria Tosti
 Howard Trachtman
 Mort and Susan Trew
 Tricia
 John Tursi
 Paula Unger
 Martin Ureel
 Kayla Van Baak
 David L. Veritas
 Veterans with PTSD

Tommy Vreeland
 Kathleen Walker
 Robert R. Walker
 Harold Warren
 Johanna Weber
 Sharon Weinberg
 John and Jillian Weinell
 Robert Weisman
 Christina Weiss
 Geoffrey Wells
 The Wells Family
 Barbara B. White
 Ben Widlus
 Martin S. Willick, M.D.
 Brigid Willson

Chris Winslow
 The Women's Committee: Brain & Behavior
 Research Foundation
 Leland D. Wood
 The Woodward Family
 Judith G. Wortman
 The Wright Family
 Michael Yelenosky
 Young Widows
 Eliza Young
 Hayley Young
 Alex Zeigler
 Jane Zemba

Memorial Tributes

A loved one
 John R. Abela
 John B. Abrams
 Marc D. Abrams
 Vincent Acampora
 Lary Adamson
 Carlo A. Adan
 Jean M. Ahern
 Nicholas R. Albers
 Janet P. Alexander
 Mia S. Alexander
 Lynn Allen
 Lori L. Altschuler, M.D.
 Helen E. Amatangelo
 Mr. Vincent S. Amoroso, Jr.
 Silas E. Anderson, Jr.
 Ted Anderson
 Christopher Andrusz
 Christina E. Angelo
 Lester Angert
 Louis Applebaum
 John A. Armbruster
 Bonnie Arno
 Anthony P. Arsneault
 David J. Artino
 Daryl Attwood, Sr.
 John Attwood
 Robert Attwood
 Marion L. (Sue) Auchter
 Jeri A. Austin
 Mary Ayling
 Patricia A. Backman
 Gina M. Bailey
 Gregory T. Bak
 Robert P. Banghart
 Story Bannister
 Scott R. Bartlett
 Matthew R. Barton
 Carl A. Basak
 Wesley A. Baylor
 Doris I. Bebell
 Meredith W. Beck
 Scott Beery
 William D. Belter
 Ronald Berger
 Blake Bergers
 Patricia I. Berndt
 Herbert Betz

Kevin M. Bezonsky
 Deepak Bhasin
 Stephen J. Binder
 Kenneth A. Blacic
 Chrisann Blankenship
 Heather A. Bleick
 David J. Block
 Doris Blumenstein
 Christine M. Blyther-Galiatsatos
 Charles F. Bodden
 Robert G. Boe
 Susan A. Bologna
 Thomas J. Bolton, Jr.
 Aidan J. Bone
 Phil Bonner
 John Boorom
 Donald Boring
 James R. Boss
 Mr. Boswell
 Amanda Bowers
 Shonda Bowman
 Joseph D. Bradshaw
 Stamatia Brady
 Debbie Brady-Erb-Thompson
 Betty Brainard-Wood
 David Braun
 Joan Brennan, Ph.D.
 Frank J. Brill
 Catherine A. Brodie
 Reina Brody
 Evan Bromberg
 Elaine C. Brooks
 Laura Brooks-Fast
 Todd P. Brown
 Tom Brown
 Adam D. Bruckner
 Robert Bryant
 Edward G. Buckovich, Jr.
 Todd Bunch
 Walter W. Bundschuh
 Peter R. Bunning
 Chantal M. Burke
 Colleen M. Burke
 Sean M. Burns
 Margaret A. Buttino
 Michael Buxton
 Paul C. Caisse
 Rosa Cameron

Joe Campbell
 Matthew Campbell
 Oscar Canavan
 Aeris G. Cannon
 Isaac Cardona
 Paul R. Carman
 Suzanne L. Castellani
 Robin E. Cathey
 Cathou
 Kevin P. Cavanaugh
 Thomas P. Cavanaugh
 Cynthia L. Cervantes
 Patrick Cervone
 Alfred H. Chapman
 Dale R. Cherney
 Matthew Cherney
 Andrew S. Christie
 Glennys Christie
 Ruth G. Clark
 Michael Clateman
 Pattie C. Clayton
 Philip J. Clements
 Gary L. Cole, Sr.
 Akilah B. Coleman
 Oliver D. Colvin, Jr.
 Janene A. Conte
 Ryan J. Cook
 Grace Cook-Blasingame
 Mary Cooney
 James D. Cooper III
 Sally Cope
 Janet Cotugno
 Bradley T. Couch
 Don Coursen
 Christopher Cowan
 Ryan R. Crookston
 Sam Cross
 Cordell P. Cull
 Jeffrey N. Curtis
 Elizabeth H. Custer
 Louis Dallafor
 Colter Dallman
 Richard D. Daly
 Mary A. D'Ambrose
 Stanley F. Dann
 Vincent A. Dann
 Gerda J. Darilek
 Davey

Bobette Davis
 Elizabeth Davis
 Cheryl L. Dawson
 Christine M. Dawson
 David Dawson
 Barbara De LaMare
 Beverly De LaMare
 A. Louise DeAngelis
 Albert N. DeBlois
 Ben DeCrease
 Nick DeMange
 Randy C. Denenberg
 Nancie D. Dennison
 Jadwiga Deren
 Vedant Desai
 Katherine Deschner
 Devin
 Dana H. Dickey
 Betty Dietrich
 Darleene Dina
 Brian E. Dione
 Daniel Disney
 Kenneth Ditzel
 Anthony DiVito
 Sylvia DiVito
 Brandon Dixon
 Jonathan E. Dixon
 Matthew Dodge
 Valerie Domitrovic
 Christopher Donovan
 Lance Dorfman
 August E. Doskey
 Mike Downing
 Rachel L. Drabenstott
 Gerald A. Drake, M.D.
 Sandra G. Dreyfuss
 Harriet Dublow
 Kyle DuBose
 Michael Ducate
 David M. Duda
 Edna Duffy
 Christopher R. Dugan
 Alan Dutka
 Duane A. Duvall
 Benjamin S. Easton
 Ethan Edelman
 Brian P. Edwards
 John J. Egan, Jr.

Ken Eggena	Ethel G. Gordon	Sabrina I. James	Mary Libby
Howard A. Ekland	Flora Gotz	Quincy Jang	Angie Libero
Suzhanna Elam, M.D.	Jennifer Gouvea	John R. Jehle, Jr.	Erma Liberty
Henri Elion	William P. Grace	Ruth Jenkins	Jacob Lichtenstein
Elizabeth (Betty)	Clayton J. Graham	Sitaben L. Jivanbhai-Patel	Melita Lichtenstein
William J. Embrey	Loeb H. Granoff	Michael D. Johnson	James Liechty
Paul J. Esposito	William Francis Grant 1st and 2nd	Bevan Jones	Jonathan Bart Lindenberg
Edward Etherington	Brenda Gray	Kathy A. Jones	Guail Linderme
Molly Everdell	Linda Gray	Ruth Jones	Hans K. Lindgren
Derek J. Everitt	Stephen M. Gray	Clyde A. Joseph	Lina Litinskaya-Weinbaum
Todd Ewen	David E. Green	Jeffrey C. Kain	Victor G. Lottmann
Daniel M. Falk	Michelle Greenblatt	Lawrence E. Kalom	Laurie A. Loubier-Salmon
Leslie E. Falzone	Mary Greener	Daniel D. Kane	Samantha Luksik
Greg Farley	Mark J. Greenlee	Robert J. Kannenberg	William C. Lund
Seymour Feinland	Sharon S. Grieshaber	John Z. Katz	Helene Lundak
Joan Feldman	George R. Groninger	Spencer D. Katz	Shirley S. Lynne
Mary Felsing	Dana Gruenfelder	Arthur Kaufman	Marion Lynton
Alec Fentum	Thomas E. Guernsey	Claude R. Kaufman	Matthew C. Lyons
John Field	Thomas S. Gumpert	Grace B. Keller	Paul K. Ma
Gregory H. Fielder	Linda Haas	James E. Kempf	Irene MacDonald
Kelli A. Finkel	Allen Halpern	Michael F. Kenigsberg	Rose MacKenzie
Jonathan J. Fisher	Larry A. Hans	Frances Kennedy-Albert	Alexis Maddock
Colleen FitzGerald	Matthew Hardin	Gregory J. Kerr	Joel R. Maginley
Mary Ann Flemming	Marie Hare	Eric Kertzner	Clare Magnus
Trocar Flook	Mary Lou Harriott	Andy King	Roman Makuch
Nanako Foran	Ellen E. Harris's father	John Kingry	James Malcolm
Todd Forehand	Jordan E. Harris	Jill A. Kirby	Ruth Malkoff
Matthew T. Fox	Stewart G. Harrison	Tyler S. Kirschner	Sol Malkoff
Celeste Fradeneck	Brent A. Harshman	Mabel C. Klein	Brittany C. Mann
Christie Fradeneck	Ellen Hayes	Raymond Kline	Merrill M. Manning III
Trey Fradeneck	Michael C. Hazzard	Nate Knight	A loved one from
Thomas J. Frangella	Kevin Heald	Steve Knitzer	The Maolucci Family
Jeffrey Frankum	Kevin J. Healey	Christine Kohlstedt	Joanne L. Mapes
Debra L. Frazier	Jimmy Hehir	Victor B. Koomey	Alan G. Marer
Robert L. Fredricksen, Jr.	Bradley R. Heilman	Helen Kopsky	Sarah Martel-Bradley
Harvey Friedenber	Frank R. Hellinger	Blackhawk Pilot Daniel Koren	Jacob B. Martin
Irvin A. Friedman	Scott L. Helt	Diane Koskinas	Stephen Martin
Mildred Frierson	Joan L. Hendricks	Kieran J. Kowal	Nicolás Martinez
Zachary Frierson	S. Henn	Tosha Kowal	Elizabeth Martino
Jason C. Frisco	LaRita Hermes-Wright	Jay I. Kreider, Jr.	Dorothy N. Massey
Eric A. Fritts	Corrections Officer 1	Kristin Ann	Dolores Massey-Healy
Rudolph H. Funke, Jr.	Rosanna Hernandez-	Kristina	Geoffrey Mather-Wood
J.B. Fuqua	McGrantham	Michael Kruczkiewicz	Lorraine Matthys
Mary Gallagher	Harry A. Herold III	Dorothy M. Kubach	Thomas Matye
Stan Garber	Daniel M. Hess	Kathleen R. Kuehlhorn	Travis Matye
Howard S. Garlick	Mark Hibbert	Rolf C. Kugler	James M. Maxwell
Elizabeth G. Gast	Nicholas Hilbert	Ilya Kurlat	Ken Mayer
Florence Gaydos	Robert B. Hill	Daniel Kyre	David Mayo
Joseph Gear	Daniel G. Hinden	Ray Lackman	Elizabeth L. McNulty
William G. Geiger	Sam Hochron	Sadie E. Ladick	Joan McCann
Marvin I. George	Raymond Hodge, Jr.	Victor M. LaFata	Esmond McCarthy
Susan Getz	Nicholas O. Hodgson	Sheila Langlois	Michael R. McCarthy
William Getz	Philip S. Holzman	Linda Lasater's mother	Mick McClain
Chandanie Ghingoor	Dave Hoppe	Linda Lasher	Stan McClintock
Dr. Irwin J. Giber	Lindsey R. Hough	Charlene Lat	Dennis McCloskey
Lynda L. Gilchrest	Lucy Hu	Leonard Latzman	Charles McCormick
Reverend Dr. T. Edward Giles	Alan Hundert	Jenna R. Laubach	Ann McDonald
Ted R. Giles	William B. Hunter	Robert E. Lauer	Dean McDonald
Joyce Gillis-Jones	Milton L. Huntley	Megan Lavin	Elma L. McDonald
Ryan C. Gilroy	Margaret Hussey	Nellie E. Leahy	Gerald J. McDonald
Kelly Gimbel	Wendie Hutchings	Danny Leber	Kathleen McDonald-Jones
Robert Gimprich	Jae Y. Hyun	Georgette J. LeCours	Lilian P. McDowell
Gregory M. Glass	Conrad Igleheart	Dolores Leffler	Debret McFarlane
Brian D. Go	Jane Irwin-Malinoff	Jorie Lester-Mark	David McGibbon
Elfrida B. Goetzenberger	David N. Isler	Harriett Levay	Dr. Elliott McGrew
Maya Gold	Damaris Jackson	Michael S. Levine	Carolyn McNamara
Alex Goldin-Krause	Prayim L. Jacobsen	Dr. Joanne Levy	Tim McNamara
Patricia Goldman-Rakic	Ben Jacobson	Steven Lewis	Brian J. McVey

Alexander J. Meffert-Ulin	Angie Pampena	Mary A. Rochfort	Philip A. Soignier
Roderick W. Merrill	Valerie Panczuk	Charlie Romney	Wallace E. Solo
Joshua K. Messier	Adam Pardee	Maurice Roncalli	Shirley Solomon
Barbara Messinger	Alison Parker	Brian Rorick	Warren Solomon
David C. Michaels	Harry C. Parker	Ira Rose	John T. Sommers
Apphia Michelich	Jeff Parker	Judith Roseman	Angelique Sonnier
Ronald Michelich	Wayne Parker	Judi Rosen	Martin Sorom
Mikey Mike	Silas Parry	Dr. Henry Rosett	Pauline L. Spangler
Tova Milinsky	Mark Patterson	Mitchell S. Ross	Phyllis M. Spanier
Christopher J. Miller	Earl M. Payne	C. Frederick Rossbach	Billy D. Spellman
Jeff Miller	Wanda Payton	Eleanor Rossbach	Diana Spellos
Mark S. Miller	Mattias J. Pena	Christina Rossi	Kalyani Srinivasan
Lori Miller-Levine	Kathleen Perachio's mother	Lewis Roth	Charles R. Staab
Vivian A. Mirabelli	Donald S. Perrino	Matthew S. Rothman	Samuel R. Stack
An MIT Scholar	Gary M. Pesche	Kelly A. Rubbo	Branch Stanley
Jonathan Mitchell	Jay R. Peshkin	Joan Rucks	Brandon T. Steimel
Michelle Mogan-Winiarski	Peter	Chris Rudder	Joyce Stein
Diane Mohageg	Marilyn Peters-Dornan	Melanie Rumuly Worth	Kolne M. Stella
Neil Molberger	Dixon Pfefferkorn	Angela S.	Myron Stepack
Daniel W. Momyer	W. Patrick C. Phear	Philippa Salisbury	Karen Stern
Gregory A. Monk	Debra Phillips	Agis Salpukas	Anita B. Stevens
Dr. Clairborne Moquin	Keith R. Phillips	JoAnn Samels	LaNelle Stinnett
Irene Moran's Brother	Parker E. Phillips II	Elaine Samson	Kathryn Stitz
Lewis Morris	Jeanette Piccielli	Kerri N. Saunders	L. Marie Strater
Linda Morrison	Sybil Pierce	Brent R. Scanlon	Mary J. Strub-Caulkins
Ellen Mosher	Barbara Pirtio	Sterling A. Schiffman	Kenneth E. Stutzman
Rick Mosher	Robin Poist	Beth Schmidt	Jerome Sulzberg
Richard D. Moszkowski	Howard W. Pope	Elizabeth Schmidt	Brian Swank
Vernon Mountcastle	Elizabeth M. Posa	Nancy Schmitt	Matthew J. Szemborski
Carole Muldoon	Virginia F. Powell	Jill Schneider	Maureen Szilva
Ronald P. Mullan	Kirk Preuss	Richard Schneider	Andrew Taddy
Donna Murphy	John W. Price	Richard B. Schreiber	Jeffery R. Taillac
Louise Murphy-Rhodes	Oliver Priceman	Dr. R. David Schreiber	Vera Tartanian
Cynthia A. Murray	Rosemarie Princiotta	Sue Schulmeister	Gary Taylor
Alies Muskin	Philip Provenza	Marilyn Schulte	H. Vonn Taylor
Tina M. Musso	Robert G. Provisor	James Schultz	James E. Taylor
Bob Myers	Samantha A. Quinn	Briana M. Schutze	Ralph D. Taylor
Drew Myslicki	Ramez E. Qureshi	Eric Schwartz	Richard P. Taylor
Mary Ellen Mysliwiec	Daniel A. Radell	Michael L. Schwartz	S. Gary Tedore
Malvina Nachman	Marion A. Ragland	Jon A. Schwenk	Peter Telkins
Carolyn M. Nagel	Raymond Rando	A. Paula Scott	Jason Tennies
Gitaben Naik	Eileen Ratner	Mark Seifter	Camilla L. Thompson
Steven Nannini	Dr. Jacob P. Rayapati	Paz Selo	Fay Thompson
John F. Nash, Jr.	Will Raymund	Werner A. Selo	Marianne Thornton
Gloria E. Neidorf	John Reason	Karen Seykora	Joseph Todaro
Christina D. Nelson	Robbie Reck	Ben Shaffer	Samuel B. Todd
Joel Nelson	Chris G. Reese	Bruce B. Shaffer	Ethel M. Toepel
Michael E. Nelson	Marci S. Reller	Me-Ira Shaindel bat	Gordy Tomalty
Ian D. Nicklas	Michael Reschke	Yekutiell ve Mindel	Pau Tornero-Soria
Carol R. Nielsen	Norma Resnick	William Shannon	Frances S. Trager
Mary C. Noble	Mark Reuling	David M. Shauger	Morris Trager
Edna J. Norman	Nancy L. Reuschlein	Alice Sherr	Samuel P. Trice
Dr. Gordon E. Northrup	Chris Rezynek	Saul Sherr	Richard Trommer
Norita Norton	Dr. Sun Hong Rhie	Harriet Shetler	Donald Trybula
Russ Nugent	Carmella Rice	Sylvia Shick	Alexandros Tsaoussis-Maddock
Hubert Nutt	Kenneth A. Rice	Tonya Shipman-Bennitt	Amanda Tucci
Judy A. Oakes	Mareta J. Richards	Shirley Shuster	Donald B. Tuson
Aaron Ohabi	William L. Ricketts	David Silbar	Leon E. Tuttle
Grant W. Ohlson, Jr.	Rodney Riddell	Annett Silva	Robert Valentini
Susan Okun	Gregory L. Ridpath	Benjamin Silver	Nicolas D. Valeriano
Nancy M. Olandese	Elizabeth M. Rieman	John T. Sinnott	Stephanie L. Van Gundy
Sean T. Olwell	Kelsey G. Riggs	Elias T. Slaman	Ginny Van Nattan
Cameron R. Orr	Dorrit L. Rippchen	Eleanor B. Slater	Charles Varkoly
Todd W. Orton	Jan Ritchie	Andrew D. Smith	Elizabeth A. Varkoly
Jason M. Ouellet	Trandl Robbins	Edmund Smith	Keith A. Vinskofski
Barbara W. Page	David M. Robel	Wayne Smith	Lenore R. Vitale
Pat Palma	Lauren Robinson-Kieves	Mary Smith-Lawrence	Mark Von Dusseldorp
Pamela	Robert Rocheleau	Linda Snow	Ann Wade-Granfield

William F. Wagner, Jr.
Bradley J. Wagnon
Susan E. Waide
Daniel F. Walker
Lena Walker
Phyllis S. Walker
Jameson Walls
Adam Ward
Ethel B. Watts-Edwards
James A. Weber
Mary Weber
Penina Weiner
Wendy Weisman

James C. Welbourne
Thomas J. Wendt
Lisa J. Wentz
Timothy R. Wentz
Heidi A. Westhoven
Virginia K. Weston
Timothy L. Whitmer
Christopher Whitted
Todd Whitton
Eamonn D. Wholley
Aaron J. Wieczorek
John A. Wiederkehr II
Michael G. Wieman

Wiggles the dog
Margaret Wills
Angela Wilson
Pauletta Wilson
Peter B. Wilson
Richard K. Wilson
Amy Winans
Dennis G. Winiarski
Ralph Wise
Doug Wistner
Patricia J. Woicek
John Wolner
Ivan Wood

G. Richard Worrell
Keith C. Worrell
Beverly A. Wuntch
Bobbi Young
Richy C. Zalite
Marilyn Zalokar
Anna Zarski
Peter W. Zartman
Andrew W. Zeh
Maria Zeier
Rita Zerr
Barry L. Zimmerman
George D. Zuckerman

Community Partners

Team Up For Mental Health

\$50,000+

9th Annual Chrissy's Wish Memorial Golf Outing

Linda & Mario Rossi
Manorville, NY

Hike for Mental Health

Leo Walker & Tom Kennedy
Appalachian Trail & Nationwide

\$25,000+

5th Annual Let The Sun Shine Run/Walk

Kathy & Curt Robbins
Cold Spring, MN

\$10,000+

Wedding of Julie & Guneet Kochar

Overland, KS

\$5,000+

Horizon Group Properties Mall Fundraising

Gary Skoien & Connie Dyer
Rosemont, IL

Team Daniel: Running for Recovery from Mental Illness

Drs. Ann & Robert Laitman
Orlando, FL & Armonk, NY

\$1,000+

A Day At The Beach

Arlene O'Rourke
Hampton Bays, NY

Remember Johnny Charity Event

Summer Reid
Orange, CA

NAMI Eastside Support Group

Dr. Tom B. Coles
Harper Woods, MI

Gaming Against Mental Illness

David O'Keefe
Trenton, NJ

Cynthia Crawford Birthday Party

Newport News, VA

Running for Research

Jennifer Spangler
Midlothian, VA

Fair Lawn High School 1st Annual

"Live to Laugh" Fundraiser

Jed Downey
Fair Lawn, NJ

Wedding of Mary Hofert & Anna Flaherty

Honolulu, HI

Power Planeteers

Jee Ramos
Fresno, CA

"REVOFEV: The Lost Something" Film

Chase Iacofano
Denver, CO

Chefwich

Lauren Bohlig
Portland, OR

Taking Strides Against Mental Illness

Harryet, Rebecca, and Stuart Ehrlich
Wayne, NJ

Dave Green Memorial Golf Classic

John Hagerty
Glenn Dale, MD

Ribbons for Research

Linda & Frank Kilpatrick
Manhattan Beach, CA

\$500+

Next to Normal: A Benefit Concert

Zachary Wobensmith
New York, NY

Kettlebell Swings for Kasia

Rory Pollack
Robbinsville, NJ

Texas A&M University Flash Zombie 5K

Alyssa Tigner
College Station, TX

BadNewsBaron Twitch

Matthew Anderson
Allen, TX

Stop the Stigma Dine & Donate/Ribbon Sale

Sydney Edelson
Fort Washington, PA

COMMUNITY

Partners

With the support of family, friends and your community, you can make a difference in the fight against mental illness and the stigma it bears. When you raise money to support the Brain & Behavior Research Foundation, you not only fund the most progressive and promising brain and behavior research, but you help chip away at the crippling effect that stigma has on these illnesses. The Foundation relies on the generosity of the community to help fund leading brain and behavior research.

In 2015, local community fundraising events raised \$216,000 to support brain and behavior research.



Ninth Annual Chrissy's Wish Memorial Golf Outing MANORVILLE, NY

Chrissy's Wish was established in memory of Christina Rossi and to honor the millions of people who continue to live with mental illnesses. All proceeds are donated to the Brain & Behavior Research Foundation. As a result of the fundraisers of the past seven years, together with matched funds, Chrissy's Wish has raised more than \$480,000 for the Foundation.

"Chrissy's greatest wish was to find peace of mind. Let's bring this wish to life. By supporting Chrissy's Wish you can help bring an end to the devastating mental disorders that strike so many our friends and family members."

LINDA AND MARIO ROSSI, CHRISSY'S PARENTS

HIKE for Mental Health APPALACHIAN TRAIL AND NATIONALLY ACROSS THE U.S.

Share the joy of hiking. Bring hope to those battling mental illness.

HIKE for Mental Health was born of a single vision: a world in which everyone, including those who suffer from mental illness, can find the simple joy of living. It's mission is to increase public awareness of the challenges and suffering faced by those afflicted by mental illness and their families; increase public appreciation for and responsible use of wilderness trails; and to raise funds to prevent and alleviate the pain caused by mental illness while maintaining and preserving wilderness trails.



Let the Sun Shine Run/Walk to Benefit the Brain & Behavior Research Foundation COLD SPRING, MN

This event was created to honor the memory of Jonathon James Robbins. Jonathon was diagnosed with schizophrenia and depression and committed suicide on April 28, 2010 at the age of 22.

"This world WILL be a better place because of Jonathon's death; not for us who loved him, but for all those other families out there who still have hope that a cure or better faster-acting medicine can help their loved ones."

KATHY ROBBINS, JONATHON'S MOM



2015

FINANCIAL SUMMARY

2015 Financial Summary

We are pleased to report on the financial position and results of the Brain & Behavior Research Foundation for 2015. We are appreciative and thankful for the commitment of Foundation leadership, dedicated staff, volunteers and our strong donor support base that allows the Foundation to perform its vital work. We remain indebted to the Foundation Scientific Council, our distinguished research leaders covering virtually every major discipline within brain and behavior science, who volunteer their expertise to select and recommend the most promising grant projects to fund.

In 2015, contributions continued to increase and bequests continued to provide major support for which we are deeply grateful to all of our supporters for their generosity. We again acknowledge the extraordinary bequest from the late Oliver D. Colvin, Jr. that continues to support our efforts at the Foundation. Together, all these donations further the Foundation's mission to alleviate the suffering caused by mental illness by awarding grants that will lead to advances and breakthroughs in scientific research.

With another strong year of results, we continue to move forward with our focus of accelerating research accomplishments to help those living with mental illness to live full and productive lives. During 2015, the Foundation awarded additional NARSAD Grants to bring the total investment in mental health research to more than \$342 million since inception.

We acknowledge, with great thanks and appreciation, the generosity of the two family foundations who have underwritten, once again, the Foundation's operating expenses. This allows for contributions targeted for research to go directly to funding NARSAD Grants. The financial report shown herein has been summarized from our 2015 audited financial statements. The Foundation's complete audited financial statements and our most recent IRS Form 990 are available online at bbrfoundation.org or contact our office at 800.829.8289 for copies of the material.

Combined Statement of Financial Position

	DECEMBER 31, 2015	DECEMBER 31, 2014
ASSETS		
Cash and cash equivalents	\$14,408,546	\$22,350,676
Investments, at fair value	20,664,680	11,164,075
Contributions receivable	—	1,436,500
Other receivables	17,038	12,009
Pledges receivable, net	505,583	780,440
Prepaid expenses and other assets	28,612	21,415
Assets held in charitable remainder trusts	1,363,469	1,460,182
Fixed assets, net	48,577	81,617
Security deposits	77,110	77,110
	\$37,113,615	\$37,384,024
LIABILITIES AND NET ASSETS		
Liabilities		
Accounts payable and accrued expenses	\$198,788	\$209,211
Grants payable	22,943,344	20,093,716
Accrued compensation	61,919	50,295
Annuities payable	791,216	871,832
Charitable gift annuities payable	301,807	317,912
	Total Liabilities	\$24,297,074
Net Assets		
Unrestricted	(3,606,221)	(1,081,384)
Unrestricted – board designated endowment	11,509,262	11,509,262
	Total Unrestricted	\$7,903,041
Temporarily restricted	-	499,680
Permanently restricted	4,913,500	4,913,500
	Total Net Assets	\$12,816,541
	\$37,113,615	\$37,384,024

Combined Statement of Activities

	YEAR ENDED DECEMBER 31, 2015	YEAR ENDED DECEMBER 31, 2014
SUPPORT AND REVENUE		
Contributions	\$11,608,273	\$7,816,588
Special Events, net	509,498	584,805
Contribution of services	1,807,051	1,389,537
Bequests	8,847,835	21,683,838
Net realized and unrealized (losses) gains on investments	(405,214)	1,184,440
Net (depreciation) appreciation of assets held in charitable remainder trusts	(96,713)	55,885
Dividend and interest income	423,681	322,676
Total Support and Revenue	\$22,694,411	\$33,037,769
EXPENSES		
Program Services		
Research grants and awards	18,441,870	22,681,953
Scientific advancement	2,293,164	1,747,843
Program support	2,544,177	2,101,977
Total Program Services	\$23,279,211	\$26,531,773
Supporting Services		
Fundraising*	903,798	793,219
Administration*	1,535,919	1,346,579
Total Supporting Services	\$2,439,717	\$2,139,798
Total Expenses	\$25,718,928	\$28,671,571
Change in Net Assets	(3,024,517)	4,366,198
Net Assets, beginning of year	15,841,058	11,474,860
End of Year Net Assets	\$12,816,541	\$15,841,058

*All fundraising and administration expenses are funded by specially designated grants.



90 Park Avenue, 16th floor, New York, NY 10016-1301
646.681.4888 | 800.829.8289
bbrfoundation.org

Investing in Breakthroughs To Find a Cure

100% of donor contributions for research are invested in our grants leading to advances and breakthroughs in brain and behavior research. This is made possible by the generous support of two family foundations which cover all of the Foundation's operating expenses.

OUR MISSION:

The Brain & Behavior Research Foundation is committed to alleviating the suffering caused by mental illness by awarding grants that will lead to advances and breakthroughs in scientific research.

HOW WE DO IT:

The Foundation funds the most innovative ideas in neuroscience and psychiatry to better understand the causes and develop new ways to treat brain and behavior disorders.

These disorders include depression, bipolar disorder, schizophrenia, autism, attention-deficit hyperactivity disorder, anxiety, borderline personality disorder, chemical dependency, obsessive-compulsive disorder and post-traumatic stress disorders.

OUR CREDENTIALS:

Since 1987, we have awarded more than \$342 million to fund more than 5,000 grants to more than 4,000 scientists around the world.

OUR VISION:

To bring the joy of living to those affected by mental illness—those who are ill and their loved ones.

SIGN UP FOR ENEWS: bbrfoundation.org/signup

FIND BBRFOUNDATION ON

