

2022
INTERNATIONAL
MENTAL HEALTH
RESEARCH
SYMPOSIUM
VIRTUAL & IN-PERSON

Friday, October 28, 2022
9:00am-12:30pm EDT

Kaufman Music Center
New York, NY





Welcome

Welcome to our International Mental Health Research Symposium.

Today we will hear presentations from the Brain & Behavior Research Foundation's 2022 Outstanding Achievement Prizewinners on topics that will include schizophrenia, suicidal behavior in bipolar disorder, pediatric mood and anxiety disorders, and cognitive neuroscience. The Outstanding Achievement Prizewinners are selected by

special committees of the BBRF Scientific Council, a volunteer group of 190 mental health experts across disciplines in brain and behavior research who review all Foundation grant applications and recommend the most promising ideas to fund.

We are pleased this year to also offer informative presentations from our two winners of the 2022 Pardes Humanitarian Prize in Mental Health.

Since 1987, the Foundation has awarded more than \$440 million to fund more than 6,400 grants to more than 5,100 scientists around the world. These awards are made specifically to fund innovative research that may not be supported elsewhere, but is vital for advancement in the fields of neuroscience and psychiatry. **100% of every dollar donated for research is invested in our research grants.** Our operating expenses are covered by separate Foundation grants.

We hope the BBRF Symposium will inspire you. Thank you for joining us in our commitment to dramatically improve the lives of those with mental illness and ultimately enable more people to live full, happy, and productive lives.

Sincerely,

Jeffrey Borenstein, M.D.

President & CEO

Brain & Behavior Research Foundation

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PRIZEWINNER, BBRF PARDES HUMANITARIAN PRIZE IN MENTAL HEALTH

Welcome



Jeffrey Borenstein, M.D.

President & CEO, BBRF

Jeffrey Borenstein, M.D., serves as the President & CEO of the Brain & Behavior Research Foundation, the largest private funder of mental health research grants. Dr. Borenstein developed the Emmy-nominated public television program “*Healthy Minds*,” and serves as host and executive producer of the series. The program, broadcast nationwide, is available online, and focuses on topics in psychiatry in order to educate the public, reduce stigma and offer a message of hope. Dr. Borenstein also serves as Editor-in-Chief of *Psychiatric News*, the newspaper of the American Psychiatric Association.

Dr. Borenstein is a Fellow of the New York Academy of Medicine and serves as the Chair of the Section of Psychiatry at the Academy. He also serves as the President of the New York State Psychiatric Association. Dr. Borenstein earned his undergraduate degree at Harvard and his medical degree at New York University.

Introduction



Robert M.A. Hirschfeld, M.D.

BBRF Founding Scientific Council Member

2002 BBRF Distinguished Investigator

2003 BBRF Falcone Prizewinner for Outstanding Achievement in Mood Disorders Research

Dr. Robert Hirschfeld is a Professor of Psychiatry and the DeWitt Wallace Senior Scholar in the Department of Psychiatry at Weill Cornell Medical College. Prior to joining the Weill Cornell Department of Psychiatry in April 2015, he served for nearly 25 years as Professor and Chair of the Department of Psychiatry at the University of Texas Medical Branch in Galveston where he conducted research, treated patients, and provided educational programs for medical students and residents. Before coming to Texas, Dr. Hirschfeld spent 18 years at the National Institute of Mental Health, where he was Chief of the Mood, Anxiety, Personality Disorders Research Branch.

Dr. Hirschfeld is renowned internationally for his research on the diagnosis and treatment of bipolar disorder and depression. He developed the Mood Disorder Questionnaire (MDQ), the most widely used screening instrument for bipolar disorder in the world. Dr. Hirschfeld has authored nearly 300 scientific papers and abstracts in leading scientific and medical journals, and has contributed chapters on mood and anxiety disorders in four major psychiatric textbooks, as well as in nearly two dozen other books on psychiatry.

From Obscurity to Hot Topic: The Kynurenic Acid Story



Robert Schwarcz, Ph.D.

University of Maryland School of Medicine
Karolinska Institute, Stockholm

BBRF Scientific Council
2002 BBRF Distinguished Investigator

In the early 1980s, work in **Dr. Schwarcz's** laboratory began to focus on the neurobiology of kynurenines, obscure metabolites of the essential amino acid tryptophan. Using a combination of biochemical, histological, electrophysiological and genetic approaches, he and colleagues elaborated many of the fundamental characteristics and control mechanisms which govern the function of these compounds in the mammalian brain, and examined adverse consequences when these functions were impaired.

In his presentation, he will discuss studies which increasingly indicated that one of the tryptophan metabolites, kynurenic acid (KYNA), is an important endogenous regulator of the function of two major neurotransmitters which play critical roles in cognitive processes in health and disease—glutamate and acetylcholine. Abnormally elevated levels of KYNA in the brain are now considered to be causally related to cognitive impairments seen in people with schizophrenia. He will describe ongoing efforts to reduce/normalize KYNA levels in the human brain. This new pharmacological approach may provide benefits to persons who experience cognitive impairments in conjunction with psychiatric diseases like schizophrenia and may also improve cognition in healthy individuals.

“There is nothing more rewarding in a scientist's career than to receive genuine recognition from colleagues in their area of research. I therefore consider the award of the Lieber Prize by the world's leading experts in clinical and pre-clinical biological psychiatry a unique acknowledgement for which I am truly appreciative and grateful.”

New Evidence for Translationally Relevant Roles of Kynurenic Acid in Schizophrenia



Sophie Erhardt, Ph.D.
Karolinska Institutet

From the start, **Dr. Erhardt's** research has focused on the idea that abnormal tryptophan degradation along the kynurenine pathway leads to increased brain levels of the metabolite kynurenic acid (KYNA), and related inhibition of NMDA and alpha7 nicotinic receptor function. She believes this is of pathophysiological significance for the psychotic symptoms and cognitive impairments in people with schizophrenia. By conducting a creative mix of electrophysiological, biochemical, pharmacological and imaging experiments in laboratory animals, she has provided fundamentally new insights into the mechanisms by which elevations in brain KYNA impair the function of both dopamine and glutamate, the two neurotransmitters which are widely believed to play key roles in schizophrenia etiology.

As leader of the Karolinska Schizophrenia Project, Dr. Erhardt and colleagues have embarked on a groundbreaking study to evaluate the "KYNA hypothesis," using brain organoids derived from controls and schizophrenia patients. She is also engaged in joint projects to identify "bio-fingerprints" of schizophrenia patients who may benefit from fundamentally new drugs that combine anti-immune properties with an ability to selectively prevent the adverse effects of elevated brain KYNA levels.

"It's a huge honor to be the 2022 recipient of the prestigious Maltz Prize. Receiving this prize indicates my credibility as a scientist and is a recognition of our scientific discoveries. It encourages us to continue searching for biomarkers and novel pharmaceutical strategies to treat psychosis and cognitive impairment. The publicity will inspire young people to believe that science is a valued endeavor."

Unlocking the Mysteries of Mood Disorders By Science Instead of Guesswork



J. John Mann, M.D.

Columbia University
New York State Psychiatric Institute
BBRF Scientific Council
2008 BBRF Distinguished Investigator

Dr. Mann's clinical work has turned suicide prevention into a scientific endeavor. In a series of studies he identified a systemic serotonin-related series of abnormalities present in suicide attempters compared with controls; the degree of abnormality correlated with lethality of future suicidal behavior. He found that there is over-expression of inhibitory serotonin 5-HT_{1A} auto-receptors in major depression and in bipolar disorders, indicating a common biological phenotype related to the depressive episodes that characterize both disorders.

He later turned his attention to the clinical and biologic predictors of suicidal behavior in bipolar disorders, showing that bipolar disorders share many suicide risk factors with major depression, with important differences. In other studies, he also found human neurogenesis is present in human brain undiminished into the eighth decade of life and may play a role in depression. He and his colleagues discovered that the rapid onset of antidepressant effect of intravenous ketamine is dose-dependent and that this dose effect is mediated by the degree to which ketamine reduces stress-related increases in brain glutamate.

"The Colvin Prize is a huge honor and I feel humble and fortunate to receive this award. I grew up in the era of NARSAD and BBRF and my key new research ideas got their initial funding from BBRF. I hope the results will help the millions of depressed patients on our planet."

Who is at Risk to Develop Bipolar Disorder?



Boris Birmaher, M.D.

University of Pittsburgh Medical Center
Western Psychiatric Institute

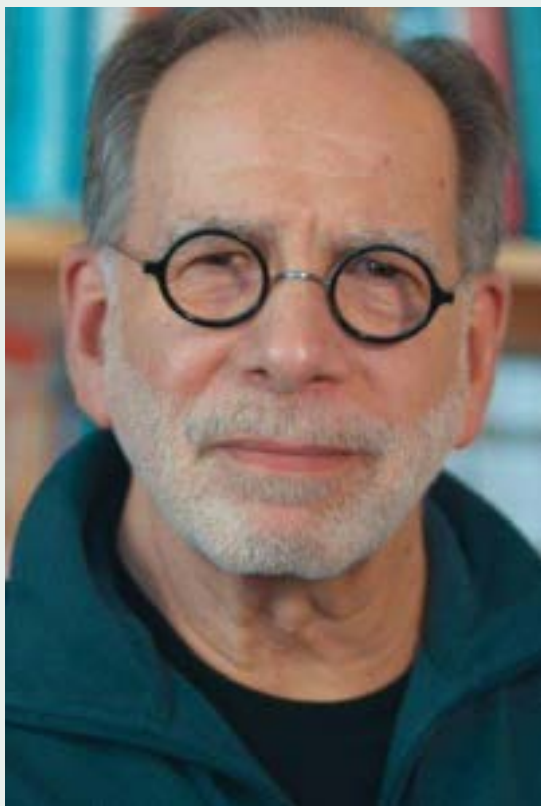
2013 BBRF Colvin Prize winner

Dr. Birmaher has made fundamental contributions to virtually all aspects of clinical, translational aspects of pediatric psychopathology. His most significant impact is in the area of pediatric mood and anxiety disorders. He created many of the standard tools used for assessment and diagnosis of these conditions. He was fundamental in defining familial and longitudinal relations among these conditions, and he has led some of the most impactful treatment studies in this area. Indeed, our current understanding of pediatric mood and anxiety disorders rests heavily on his accomplishments.

In his presentation, Dr. Birmaher will note that bipolar disorder is an illness that affects about 2-3% of children and adolescents. Untreated, it affects the normal development of the child and is associated with social, family, academic, and work difficulties. Moreover, it significantly increases the risk for substance abuse, legal problems, and suicidal behaviors. Therefore, he says, it is important to identify who is at risk to develop bipolar disorder and to develop strategies to delay, and in the best of cases, prevent the onset of this disorder. Dr. Birmaher will discuss the Pittsburgh Bipolar Offspring Study (BIOS), which seeks to identify the symptoms and other factors associated with increased risk to develop bipolar disorder. The presentation will show that offspring of parents with bipolar disorder are at specific high risk to develop bipolar disorder. Also, it will present the symptoms and the genes associated with increased risk to develop bipolar disorder.

“The Ruane Prize is certainly a great honor. It is very important to realize, however, that this honor does not recognize me alone, but also the talented and hard-working group of researchers with whom I work.”

Solutions to the Brain-Body Problem: Neural Substrates for Psycho-somatic Disease



Peter L. Strick, Ph.D.
University of Pittsburgh School
of Medicine

Dr. Strick's research focuses on four major areas: 1) the generation and control of voluntary movement by the motor areas of the cerebral cortex; 2) the motor, cognitive and affective functions of the basal ganglia and cerebellum; 3) the neural basis for the mind-body connection; and 4) unraveling complex neural networks in the central nervous system. His lab is using modern neuroanatomical, physiological, and functional imaging techniques to determine how each of the cortical motor areas differentially contributes to the generation and control of voluntary movement. He is also investigating the role of the premotor areas in the recovery of motor function that can occur following damage to the primary motor cortex or its connections, as in spinal cord injury or strokes.

In his presentation he will note that modern medicine has generally viewed the concept of "psycho-somatic" disease with suspicion, partly because no neural networks were known for the "mind," conceptually associated with the cerebral cortex, to influence autonomic and endocrine systems that control internal organs. He will explain how his team has used a unique tracing method to identify the areas of the cerebral cortex in the monkey that communicate through multi-synaptic connections with the adrenal medulla. He will explain the results and their implications, among other things, in the control of stress, and for understanding stress disorders and depression. One of the insights from the work is that there is a concrete anatomical basis for psychosomatic illness where mental states can alter organ function.

"I am deeply honored to be selected for this year's Goldman-Rakic Prize. I met Pat early in my career. Her contributions to science were only matched by her generosity to her friends and students. Pat was one of the first multidisciplinary 'neuroscientists.' She has been a model for the generation of neuroscientists that followed her."

PRIZEWINNER, BBRF PARDES HUMANITARIAN PRIZE
IN MENTAL HEALTH

Recommendations for Addressing Mental Health Disparities Through Research



Altha J. Stewart, M.D.

*Senior Associate Dean for Community
Health Engagement*

*The University of Tennessee Health
Science Center*

*Director, Division of Public and
Community Psychiatry*

*Director, Center for Youth Advocacy
and Well-Being*

Altha J. Stewart, M.D., is Senior Associate Dean for Community Health Engagement at the University of Tennessee Health Science Center (UTHSC) in Memphis is Associate Professor and Chief of Social/Community Psychiatry as well as Director, Center for Youth Advocacy and Well-Being at UTHSC. In 2018-19 she served as the 145th President of the American Psychiatric Association, the first African-American elected to this position in the 175-year history of the organization. Prior to joining the faculty at UTHSC, she served as Executive Director of the Memphis/Shelby County System of Care program. A native of Memphis, Dr. Stewart worked for decades as CEO/Executive Director in large public mental health systems in Pennsylvania, New York, and Michigan. She received her medical degree from Temple University Medical School and completed her residency at what is now Drexel University.

Disparities in the prevalence and outcomes of mental health disorders are well recognized in the U.S. in racialized and underserved communities. Factors ranging from limited access to services, challenges in finding culturally competent providers, and navigating systems that are structurally incompetent present barriers to care and continue practices that do not fully address the needs of many communities. Dr. Stewart will discuss the need for more research to improve care and reduce the structural determinants of mental health in diverse populations. She will address the need to establish priorities, engage community stakeholders, and collaborate with communities on research in order to develop and test effective interventions to reduce these disparities.

Dr. Stewart has dedicated her career to helping the most disadvantaged and underserved people in our society suffering from serious mental illnesses. She is a leading voice in America about structural racism and its impact on mental health treatment for people of color. She has authored numerous publications on the determinants of disparities in mental health treatment.

The Pardes Humanitarian Prize in Mental Health is sponsored in part by Janssen Research & Development, LLC, one of the Janssen Pharmaceutical Companies of Johnson & Johnson.

PRIZEWINNER, BBRF PARDES HUMANITARIAN PRIZE
IN MENTAL HEALTH

Providing Psychological Support to Victims of State Repression and War



**Robert van Voren, FRCPsych
(HON.)**

*Chief Executive of "Human Rights in Mental
Health-Federation Global Initiative on
Psychiatry" (FGIP)*

Professor of Soviet- and Post-Soviet Studies

Dr. Robert van Voren has dedicated his life to the cause of human rights and mental health. For 45 years his dynamic leadership and global efforts in the field has provided direction as well practical support for making human rights a strong pillar of how societies deal with persons living with mental disorders.

As a leader his work includes creating countless initiatives and activities for schools, workshops, training seminars, advocacy campaigns, establishing and restructuring mental health services, documenting human rights abuses and giving voice to people with mental disorders. He actively contributes to humanitarian responses, creates networks, organizations, and philanthropic programs, supporting national reforms, leading research projects, developing and disseminating manuals and guiding documents that will support future leaders in the field

In times of political instabilities and humanitarian emergency in Eastern Europe, he manages to establish and coordinate an innovative program for the provision of independent psychological support services for people in Belarus and Ukraine as well as to deliver humanitarian aid to mental health institutions in Ukraine. He teaches human rights and democratization at universities in Georgia, Lithuania, Poland and Ukraine.

In his presentation he will discuss efforts to provide psychological support to victims of state repression in Belarus and victims of war in Ukraine (where he has worked for more than 30 years). Several programs were developed in the course of the past two years to deal with the psychological distress caused by mass arrests of human right defenders and others and, subsequently, the war that was unleashed on Ukraine in which over ten million people were displaced, tens of thousands of people were killed and many more were subjected to the horrors of war.

The Pardes Humanitarian Prize in Mental Health is sponsored in part by Janssen Research & Development, LLC, one of the Janssen Pharmaceutical Companies of Johnson & Johnson.

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***In recognition of Dr. Herbert Pardes, Constance and Stephen Lieber
for their remarkable dedication and collaboration in the advancement
of mental health research and Brain and Behavior Research Foundation.***



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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.

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To dramatically improve the lives of those living with mental illness, ultimately enabling them to live full, happy, and productive lives.

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35
years

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