

**University of Maryland School of Medicine  
Department of Psychiatry  
Research Faculty - Areas of Interest (updated 7/2018)**

This list is to be used by trainees in the Department of Psychiatry to identify faculty with overlapping research interests in order to get involved in research activities. After identifying a faculty member whose work is of interest to you, please email him/her to set up a time to meet. Each faculty member will have different projects going on and may or may not be able to work with a trainee when you contact him/her. However, all faculty listed here expect to be contacted by trainees and if they are unable to work with a trainee at this time they will have suggestions for trainees on other faculty to contact with similar work/research interests.

**Division of Adult Psychiatry**

**Todd Gould, MD.** [[gouldlab@me.com](mailto:gouldlab@me.com)]

Dr. Gould's laboratory investigates the pathophysiology of mood disorders and the mechanisms of action of mood stabilizers and antidepressants using genetic, pharmacological, and behavioral methods. The research has a particular focus on the development of improved animal models for applications to psychiatry, the functional consequences of mood disorder susceptibility genes, and collaborative translational studies with clinically focused research groups. We aim to further understand the underlying causes of mood disorders as well as assess the feasibility of novel treatment strategies.

**Teo Postalache, MD.** [[tpostola@psych.umaryland.edu](mailto:tpostola@psych.umaryland.edu)]

Dr. Postalache investigates and addresses misalignments between environmental day and night, light and darkness, activity and rest, wakefulness and sleep, and markers of biological day and night. He also takes an active interest in interactions between allergens or microbes, immune function, and brain structures contributing to emotional and behavioral regulation and dysregulation. His research is highly collaborative and multilevel, with ongoing projects in Germany, Denmark, Austria, Sweden, Lancaster PA (in Old Order Amish), and the VA.

**Leonardo Tonelli, Ph.D.** [[ltonelli@psych.umaryland.edu](mailto:ltonelli@psych.umaryland.edu)]

Dr. Tonelli's laboratory is investigating the role of adaptive immune processes in conferring susceptibility or resistance to the development of pathological stress responses such as those seen in anxiety and post-traumatic stress disorders and depression. We are developing a pre-clinical mice model to study the mechanisms of interaction between T cells and brain cells. These studies may assist in the development of a cell-based therapy for the treatment of stress-related disorders.

**Division of Alcohol and Drug Abuse**

**David Gorelick, MD.** [[dgorelick@mprc.umaryland.edu](mailto:dgorelick@mprc.umaryland.edu)]

Dr. Gorelick's research interests are the clinical pharmacology of substance abuse, substance withdrawal, and development of new biological treatments for substance use disorders, including medication, drug-metabolizing enzymes, and transcranial magnetic stimulation (TMS). His recent work focuses on cannabis (marijuana) and the cannabinoid chemicals found in the plant (including their potential therapeutic uses), new medications to treat alcohol and cocaine abuse, and treatment of individuals with both substance use disorders and a comorbid major psychiatric disorder, such as schizophrenia. Dr. Gorelick is Scientific Director of the Department's Clinical Neurobehavioral Center, where he is conducting outpatient studies of new medication to treat alcohol use disorder.

**Bankole Johnson, DSc, MD, MBChB, MPhil, FRCPsych, DFAPA** [[bjohnson@psych.umaryland.edu](mailto:bjohnson@psych.umaryland.edu)]

Professor Johnson is a principal investigator on NIH-funded research studies using neuroimaging, neuropharmacology, and molecular genetics techniques. He also serves on numerous NIH review and other committees, including special panels. His primary area of research expertise is the psychopharmacology of medications for treating addictions. His clinical expertise is in the fields of addiction, biological, and forensic psychiatry. Professor Johnson's current research incorporates

neuroimaging evaluations into his drug interaction studies to identify the site-specific effects of abused drugs and to evaluate the effectiveness of potential medications for the treatment of addiction.

**Chamindi Seneviratne, MD.** [[csenevi@psych.umaryland.edu](mailto:csenevi@psych.umaryland.edu)]

Dr. Seneviratne has done extensive research in molecular genetics in substance abuse with a primary focus on alcoholism. She has been working in the alcoholism research field for over ten years and has been involved in several pharmacogenetic clinical trials. She conducts genetic experimentations using various genotyping techniques, develop protocols and analyze data. Her other research interests include characterizing molecular mechanisms of gene regulation using molecular cloning and gene expression techniques in in-vitro cell cultures and human blood cells.

## **Division of Child and Adolescent Psychiatry**

**Jill Haak Bohnenkamp, Ph.D.** [[jbohnenk@psych.umaryland.edu](mailto:jbohnenk@psych.umaryland.edu)]

Dr. Bohnenkamp's research interests include behavioral and academic outcomes of school mental health service provision, school mental health workforce development, mental health training for educators and pediatric primary care providers and increased access to evidence-based mental health services for youth and families.

**Nancy Lever, Ph.D.** [[Nlever@psych.umaryland.edu](mailto:Nlever@psych.umaryland.edu)]

Dr. Lever has a particular focus on training, outreach, dissemination, and resource advancement, especially as it relates to promoting high quality, evidence-based research, training, policy, and practice in school mental health.

**David Pruitt, MD.** [[dpruitt@psych.umaryland.edu](mailto:dpruitt@psych.umaryland.edu)]

Dr. Pruitt's research interests are in rational/irrational pharmacology and medical care and effective treatments for children/adolescents and their families.

**Gloria Reeves, MD.** [[Greeves@psych.umaryland.edu](mailto:Greeves@psych.umaryland.edu)]

Dr. Reeves's research interests include childhood aggression, polypharmacy issues in child psychiatry, youth violence prevention, and neuroimaging.

**Sharon Hoover Stephan, Ph.D.** [[Sstephan@psych.umaryland.edu](mailto:Sstephan@psych.umaryland.edu)]

Dr. Hoover Stephan conducts research and evaluation in the area of school-based mental health intervention implementation. She has focused specifically on the areas of trauma-informed care for students and mental health training of primary care and other health providers (including school nurses). Dr. Hoover Stephan currently has projects on developing national performance standards for school mental health; evaluating the impact of school-based behavioral health, including substance use, interventions on student performance and functioning; evaluating the impact of a behavioral health supports for transition age (ages 16-24) youth; and evaluating the impact of a comprehensive approach to emotional and behavioral crises in schools.

## **Division of Geriatric Psychiatry**

**William T. Regenold, MDCM** [[Wregenol@psych.umaryland.edu](mailto:Wregenol@psych.umaryland.edu)]

Dr. Regenold's research has focused primarily on the role of abnormalities of brain glucose metabolism in the pathophysiology of mood disorders and schizophrenia. Glucose is the exclusive source of energy for the brain; therefore, glucose metabolism is essential to brain energy metabolism. Our findings, based on data from postmortem brain and cerebrospinal fluid, have led us recently to investigate whether there is a problem in glucose metabolism by the mitochondrion, the cell organelle that is critical to generating energy from glucose. The ultimate goal of the research is to find out whether symptoms of mental illness can be prevented or relieved by improving brain glucose metabolism. We are also

studying the therapeutic mechanism of action of electroconvulsive therapy, with a particular interest in the neurotrophic properties of electrical current.

### **Division of Psychiatric Services Research (DPSR)**

**Richard Goldberg, Ph.D.** [Richard.Goldberg@va.gov]

Dr. Goldberg is a clinical and health services researcher whose work focused on the development, evaluation and implementation of recovery oriented treatments and services for adults living with serious mental illness. His current projects include the evaluation of health and wellness and mental health consumer delivered interventions.

**Howard Goldman, MD, MPH** [hh.goldman@verizon.net]

Dr. Goldman's expertise is in evaluating mental health services and financing programs and policies. He is the director of the Network on Mental Health Policy Research, funded by the MacArthur Foundation. The Network is the sponsor of several studies on mental health financing. He also served as Principal Investigator of the study team conducting the Evaluation of the Implementation and Impact of Mental Health and Substance Abuse Parity in the Federal Employees Health Benefits program, sponsored by the government.

**Laurel J. Kiser, Ph.D., M.B.A.** [lkiser@psych.umaryland.edu]

Dr. Kiser's work focuses on the delivery and evaluation of mental health services for children and adolescents and their families, specifically ethnic minority families living in urban poverty. Dr. Kiser is Principal Investigator of the Family Informed Trauma Treatment (FITT) Center, a SAMHSA National Child Traumatic Stress Network Category II Center. Her research is focused on family/dyadic adaptations to stress and trauma and evaluation of Strengthening Family Coping Resources, an intervention for family trauma.

**Julie Kreyenbuhl, Pharm.D., Ph.D.** [Julie.Kreyenbuhl@va.gov]

Dr. Kreyenbuhl's research focus is on the pharmacoepidemiology of serious mental illness and she has contributed extensively to the development of evidence-based treatment guidelines for schizophrenia. Dr. Kreyenbuhl has expertise in evaluating medication adherence among individuals with serious mental illness, and has developed and tested a Smartphone application for enhancing adherence to antipsychotic medications. She is also interested in methods to improve screening for and patient self-management of side effects of antipsychotic and other psychotropic medications. She is currently studying the unique impact of cardiometabolic side effects of psychotropic medications in women with serious mental illness.

**Alicia Lucksted, Ph.D.** [Aluckste@psych.umaryland.edu]

Dr. Lucksted is a clinical-community psychologist. Her research focuses on outcomes and change processes for psycho-social interventions, including consumer and family led self-help programs, using both quantitative and qualitative methods. Current content areas include societal and internalized (self) stigma regarding mental illness, stigma and engagement in services and recovery, preventing the development of self-stigma, consumer navigation of early episodes of psychosis and services, and the impacts of Mental Health First Aid as a public education program.

**Deborah Medoff, Ph.D.** [Dmedoff@psych.umaryland.edu]

Dr. Medoff is a quantitative psychologist and a MIRECC research investigator and an associate professor with the Division of Psychiatric Services Research (DPSR), Department of Psychiatry, University of Maryland School of Medicine. She is the director of data management for the MIRECC and the head of the data analysis unit for the DPSR. She is an expert in research methods, statistics and measurement with extensive experience designing and analyzing research on serious mental illness.

## Division of Psychology

### **Melanie Bennett, Ph.D.** [mbennett@psych.umaryland.edu]

Dr. Bennett has extensive expertise in the development of interventions to address health behaviors and social functioning among those with mental health disorders. Much of her work has centered on the assessment and treatment of substance use disorders in people with major mental illness with specific interest in smoking cessation and reducing harmful drinking. She is also interested in working with and training clinicians to provide evidence based interventions to young adults experiencing early psychosis. Dr. Bennett has also recently been funded to conduct a clinical trial of a psychosocial intervention to improve negative symptoms and increase community engagement in Veterans with schizophrenia.

### **Amy Drapalski, Ph.D.** [Amy.Drapalski@va.gov]

Dr. Drapalski's research focuses on the development and implementation of interventions to reduce internalized stigma in people with mental illness, as well as topics related to mental health recovery, family interventions in SMI and topics related to the health and mental health needs of women veterans.

## Maryland Psychiatric Research Center (MPRC)

### **Robert W. Buchanan, M.D.** [RWBuchanan@mprc.umaryland.edu]

Dr. Buchanan's major research interests are schizophrenia phenomenology; the neuroanatomical and behavioral investigation of the pathophysiology of schizophrenia; and the development of novel pharmacological approaches for negative symptoms, cognitive impairments, and treatment-resistant positive symptoms in people with first episode and multi-episode schizophrenia. He has conducted a series of proof of concept and clinical trials examining antipsychotic-reduction strategies in the acute and maintenance treatment of schizophrenia; the use of adjunctive pharmacological agents for the treatment of negative symptoms and cognitive impairments; and the comparative efficacy of clozapine and olanzapine in partially responsive outpatients with schizophrenia. He was involved in multiple aspects of the Measurement and Treatment Research to Improve Cognition in Schizophrenia (MATRICS), the Treatment Units for Research on Neurocognition and Schizophrenia (TURN) and the Treatment and Evaluation Network for Experimental Targets in Schizophrenia (TENETS) projects. He is currently funded to evaluate the neural basis of social function and to evaluate novel therapeutic approaches for the treatment of cognitive and social function impairments and persistent positive symptoms, including the use of add-on oxytocin and anti-inflammatory and anti-viral agents.

### **William Carpenter, M.D.** [wcarpent@mprc.umaryland.edu]

Dr. Carpenter's interests include early detection/intervention in psychotic illness; schizophrenia therapeutics; psychopathology concepts, and translational science. He served as the Director of the Maryland Psychiatric Research Center for over 30 years.

### **Joshua Chiappelli, MD** [jchiappelli@mprc.umaryland.edu]

Dr. Chiappelli's current projects include the use of laboratory stress paradigms to probe stress pathophysiology in schizophrenia, the comparison of pathophysiology between psychotic and mood disorders, and investigation of the relationship between inflammatory processes and neuroimaging markers in schizophrenia. Other research interests include phenomenology and cross-cultural aspects of psychopathology.

### **Greg Elmer, Ph.D.** [gelmer@mprc.umaryland.edu]

The primary objective of Dr. Elmer's laboratory is to better understand the neurobiology and neurogenetics of drug abuse, trauma and severe mental illness and the neurobiological factors integral to their co-morbidity. The strategies we use to investigate brain-behavior relationships include behavior genetics, behavior pharmacology, brain stimulation, large-scale gene expression analysis and data mining. Examples of specific behavioral pharmacology techniques include brain stimulation reward and

i.v. drug self-administration to investigate specific components thought to be involved in drug abuse. These techniques tie in with major collaborative initiatives to investigate the neurobiological events involved in reward and tolerance to opiates using large-scale gene expression profiling. In addition, we use models of reward processing, learning and memory paradigms and ethological observation to investigate specific components thought to be involved in the neurobiological consequences of trauma and the neuropsychopharmacological effects of drugs. Altered function in reward learning and the neurobiology of reward is a specific area of interest since the consequences of trauma, drug abuse and mental illness present with aberrant reward behaviors. By establishing parallel lines of investigation, we hope to determine genetic and neurobiological areas of confluence in order to discover novel treatment intervention strategies.

**James Gold, Ph.D.** [jgold@mprc.umaryland.edu]

Work in Dr. Gold's lab is in 4 main areas: 1) experimental studies of attention and working memory deficits using behavioral, EEG, and fMRI methods; 2) experimental studies examining aspects of reward based learning and decision making using behavioral and EEG methods; 3) psychometric validation of experimental cognitive neuroscience based behavioral methods with the goal of developing versions of tasks that could be used in clinical trials; 4) studies of cognitive enhancing drugs and interventions.

**Britta Hahn, Ph.D.** [bhahn@mprc.umaryland.edu]

Dr. Hahn's research focuses on cognition in schizophrenia, and on the cognitive-enhancing and dependence-related effects of nicotine and related compounds. She is studying these effects in rodent models, in human smokers and non-smokers, and in people with schizophrenia using behavioral and neuroimaging techniques.

**Elliot Hong, MD** [ehong@mprc.umaryland.edu]

Dr. Hong is the Director of the University of Maryland Center for Brain Imaging Research. His brain imaging research focuses on understanding the functional brain circuits that influence schizophrenia and severe nicotine addiction. He is actively pursuing research and clinical trial strategies using neurophysiological and imaging biomarkers to optimize mechanism-based interventions through nicotinic receptor and other novel mechanisms. His recent research emphasis is on neuroinflammation and nicotinic, GABA and NMDA receptor mechanisms. The overall research focuses on using neuroimaging, genetics, clinical trials, and neurophysiological methods to study etiology of and treatment for schizophrenia spectrum disorders.

**Deanna L. Kelly, PharmD., BCPP** [dkelly@mprc.umaryland.edu]

Dr. Kelly's major research interests include schizophrenia treatment trials, women's mental health, and clozapine underuse and strategies to improve care. She is working also in the area of gluten sensitivity in schizophrenia. She has research and manuscript writing opportunities for students and trainees.

**Peter Kochunov, Ph.D.** [pkochunov@gmail.com]

Dr. Kochunov's interests are in developing quantitative, neuroimaging-based endophenotypes for psychiatric and neurological disorders. Dr. Kochunov supervises the department of psychiatry, research MRI center located on the grounds of Spring Grove hospital, Catonsville. Dr. Kochunov's research involves developing novel connectomics protocol to quantify cerebral connectivity and integrity of cerebral white matter that is impacted by disorders like schizophrenia. He is also actively involved in the big-data research and co-directs ENIGMA-DTI and ENIGMA-RSfMRI work group

**Laura Rowland, Ph.D.** [lrowland@mprc.umaryland.edu]

Dr. Rowland's research interests include *in vivo* neurochemical measurements of glutamatergic and GABAergic function, multimodal neuroimaging assessments of learning and memory, translational behavioral neuroscience, and sleep in schizophrenia and related disorders. She currently has NIH R01 grant funding to measure neurochemical differences with 7T MRS early and later in the schizophrenia

illness with Dr. Peter Barker (JHU) and to study relational learning using multimodal imaging (MRS, fMRI, DTI) in schizophrenia.

**Robert Schwarcz, Ph.D.** [RSchwarc@mprc.umaryland.edu]

Current studies in the Schwarcz laboratory are designed primarily to explore the role of the kynurenine pathway of tryptophan degradation in the pathophysiology of schizophrenia (SZ), and to develop fundamentally new therapeutic interventions based on the pharmacological manipulation of brain kynurenines. In this context, we have become especially interested in kynurenic acid (KYNA), which we found to be causally linked to the cognitive deficits seen in individuals with SZ. This concept is especially relevant since 1) KYNA is an antagonist of both  $\alpha 7$  nicotinic and N-methyl-D-aspartate (NMDA) receptors, both of which play critical roles in cognition and brain development; 2) brain and cerebrospinal fluid KYNA levels are significantly increased in SZ; 3) in rodents, experimental KYNA elevations cause cognitive dysfunctions reminiscent of SZ; 4) brain KYNA metabolism is activated by stress and immune stimulation during early development; and 5) prenatal increases in brain KYNA cause an array of SZ-like abnormalities and vulnerabilities in adulthood. His results indicate that inhibitors of KYNA biosynthesis ("KAT II inhibitors") show therapeutic efficacy in animal preparations that are believed to be informative for SZ pathophysiology. In close collaboration with clinical researchers at the MPRC, and with the pharmaceutical industry, ongoing studies in the laboratory now test whether inhibition of KYNA formation is a viable strategy to overcome cognitive impairments in SZ.

**Heidi Wehring, PharmD, BCPP** [hwehring@mprc.umaryland.edu]

Dr. Wehring's research centers on pharmacological interventions for youth and adults with schizophrenia and other severe mental illnesses, as well as clinical research of issues surrounding persons dually diagnosed with severe mental illness and a substance use disorder, especially tobacco and cannabis. Dr. Wehring's currently funded work includes the study of issues surrounding tobacco craving in smokers with schizophrenia, potential interventions for craving reduction and smoking cessation, and interventions for children with severe mental illness requiring treatment with antipsychotic medications.

**James A. Waltz, Ph.D.** [jwaltz@mprc.umaryland.edu]

Dr. Waltz's research interests include the study of deficits of learning and motivation in psychotic illness, using behavioral paradigms from the experimental literature, computational modeling techniques, and functional MRI. The purpose of these studies has been to develop a better understanding of which aspects of the physiology of reward-driven learning are impaired in schizophrenia, and which might be preserved. He is currently funded by an NIH R01 grant to investigate relationships between neural correlates of learning and decision variables and the symptoms of schizophrenia.

To add, update, or revise faculty research descriptions on this list, please contact Melanie Bennett ([mbennett@som.umaryland.edu](mailto:mbennett@som.umaryland.edu)).