

University of Maryland School of Medicine
Department of Psychiatry
Research Faculty - Areas of Interest (2022)
* Core education faculty

Division of Adult Psychiatry

Teo Postolache, M.D. [tpostola@som.umaryland.edu] Professor
Director Mood and Anxiety Program

Dr. Postolache's research interests include: 1) Inflammation, kynurenines, latent infections (e.g. *Toxoplasma gondii*), military record, trauma history, clinical conditions, neuropsychological and personality trait endophenotypes of suicidal behavior, and history of suicide attempt in US Veterans. 2) *Toxoplasma gondii* infection and cognitive dysfunction, depressive scores, and measures of frailty in the elderly. This work involves collaborations with Spanish geriatric psychiatrists. 3) Metabolic and depressive symptoms in the Old Order Amish; and 4) Light treatment for Seasonal Affective Disorder. His research is highly collaborative and multilevel, with ongoing projects in Germany, Denmark, Austria, Sweden, Lancaster PA (in Old Order Amish), and the VA.

Division of Alcohol and Drug Abuse

Eric Weintraub*, M.D. [eweindra@som.umaryland.edu] Professor; Director

Dr. Weintraub's active, funded projects include expanding access to treatment for individuals with substance use disorders in underserved rural areas utilizing innovative telemedicine models.

David Gorelick, M.D. [dgorelick@som.umaryland.edu] Professor

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.

Daniel Roche, Ph.D. [droche@som.umaryland.edu] Assistant Professor

Dr. Roche is a neurobiologist with specialized training in the neuroscience of drug addiction, human behavioral pharmacology, and neuroendocrinology. As a postdoc and research scientist at UCLA, his research focus transitioned from general human behavioral pharmacology to medication development for substance use disorder, predominantly alcohol- and tobacco-use disorder. His research program seeks to identify the biological and behavioral mechanisms underlying the development of addiction in order to develop new and more efficacious pharmacological treatments. His present focus is to study the role of neuroinflammation in the development and maintenance of alcoholism and examine whether the neuroimmune system is a viable pharmacological treatment target for the disorder.

Chamindi Seneviratne, M.D. [csenevi@som.umaryland.edu] Assistant Professor

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 Basic and Translational Research

Todd Gould, M.D. [gouldlab@me.com] Professor; Director

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.

Sarah Clark*, Ph.D. [sclark@som.umaryland.edu] Assistant Professor

Dr. Clark investigates the contribution of neuroimmune interactions to the development of psychiatric disorders. Her research focuses on three main aspects: 1) T-cell mediated responses to stress; 2) the role of the immune system in neurodevelopment; and 3) therapeutic strategies to reduce neuroinflammation to improve psychiatric outcomes.

Maged Harraz, Ph.D. [mharraz@som.umaryland.edu] Assistant Professor

Dr. Harraz is joining the department this year and will be investigating mechanisms underlying addiction and treatment, including the identification of novel receptors for drugs of abuse.

Division of Child and Adolescent Psychiatry

Sarah Edwards, Ph.D. [sedwards@som.umaryland.edu] Associate Professor; Director

Dr. Edwards has presented at national conferences and co-authored manuscripts on a variety of topics including teaching methods in graduate medical education; use of telepsychiatry in school mental health; and use of an interprofessional model to screen and treat hospitalized youth with delirium. Her research interests involve integrated pediatric care, interprofessional training, pediatric delirium, and youth suicide screening and prevention.

Tiffany Beason, Ph.D. [tbeason@som.umaryland.edu] Assistant Professor

Dr. Beason is a licensed clinical and community psychologist and Assistant Professor at the University of Maryland School of Medicine and faculty at the National Center for School Mental Health. Dr. Beason's research objective is to engage in program development and evaluation on interventions that are strengths-based and/or focus on resiliency promotion in youth and families from communities of color and/or low-income backgrounds. Dr. Beason's specific research interests relate to academic achievement, positive racial/ethnic identity, adaptive social and coping skills, and sense of community among youth and young adults.

Jill Haak Bohnenkamp, Ph.D. [jbohenk@som.umaryland.edu] Assistant Professor

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.

Kay Connors, LCSW-C [kconnors@som.umaryland.edu] Instructor

Kay Connors, LCSW-C, Instructor, University of Maryland School of Medicine, Department of Psychiatry, Project Director of the Family Informed Trauma Treatment Center and Executive Director of the Taghi Modarressi Center for Infant Study, has over 33 years of experience as a clinical social worker working with children, families and communities impacted trauma. Her interests include: 1. Infant and early childhood development and mental health; 2. Family therapy and systems; 3. Traumatic stress in children 4. Children's mental health services improvements

Nancy Lever, Ph.D. [Nlever@som.umaryland.edu] Associate Professor

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, M.D. [dpruitt@som.umaryland.edu] Professor

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

Gloria Reeves, M.D. [Greeves@som.umaryland.edu] Associate Professor

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

Sharon Hoover, Ph.D. [Shoover@som.umaryland.edu] Associate Professor

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 Community Psychiatry

Ann Hackman*, M.D. [ahackman@som.umaryland.edu] Associate Professor; Director
Dr. Hackman has a longstanding interest in serious mental illness, in the treatment of people living with schizophrenia and in underserved populations including people experiencing homelessness. Other areas of interest include Community Psychiatry, assertive community treatment, first episode psychosis, social justice and healthcare disparities.

Jane Richardson*, M.D. [jrichard@som.umaryland.edu] Assistant Professor
Dr. Richardson has experience treating adolescents and adults with severe mental illness. She is particularly interested in first-episode psychosis, the overlap of psychotic disorders with anxiety and trauma-related disorders, and access to care for adults with SMI.

Division of Consultation-Liaison Psychiatry

Charles Robinson*, M.D. [crobinso@som.umaryland.edu] Assistant Professor; Director

Anique Forrester*, M.D. [aforrest@som.umaryland.edu] Assistant Professor
Dr. Forrester's research interests include Women's Mental Health specifically, Perinatal Psychiatry as well as Psycho-Oncology and Cultural Competence in the medical setting. She is strongly committed to all levels of medical education as well as improving health equity, addressing systemic racism and bias in the medical system. Diversity, Equity, and Inclusion – Integration into Clinical Practice and Facilitating Institutional Cultural Shift

David Glovinsky*, M.D. [dglovins@som.umaryland.edu] Assistant Professor
Dr. Glovinsky's interests include Parkinson's Disease, somatoform disorders, psychosomatic medicine.

Samantha Latorre*, M.D. [slatorre@som.umaryland.edu] Assistant Professor
Dr. Latorre's research interests include trainee educational programs, collaborative care models, and women's mental health. Recently, Dr. Latorre has published an article in Psychosomatics entitled "Anti-NMDAR Encephalitis: A Multidisciplinary Approach to Identification of the Disorder and Management of Psychiatric Symptoms" and a piece in Ob.Gyn News on "Depression after miscarriage." She has been involved in resident quality improvement projects involving capacity education to other medical and surgical disciplines as well as creating an annual seminar for multidisciplinary trainees on various women's mental health topics. Dr. Latorre also helped create educational content for the National Curriculum for Reproductive Psychiatry, a free resource for training directors and residents.

Division of Education – core faculty (*)

Mark Ehrenreich*, M.D. [mehrenre@som.umaryland.edu] Assistant Professor
Chief of Education, Residency Training Director

Dr. Ehrenreich has extensive experience in consultation-liaison psychiatry, medical ethics, and medical education. Research interests include consultation liaison psychiatry, transplant psychiatry (liver, kidney, heart, lung, face, bone marrow), psychiatric care of the medically ill, the interface between psychiatry and endocrinology, depression in the medically ill, psychiatric ethics, medical student education, psychiatric resident education, and training in CL psychiatry.

Marissa Flaherty*, M.D. [mflaherty@som.umaryland.edu] Assistant Professor
Dr. Flaherty is a community psychiatrist with an interest in treating severe mental illness through recovery oriented care. She is involved in community advocacy for increasing mental health resources for the residents of Baltimore and the surrounding areas. She has a passion for teaching and is involved in teaching both medical students and residents in psychiatry. Her key clinical interests include severe mental illness, schizophrenia, bipolar disorder, community mental health, medical student education, medical student wellness and psychiatry resident education.

Vedrana Hodzic*, M.D. [vhodzic@som.umaryland.edu] Assistant Professor

Dr. Hodzic has experience in acute care psychiatry working in inpatient, emergency room and urgent care settings. Her interests include emergency psychiatry, severe mental illness, medical student and resident education, and brain stimulation with ECT and TMS.

Chris Miller*, M.D. [chmiller@som.umaryland.edu] Associate Professor

Director of Psychotherapy Education, Associate Medical Director of Psychiatric Emergency Services, Associate Training Director for Residency Education

Dr. Miller has experience in psychoanalysis, emergency psychiatry, and resident education. He is interested in the applications of psychodynamic principles across psychiatric settings, as well as to the Humanities. He is also interested in the interface between the neurosciences and psychotherapy.

Neil Sandson*, M.D. [neil.sandson@va.gov]

Director of Hospital-Based Services, VA Maryland Health Care System

Dr. Sandson has experience with psychopharmacology, medical education, and managing treatment-resistant patients. His area of sub-specialization is drug-drug interactions

Christopher Welsh*, M.D. [cwelsh@som.umaryland.edu] Associate Professor

Dr. Welsh is an Associate Professor in the Department of Psychiatry at the University of Maryland School of Medicine. His main area of clinical work is in the area of substance use disorders. He works in various in- and out-patient settings (as well as via Tele-medicine), including methadone and buprenorphine maintenance. He has an interest in substance use in pregnancy and the medical complications of addiction.

Gopal Vyas*, D.O. [gopalvyas@som.umaryland.edu] Assistant Professor

Dr. Vyas' area of interests include: Psychomotor disorders – catatonia (excited, withdrawn, malignant/NMS); Any and all things related to Clozapine, Lithium, Lorazepam (in that order); Anosognosia – insight, refusal of treatment, treatment engagement; Treatment resistant psychosis / mania; and Descriptive psychopathology / rating scales (some)

Joy Chang*, M.D. [jchang@som.umaryland.edu] Assistant Professor

Hinda Dubin*, M.D. [hdubin@som.umaryland.edu] Assistant Professor

Division of Geriatric Psychiatry

Christopher Marano*, M.D. [cmarano@som.umaryland.edu] Assistant Professor; Director

Director, Division of Geriatric Psychiatry, Adult Inpatient Service and Electroconvulsive Therapy Service

Dr. Marano has particular expertise in the neuropsychiatric symptoms of dementia as well as psychiatric disorders in medically complex older adults. Dr. Marano's research interests include the relationship between late-life depression and dementia, abnormal glucose metabolism in neuropsychiatric disorders, and multi-modal imaging of neuropsychiatric disorders. He currently serves as co-PI on an on an NIMH R01 grant investigating brain bioenergetic abnormalities in schizophrenia using a translational approach utilizing brain imaging and clinical assessments in living patients, bioenergetics studies in cultured human iPSC-derived neurons/astrocytes, and biochemical confirmation studies in postmortem brain accompanied with bioinformatics.

Seshagiri Rao Doddi, MBBS [sdoddi@som.umaryland.edu] Clinical Associate Professor

Dr. Doddi is collaborating with the neuro-critical care team regarding efficacy of ECT treatment for refractory status epilepticus.

Yu Dong, M.D., Ph.D. [yu.dong@som.umaryland.edu]

Dr. Dong is currently collaborating with the Department of Epidemiology and Public Health on the DEKODE Study, which is studying the intersection between osteoarthritis and mental health and the benefits of exercise and duloxetine. They are actively recruiting patients at this time.

Division of Psychiatric Services Research (DPSR)

Melanie Bennett, Ph.D. [mbennett@som.umaryland.edu] Professor; Director

Dr. Bennet's research focuses on the development, testing, and implementation of psychosocial interventions to help persons living with serious mental illness (SMI) reduce substance use, improve health, enhance recovery, and improve social/community engagement. Her work, focused on improving social functioning and community engagement in SMI, includes studying strategies to help individuals with SMI accomplish self-determined goals with respect to enhancing community integration and social functioning. She is currently the PI on a VA RR&D-funded project, leading the evaluation of a behavioral intervention package that teaches Veterans with schizophrenia ways to overcome deficits in anticipatory pleasure, increase motivation for pleasant activities, reduce expectations of failure in community activities, and perform skillfully in new social situations. She is interested in understanding and treating substance use disorders and promoting health behavior change in SMI, including (1) the impact of behavioral interventions for drinking, drug use, and tobacco, (2) training peer mentors with SMI to enhance smoking cessation outcomes, and (3) strategies to make substance use services available in mental health settings. Dr. Bennet is also involved in studies examining theory-driven, personalized medicine interventions and understanding factors that contribute to medication response among patients with alcohol use disorders. She is the co-PI on a NIAAA-funded study examining the efficacy of pregabalin in the treatment of alcohol use disorder and comorbid posttraumatic stress disorder; a secondary aim of this work is to examine the use of genetic markers to identify responders to pregabalin in order to, in the future, be able to match likely responders to pharmacological treatment.

Amy Drapalski, Ph.D. [Amy.Drapalski@va.gov] Instructor

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.

Richard Goldberg, Ph.D. [Richard.Goldberg@va.gov, rgoldberg@som.umaryland.edu] Professor

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, M.D., Ph.D. [hh.goldman@verizon.net; hgold,man@som.umaryland.edu] Professor

Dr. Goldman's is a behavioral health policy researcher involved in evaluating national policies with respect to health insurance and disability benefits. He is involved as a consultant to national evaluations of policy and service demonstration programs, often working with economists and other policy analysts. He has a particular interest in labor force participation by individuals with severe impairments.

Laurel J. Kiser, Ph.D., M.B.A. [lkiser@som.umaryland.edu] Associate Professor

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, jkreyenb@som.umaryland.edu] Associate Professor

Dr. Kreyenbuhl's research focus is on the pharmacoepidemiology of serious mental illness and she has expertise in using large administrative databases from national healthcare systems including the VA, Medicaid and Medicare for this work. She has also contributed extensively to the development of evidence-based treatment guidelines for schizophrenia. Dr. Kreyenbuhl also 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.

Alicia Lucksted, Ph.D. [Aluckste@som.umaryland.edu] Associate Professor

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.

Maryland Psychiatric Research Center (MPRC)

Deanna L. Kelly, PharmD., BCPP [dkelly@som.umaryland.edu] Professor; Interim Director

Dr. Kelly's major research interests include schizophrenia treatment trials, women's mental health, and clozapine underuse and strategies to improve care. She has completed several studies with clozapine and most recently the safety of clozapine in benign ethnic neutropenia and is performing a new clinical trial to improve clozapine use with a telementoring project in the State of Maryland. Also, she has projects related to the point of care monitoring with clozapine (blood levels and ANC monitoring) She is working also in the area of gluten sensitivity, gut permeability, microbiome and prebiotic treatment in schizophrenia and has ongoing clinical trials in these areas. Dr. Kelly has a current project collecting social media data and self-reported mental health assessments to develop screening and symptom monitoring tools using language and social media for mental health issues. She has many collaborations in basic and clinical science and she has research and manuscript writing opportunities for students and trainees.

Seth Ament, Ph.D. [sament@som.umaryland.edu] Assistant Professor

Dr. Ament's research focuses on genetic and genomic studies of the brain and brain disorders through four strategies: (1) genome sequencing studies to identify rare mutations that increase risk for brain disorders, and functional studies of these mutations in human stem cells and animal models; (2) single-cell transcriptomics and epigenomics studies to characterize the diversity of cell types in the brain and how these populations of cells are altered in brain disorders; (3) molecular and computational systems biology studies integrating GWAS and functional genomics data from the mammalian brain to characterize disease-perturbed gene networks and multi-scale disease mechanisms; and (4) translational studies designed to leverage genomic data for the development of clinically useful biomarkers and novel therapeutic targets. Ongoing studies in the lab apply these approaches to mood disorders, schizophrenia, substance use disorders, Huntington's disease, neuroinflammation, and hearing loss. This work is highly collaborative, both locally and as part of large consortia, such as the BRAIN Initiative Cell Census Network and the Whole Genome Sequencing of Psychiatric Disorders consortium.

Leon Brown Ph.D. [plbrown@som.umaryland.edu] Instructor

Dr. Brown studies the neurocircuitry involved in processing aversive stimuli and their relation to mental health function. The specific brain area of his interest, the lateral habenula, exerts inhibitory control over dopaminergic and serotonergic midbrain neurons and as such is well positioned to modulate reward processing and the expression of affective disorders. Using electrophysiological and histological techniques, Dr. Brown uses rodent models for the study of addiction and depression to further understand this circuit.

Robert W. Buchanan, M.D. [RBuchanan@som.umaryland.edu] Professor

Dr. Buchanan's major research interests include the neurobehavioral and neuroanatomical investigation of the pathophysiology of schizophrenia and, the investigation of novel pharmacological approaches for the treatment of people with schizophrenia. He has conducted a series of studies examining the clinical correlates of the primary, enduring negative or deficit symptoms of schizophrenia, including the neuropsychological and electrophysiological correlates of these symptoms. He has also conducted multiple structural, functional and spectroscopic imaging studies designed to elucidate the neuroanatomy and neurochemistry of these symptoms. 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, cognitive impairments, and treatment-resistant positive symptoms; the utility of adjunctive oxytocin to cognitive behavioral therapy and social skill training for enhancement of social role function; and the comparative efficacy of clozapine and olanzapine for positive and negative symptoms and cognitive impairment in partially responsive outpatients with schizophrenia.

William Carpenter, M.D. [wcarpent@som.umaryland.edu] Professor

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. Dr. Carpenter also serves as a senior advisor to the NIMH and has been involved in the development of the Research Domains Criteria (RDoC), whose

implantation was designed to increase knowledge of brain mechanisms involved in psychopathology. He also works with the HiTOP project seeking a new organization for nosology and chaired the DSM-5 Psychosis Work Group.

Joshua Chiappelli, M.D. [jchiappe@som.umaryland.edu] Assistant Professor

Dr. Chiappelli is part of the Neuroimaging Research Program at MPRC. His research includes investigating the roles of stress and inflammation in pathophysiology in schizophrenia, and the comparison of pathophysiology between psychotic and mood disorders. His current focus is on possible mechanisms for remediating white matter deficits in schizophrenia. Other research interests include phenomenology and cross-cultural aspects of psychopathology.

Greg Elmer, Ph.D. [gelmer@som.umaryland.edu] Professor

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, circuitry analysis and large-scale gene expression analysis and data mining. 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. In particular, habenula-associated circuitry work led us to our most recent area of research focus- the consequences of adolescent trauma on neurocircuitry and its dramatic effect on adult mental illness. The series of Adverse Childhood Experience (ACE) studies dramatically documents the nearly linear increased risk for psychiatric illness associated with each traumatic experience during childhood. The goal of our work is to accelerate the development of a novel childhood trauma model and explore hypotheses related to altered neurocircuitry in the consequences of early-life trauma on adult psychopathology.

James Gold, Ph.D. [jgold@som.umaryland.edu] Professor

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; this work is done in collaboration with Steve Luck at UC Davis; 2) Behavioral, EEG, and fMRI studies examining predictive coding models of hallucinations and delusions; this work is done in collaboration with Phil Corlett at Yale University; 3) studies of experimental cognitive neuroscience based behavioral and computational modeling methods with the goal of developing versions of tasks that could be used in clinical trials; this work is done in collaboration with Cam Carter, Dan Ragland, and Steve Luck (UC Davis), Deanna Barch (Wash. U.), Angus MacDonald (U. Minn), Molly Erickson (U Chicago), and Steve Silverstein (U. Rochester); 4) studies using behavioral methods to try and predict conversion to psychosis in young people thought to be at high clinical risk; this study done in collaboration with Vijay Mittal (Northwestern), Greg Strauss (U. Georgia), Lauren Ellman (Temple), Elain Walker (Emory), Phil Corlett, Scot Woods, Al Powers (Yale).

Britta Hahn, Ph.D. [bhahn@som.umaryland.edu] Associate Professor

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.

Stephanie M. Hare, Ph.D. [stephanie.hare@som.umaryland.edu] Instructor

Dr. Hare's research focuses on understanding how brain excitability is altered in individuals with schizophrenia spectrum disorders (SSD), and how altered excitability may beget different symptoms. Her lab uses functional magnetic resonance imaging (fMRI) to study the neural signatures of hallucinations. She also uses transcranial magnetic stimulation (TMS) as a direct probe of altered excitability in motor pathways in SSD and hopes to use TMS to develop novel therapies for those with refractory symptoms in the future. Finally, Dr. Hare has vast research (and teaching) interests exploring topics in the philosophy of psychiatry and the ethical implications of emerging neurotechnologies (e.g. a relatively new field called "neuroethics").

Elliot Hong, M.D. [ehong@som.umaryland.edu] Professor

Dr. Hong's 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.

Mark Kvarta, M.D., Ph.D. [mark.kvarta@som.umaryland.edu] Assistant Professor

Dr. Kvarta is part of the Neuroimaging Research Program at MPRC. The primary objective of his research is to understand the impact that stress across the lifespan has on neurobiological circuitry to contribute to expression of depressive symptoms. He focuses on stress-affective circuitry abnormalities in major depression, treatment resistant depression, and schizophrenia spectrum disorders using task-based fMRI, genetics, and physiological and clinical measures to detail how stress mechanisms intersect with psychiatric symptoms.

Peter Kochunov, Ph.D. [pkochunov@som.umaynd.edu] Professor

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

Francesca Notarangelo, Ph.D. [Fnotarangelo@som.umaryland.edu] Assistant Professor

Dr. Notarangelo's research interests focus on investigating the role of the kynurenine pathway of tryptophan degradation in the cognitive dysfunction observed in schizophrenia using biochemical, behavioral and pharmacological approaches. She is also exploring the role of this pathway in the gut-brain axis and developing animal models to study the effect of altered gut microbiota on the kynurenine pathway and cognition.

Robert Schwarcz, Ph.D. [RSchwarc@som.umaryland.edu] Professor

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.

James A. Waltz, Ph.D. [jwaltz@som.umaryland.edu] Associate Professor

Dr. Waltz's research interests are in the neural processing underlying the symptoms of psychopathology, mainly related to psychotic illness, but also pertaining to mood disorders. He is also interested in better characterizing "risk states" in adolescents identified as having particular vulnerability for developing psychotic or mood disorders. He is interested in describing the neural basis of both positive symptoms, such as hallucinations, delusions, and paranoia, and negative symptoms, such as avolition and anhedonia. He uses methods of cognitive neuroscience - especially functional neuroimaging and computational modeling. One of his primary areas of focus is understanding how component processes related to reinforcement learning and decision making are involved in motivational deficits exhibited by people with psychotic and mood disorders.

Elaine Weiner, M.D. [eweiner@som.umaryland.edu] Associate Professor

Dr. Weiner has been involved with research projects around cigarette smoking cessation in people with schizophrenia. She has ongoing interest in studies around wellness in people with schizophrenia, particularly weight management accomplished through healthy eating and regular exercise. As Medical Director in the Outpatient Research Program clinic, Dr. Weiner has been involved in studies that address residual negative and positive symptoms of schizophrenia and associated cognitive impairments. Recently

becoming Medical Director of the First Episode Clinic, she sees great potential for fruitful inquiry in the many clinical areas that are particular to this population.