2018-2019 Research Report
Psychiatry and Psychology
Welcome to the 2018 – 2019 Research Report of the Mayo Clinic Department of Psychiatry & Psychology

Thank you for your interest in our Department of Psychiatry and Psychology and learning more about our research accomplishments. Our Department plays an essential role in Mayo Clinic’s goal of inspiring hope and contributing to the health and well-being of every patient through integrated clinical practice, education, and research. At Mayo Clinic’s three main campuses -- Rochester, Minnesota; Jacksonville, Florida; and Scottsdale, Arizona -- there are over 150 psychiatrists and psychologists, joined by over 200 allied health staff to meet the needs of the patient. Our flagship clinical programs include our Psychiatric Hospital, Mayo Clinic Depression Center, Pain Rehabilitation Program, Addiction Treatment Center, Child and Adolescent Programs, Transitions Program, Neurocognitive Assessment and Treatment Programs, Behavioral Medicine Program, Integrated Care Programs, and the John E. Herman Home, a residential facility for patients with complex psychiatric illnesses.

Our Department provides numerous educational programs including Medical School Education, Graduate Medical Education Residencies in Adult and Child and Adolescent Psychiatry, Fellowships in Medical Psychology (Clinical Child Psychology, Clinical Health Psychology, and Clinical Neuropsychology), Geriatric Psychiatry, Psychosomatic Medicine, Sleep Medicine, Addiction Psychiatry, and Mood Disorders Fellowship. For the last three years, Mayo Clinic has been ranked as the number one hospital in the country by the U.S. New and World Report and due to the expertise and range of the clinical and educational programs our Department offers, our Department of Psychiatry and Psychology was again ranked as one of the Top Ten Psychiatry Departments in the country by U.S. News and World Report in 2018 – 2019. Many of our research projects focus on clinical interventions and our clinical programs guide and shape our research efforts, which in combination help to individualize treatment to provide the best care to every patient every day.

Precision Medicine is an emerging approach for disease treatment and prevention that takes into account individual variability in genes, environment and lifestyle for each person. Mayo Clinic has been awarded $142 million in funding for five years by the National Institutes of Health to serve as the national Precision Medicine Initiative Cohort Program Biobank. The biobank will hold a research repository of biologic samples, known as biospecimens. This program aims to advance precision medicine by enrolling 1 million or more U.S. participants to better understand individual differences that contribute to health and disease. This is an extraordinary opportunity for Mayo Clinic to participate in an important research initiative. Our Department, under Dr. Mark Frye’s leadership, has a large active biobank of individuals with bipolar disorder and refractory depression. Learning more about applying individualized medicine to patients with mood disorders is an exciting area of investigation in our Department, and there will be other applications of precision medicine to other psychiatric illnesses in the future.

The Department of Psychiatry and Psychology continues to highlight research teams in our annual 2018 – 19 Departmental Research Report. We want to highlight the value, importance, and productivity of research teams within our department. These research teams can also be found across the Mayo Clinic sites which include Minnesota, Florida, and Arizona, and also involve the many hospitals that comprise the Mayo Clinic Health System. For example, the Neuropsychology, Aging, and Cognition Research Team has scientific investigators across all three campuses. Research teams within our Department include an array of health care professionals and focus on the evaluation and treatment of a range of mental health problems and their impact on patients and their families. The Mayo Clinic Depression Center Research Team, which includes psychiatrists, psychologists, and other health care professionals, is just one example of the innovative and collaborative work that takes place within our Department.

If you are interested in contacting any of the investigators highlighted in this report, please contact our Department at 507-266-5100.
psychologists, nurses, and social workers, conducting clinically relevant research in treatment-resistant depression and bipolar disorder, is an example of a highly productive multidisciplinary clinical research team. Additionally, many investigators in our Department are engaged in research projects with other Departments or Centers of Excellence across our academic medical center. For example our Department has investigators in The Mayo Clinic Comprehensive Cancer Center, The Bariatric Surgery Center of Excellence, and The Alzheimer’s Disease Research Center. Finally, we encourage the participation of research with other academic centers, collaborations, and multisite studies. The University of Minnesota, the Karolinska Institute in Sweden, and the National Network of Depression Centers are outstanding examples of collaborative multicenter research projects.

Meeting the needs of diverse, underserved populations and addressing health disparities is a priority of our Department’s clinical, educational, and research programs. In addition, many people with mental health issues struggle to get needed medical, psychiatric and psychological care. To address these problems, our department has numerous clinical, academic and research projects focused on meeting the needs of underserved populations, developing creative mental health treatment delivery systems, and tailoring interventions for underserved populations. Specific examples include:

**GRANTS**
The National Institute of Mental Health. Expanding access to cognitive behavioral therapy (CBT) for childhood anxiety disorders via smartphones. Principal Investigator: Whiteside.

The National Institute on Drug Abuse. Social media intervention to promote smoking treatment utilization and cessation among Alaska Native smoker. Principal Investigator: Patten.


The National Cancer Institute. Community intervention to reduce tobacco use among pregnant Alaska Native women. Principal Investigator: Patten.


Goal is to train and mentor Native American and other minority fellows and junior faculty in research and grant writing. Principal Investigator: Patten.

The National Institute of Mental Health. Primary Care Initiatives: Coordinated Anxiety Learning and Management (CALM), Diabetes, Cardiovascular Disease, Depression, Comprehensive Pediatric and Adolescent Support Services Care Team (ComPASS), Early Management and Evidence-Based Recognition of Adolescents Living With Depression (EMERALD), and Depression Improvement Across Minnesota, Offering A New Direction (DIAMOND) Drs. David Katzelnick and Mark Williams. Using technology to optimize child mental health care in real world settings. Principal investigator: Whiteside.

**KEY PUBLICATIONS**

Aschbrenner KA, Patten CA, Brunette MF. Feasibility of a support person intervention to promote smoking cessation treatment use among smokers with mental illness. *Transl Behav Med.* 2018, 785-792.


Mayo Clinic Depression Center

Left to right: Leffler, Kung, Veldic, Vande Voort, Frye, Singh

ADULT INVESTIGATORS

PEDIATRIC INVESTIGATORS
Paul E. Croarkin, D.O., M.S., John E. Huxsahl, M.D., Jarrod M. Leffler, Ph.D., L.P., and Jennifer L. Vande Voort, M.D.

Depression is a significant public health problem, in this country and across the globe. Effective treatment can be challenging to identify for the individual and relapse is common after depression treatment. Therefore effective, individualized, long-lasting treatments are needed for depression. The main focus of the Mayo Clinic Depression Center is to conduct clinically relevant research in treatment-resistant depression and bipolar disorder in adults, adolescents, and children. Our current research projects aim to build on our comprehensive and multidisciplinary depression treatment programs. Mayo Clinic Depression Center is a Center of Excellence for the National Network of Depression Centers, a network of 21 leading clinical and academic Centers of Excellence in the U.S. working to transform the field of depressive illness and related mood disorders.
GRANTS AND AWARDS

K23 Mentored Patient-Oriented Research Career Development Award (Mentor: Frye). 02/14-01/18. Principal Investigator: Croarkin.

National Institute of Mental Health. Glutamatergic and GABAergic Biomarkers in rTMS for Adolescent Depression. 08/17 - 06/22. Principal Investigator: Croarkin.

National Institute of Mental Health: Mentored Patient-Oriented Research Career Development Award. Glutamate Probes in Adolescent Depression. 02/13-01/18. Principal Investigator: Croarkin, Mentor: Frye.

Neuronetics. A Randomized, Sham-Controlled Trial Evaluating the Safety and Effectiveness of NeuroStar Transcranial Magnetic Stimulation (TMS) Therapy in Depressed Adolescents. 10/15-10/19. Principal Investigator: Croarkin.

NeuroStar Advanced Therapy. A Randomized, Sham-Controlled Trial Evaluating the Safety and Effectiveness of NeuroStar Transcranial Magnetic Stimulation (TMS) Therapy in Depressed Adolescents. 01/2016-12/2019. Principal Investigator: Croarkin.

Prospective Multicenter Double-Blind Sham-Controlled Adaptive Design Study to Confirm the Safety and Efficacy of NEST sTMS in Subjects with Major Depressive Disorder Who Have Not Responded to at Least One Antidepressant Medication in the Current Episode. 04/18 – 03/19. Principal Investigator: Croarkin.

KEY PUBLICATIONS


LEADERSHIP ROLES

Mark A. Frye, M.D., Board of Councilors, International Society for Bipolar Disorders.

Mark A. Frye, M.D., Member, Scientific Advisory Board, Depression and Bipolar Support Alliance.


Paul E. Croarkin, D.O., Committee Member, American Academy of Child and Adolescent Psychiatry Research Committee.
The Mayo Clinic Neuromodulation Group in Rochester, Minnesota, focuses on Electroconvulsive Therapy (ECT), Transcranial Magnetic Stimulation (TMS), and Deep Brain Stimulation (DBS) research. Drs. Kung, Rasmussen, and Johnson continue work that refines contemporary ECT practice using daily right unilateral ultrabrief pulse ECT to potentially shorten the treatment duration of ECT for depression, without sacrificing effectiveness or cognitive impairments. Drs. Croarkin, Lewis, and Vande Voort are leading a multi-site randomized double-blinded study of rTMS versus sham for the treatment of adolescent depression, which will be the largest study of rTMS in the adolescent population. Drs. Kung and Croarkin are the site investigators for a multi-site TMS and bipolar depression study based at Sheppard Pratt in Maryland. Dr. Sampson has conducted open-label TMS studies in patients with depression and comorbid conditions such as Post-traumatic Stress Disorder (PTSD), Borderline Personality Disorder, and chronic pain/fibromyalgia. Future rTMS studies will examine novel dosing strategies such as theta burst stimulation in adolescents and adults. Current initiatives with DBS will examine optimizations for the treat of depression in epilepsy and Parkinson's Disease with novel technology. Drs. Croarkin, Doruk Camsari, and Lewis are leading efforts to develop biomarkers for neuromodulation with magnetic resonance spectroscopy, functional magnetic resonance imaging, quantitative electroencephalography, and transcranial magnetic stimulation neurophysiology studies. These examples of our neuromodulation research highlight the underlying goal: to expand our knowledge and treatment options for depression and other psychiatric illnesses, beyond conventional medications and psychotherapies.
GRANTS AND AWARDS

NIMH Mentored Patient-Oriented Research Career Development Award. Glutamate Probes in Adolescent Depression. 02/13–01/18. Principal Investigator: Croarkin, Mentor: Frye.

RO1 MHMH 113700, NIMH. Glutamatergic and GABAergic Biomarkers in rTMS for Adolescent Depression. 08/17 - 06/22. Principal Investigator: Croarkin.

NeuroStar Advanced Therapy. A Randomized, Sham-Controlled Trial Evaluating the Safety and Effectiveness of NeuroStar Transcranial Magnetic Stimulation (TMS) Therapy in Depressed Adolescents. 01/16 – 12/19. Principal Investigator: Croarkin.


Prospective Multicenter Double-Blind Sham-Controlled Adaptive Design Study to Confirm the Safety and Efficacy of NEST tTMS in Subjects with Major Depressive Disorder Who Have Not Responded to at Least One Antidepressant Medication in the Current Episode. 04/18 – 03/19. Principal Investigator: Croarkin.

Raine Visiting Professorship Award, The Raine Medical Research Foundation and Perron Institute for Neurological and Translational Science. For research and education pursuits focused on preclinical models of brain stimulation. University of Western Australia. Principal Investigator: Croarkin.

Mayo Clinic Department of Psychiatry Small Grant Program. Quantitative EEG Correlates of Suicidality in Adolescents. 07/18 – 06/20. Principal Investigators: Croarkin and Doruk Camsari.

KEY PUBLICATIONS


LEADERSHIP ROLES


Paul E. Croarkin, D.O., Committee Member, American Academy of Child and Adolescent Psychiatry Research Committee.

Shirlene M. Sampson, M.D., Executive Committee Member, International Society for ECT and Neurostimulation, 2010 – present.
Mayo Clinic has several new innovative approaches to improving the wellness of its trainees, employees and patients. In Rochester, the Dan Abraham Health Living Center is an on-site facility for employees that provide programs for aerobic fitness, healthy nutrition, weight management, wellness coaching and resiliency for over 14,000 employee members. Mayo Clinic has also developed an evidence based patient wellness center, The Health Living Program. For both the employee wellness center and the patient health living program, Dr. Vickers is the Medical Director for the Mayo Clinic Wellness Coaching Program and Dr. Clark is the Domain Leader for Resiliency. Dr. Vickers helped create, design, and implement the Mayo Clinic Health and Wellness Coaching Certification Program and trains health care providers from across the country in coaching communication and self-management education approaches for medical settings. Dr. Rackley is the new Director of Trainee Well-being for the Mayo Clinic School of Graduate Medical Education. In this role she supports and advises training program wellness projects, develops curriculum for trainees and faculty on recognition of stress and mental illness, and ensures appropriate resources are available for trainee wellness. Dr. Stonnington is the Wellness Director for Mayo Clinic School of Medicine and the Mayo Clinic College of Medicine and Science, Arizona Campus. She also chairs a resiliency workgroup to develop programs, resources, and recommendations to leadership directed at increasing well-being and preventing burnout among staff physicians and advanced practitioners. Additionally several research funded projects have been conducted and published and examples include a randomized controlled trial of a resiliency intervention for physician and advanced practitioner mothers, a health coaching intervention for patients with COPD, a randomized control trial comparing in-person versus smartphone delivered resiliency interventions for healthcare workers, and examining the outcomes from participating in a 12-week wellness coaching program.
GRANTS


KEY PUBLICATIONS


PRESENTATIONS


Stonnington CM, Symposium Chair. Why Are Women Physicians at Higher Risk for Burnout? Empowering the Next Generation to Do It Better (Than We Have!). American Psychiatric Association Annual Meeting, New York City, NY, May 7, 2018.


LEADERSHIP ROLES

Kristin Vickers, Ph.D., Medical Director, Mayo Clinic Health and Wellness Coaching Program. 2010–present.

Sandra J. Rackley, Ph.D., L.P., Director of Trainee, Well-Being for the Mayo Clinic School of Graduate Medical Education. 2017–present.

Cynthia M. Stonnington, M.D., Wellness Director, Mayo Clinic School of Medicine and the Mayo Clinic College of Medicine and Science, Arizona Campus and Chair, Resiliency Workgroup, Mayo Clinic in Arizona. 2017.

Matthew M. Clark, Ph.D., Scientific Advisory Board, Institute of Coaching, Harvard University. 2017–present.
The goal of this multidisciplinary research team is to improve the care of children and adolescents with anxiety disorders and obsessive compulsive disorder (OCD). Over the past two years we have documented the support for exposure-based cognitive behavior therapy through a comprehensive meta-analyses, expanded the support for our five-day intensive anxiety disorders treatment program available to children throughout the country with a variety of anxiety and OCD concerns, and broadened our study of the lack of evidence-based care in community settings to examine additional child mental health concerns. Our work to develop technological solutions to aid in the advancement of treatment for childhood anxiety disorders continues under multiple internal and government agency grants to expand our iPhone application, Mayo Clinic Anxiety Coach, to include a therapist web-based portal, a web-based self-help application, virtual reality enhanced exposures, and an immersive video game. Our research now encompasses strategies for managing a range of childhood mental health problems. In 2018-2019, presentations and workshops were given at the annual meetings of the Anxiety and Depression Association of America and the Association of Behavioral and Cognitive Therapy.
GRANTS

National Institute of Mental Health Clinic: Using Technology to Optimize Child Mental Health Care In Real World Settings. 01/17 - 12/18. Principal Investigator: Whiteside.

National Institute on Disability, Independent Living, and Rehabilitation Research: Anxiety Coach for Children: A Tool to Increase Community and Educational Participation. 1/16 - 12/17. Principal Investigator: Whiteside.

National Institute of Mental Health Clinic: Expanding access to CBT for childhood anxiety disorders via smart phones 01/13 - 12/18. Principal Investigator: Whiteside.

KEY PUBLICATIONS


The primary goal of the pediatric psychology research team is to improve the quality of life of children and their families dealing with acute or chronic medical or psychological conditions. This research team is involved in several externally funded research projects focused on developing new and innovative individual and family based treatments, which will help improve the lives of the children and adolescents we serve. For example, we have an ongoing study funded by the National Eating Disorders Association examining the effectiveness of a new model of treating eating disorders within the primary care setting. Our investigators are also exploring how to adapt a family based treatment approach for overweight adolescents, highlighting the importance of including the family in pediatric care. Our team is also involved in gaining a better understanding of the interplay of medical and psychological factors in pediatric illness. For example, we have ongoing studies examining symptoms and anxiety level in adolescent with autonomic dysfunction and are working on developing interventions aimed at improving communication between pediatric patients and their healthcare team. Our faculty has numerous scientific publications, presentations at national and international conferences, and hold leadership roles in national professional and scientific organizations.

GRANTS AND AWARDS


INVESTIGATORS


Mayo Clinic Department of Psychiatry & Psychology Small Grants Program, Mayo Clinic CCaTS grant. Effects of Symptom Severity, Depressive and Anxiety Symptoms, and Health Behaviors on Daily Functioning and Diagnosis of Pediatric Patients with POTS or Other Autonomic Dysfunction. 2017-2018. Consultant: Biggs.


KEY PUBLICATIONS


Whiteside SPH, Dammann JE, Tiede MS, Biggs BK, Hillson Jensen A. Increasing availability of exposure therapy through intensive group treatment for childhood anxiety and OCD. *Behav Modif*. 2017, Sep 01; 707-728.


**PRESENTATIONS**


Biggs BK. (2017, August). Expanding the Reach of Behaviorally Based Pediatric Obesity Intervention Programs. Paper symposium presented at the annual meeting of the American Psychological Association, Washington, DC.


LEADERSHIP ROLES


Bridget Briggs, PhD, LP, Editorial Board, Child and Youth Care Forum, 2008-present.

Cynthia Harbeck-Weber, PhD, LP, President, Pediatric Pain Special Interest Group, Society of Pediatric Psychology, 2016-2017.

Cynthia Harbeck-Weber, PhD, LP, Past President, Pediatric Pain Special Interest Group, Society of Pediatric Psychology, 2017-2018.

Cynthia Harbeck-Weber, PhD, LP, Member, Workgroup to develop Child Psychology Post-doctoral Competencies (Representative from CCaPPTC), 2017-2018.

Jarrod Leffler, PhD, LP, President, the American Board of Clinical Child and Adolescent Psychology (ABCAPP), 2016-2017.

Jarrod Leffler, PhD, LP, Past President & President Elect, the American Board of Clinical Child and Adolescent Psychology (ABCAPP), 2017-2018.

Jarrod Leffler, PhD, LP, Chair, the Association for Behavioral and Cognitive Therapies Child and Adolescent Depression Special Interest Group, 2016-2017.

Jarrod Leffler, PhD, LP, Past Chair, the Association for Behavioral and Cognitive Therapies Child and Adolescent Depression Special Interest Group, 2017-present.

Jarrod Leffler, PhD, LP, Editorial Board, Evidence-Based Practice in Child and Adolescent Mental Health, 2016-present.
The Samuel C. Johnson Genomics of Addiction Program was designed to bring a multidisciplinary, integrated group of clinicians and scientists together to work synergistically to better understand molecular mechanisms and to identify biomarkers associated with drug responses in alcoholism.

Mayo Clinic S.C. Johnson investigators have published more than 100 peer-reviewed articles in major journals during the last three years in the fields of addiction, neuroscience, genetics and psychiatry. With future support from the NIH and benefactors this multidisciplinary research team plans to establish the best personalized treatments for alcoholism.

**INVESTIGATORS**

Joanna M. Biernacka, Ph.D., Doo-Sup Choi, Ph.D., Paul E. Croarkin, D.O., M.S., Mark A. Frye, M.D., Daniel K. Hall-Flavin, M.D., M.S., Mi-Hyeon Jang, Ph.D., Victor M. Karpyak, M.D., Ph.D., Tamas Kozicz, M.D., Ph.D., Luis Lujan, Ph.D., M.S., Terry D. Schneekloth, M.D., Vijay Shah, M.D., Marin Veldic, M.D., and Richard Weinshilboum, M.D.

**GRANTS AND AWARDS**

**National Institute of Health (R01): Alcohol and Adenosine-Mediated Glutamate Signaling in Neuro-Glial Interaction. 09/09 – 12/19.** Principal Investigator: Choi.

**National Institute of Health (R21): Pharmacogenomics of Treatment Outcomes in Alcohol Use Disorders. 07/16 – 06/18.** Principal Investigators: Biernacka and Karpyak.

**National Institute of Health (R01): Inherited Variations In Drug Metabolizing Enzymes. 07/96 - 03/20.** Principal Investigator: Weinshilboum.

**National Institute of Health (R01): Metabolomic Signatures Predictive of Outcomes to Treatments for Major Depression. 04/17-03/18.** Principal Investigator: Weinshilboum.

**National Institute of Health (R01): Role of BubR1 as a juvenile protective factor in hippocampal aging. 03/18 – 12/22.** Principal Investigator: Jang.

**National Institute of Health (R01): In Vivo Fluorescent Microscopy Analysis of Motor Cortex Activation by STN DBS. 05/18 – 02/21.** Principal Investigator: Lujan.

**National Institute of Health (R01): Neurochemical closed -loop controller for smart DBS. 01/14 – 12/18.** Principal Investigator: Lujan.

**National Institute of Health (R01): Molecular Mechanisms of Liver Fibrosis. 05/17 – 04/22.** Principal Investigator: Shah.

**National Institute of Health (R01): Molecular Mechanisms of Portal Hypertension.08/14 – 07/19.** Principal Investigator: Shah.

**National Institute of Health (U01): TREAT-Mayo. 09/12 – 06/18.** Principal Investigator: Shah.

**National Institute of Health (R01): Targeting matrix stiffness in lung and liver fibrosis. 08/16 – 04/20.** Principal Investigators: Tschumperlin and Shah.

**ASPET David Lehr Research Award: Adenosine-Mediated Glutamate Signaling in Neuro-Glial Interaction and Alcoholism. 05/15 – 04/17.** Principal Investigator: Choi.

**S. C. Johnson Genomics of Addiction: Biomarker Development for Individualized Treatment of Alcoholism. 01/14 – 12/19.** Principal Investigator: Choi.

**Training Grant in Clinical Pharmacology (T32). 07/98 - 06/18.** Principal Investigator: Weinshilboum.
KEY PUBLICATIONS


Researchers in this team have established a large biobank for bipolar disorder, thus far collecting biological samples and clinical data from over 2,500 individuals with bipolar disorder. This is a multisite endeavor, with Mayo Clinic in Rochester, Minnesota, serving as the primary project site. Other sites that are assisting in the recruitment of participants include Mayo Clinic Health System Austin, the Lindner Center of HOPE (Mason, Ohio), the University of Minnesota, Universidad de los Andes (Chile), and UANL - Universidad Autónoma de Nuevo León (Mexico). The infrastructure of this data-rich biobank has facilitated epidemiological and biomarker studies of disease risk, disease progression, comorbid illness, and treatment outcomes using state-of-the-art research technology. Using the Biobank resource, the research team has completed a series of studies investigating genetic variation that contributes to disease risk, in particular, focusing on subtypes of bipolar disorder defined by presence of specific illness characteristics or comorbidities, as well as genetic variation that influences how a patient responds to pharmacological treatment of bipolar depression. Other projects have utilized serum, plasma, and slow frozen cells extracted from the blood specimens to investigate a variety of biomarkers including protein expression, epigenetic variation, and measures of mitochondrial function. The Mayo Clinic Biobank for Bipolar Disorder is also collaborating with large international research consortia, including the Psychiatric Genomics Consortium (PGC) and the International Consortium for Lithium Genetics (ConLiGen). The identification of genetic risk factors associated with disease onset can potentially lead to early interventional treatment in at-risk patients. This early intervention is particularly important in bipolar disorder because the initiation of any treatment for bipolar disorder is often delayed by more than a decade from the time of onset. Additionally, identification of pharmacogenomic predictors of treatment response could provide increased selectivity to treatment recommendations, as well as help prevent such serious adverse events as antidepressant-induced mania.
GRANTS


KEY PUBLICATIONS


PROFESSIONAL INTERNATIONAL PRESENTATIONS


The primary objectives of this research program are to better understand genetic variability as it relates to antidepressant response and to evaluate the use of pharmacokinetic/pharmacodynamic variation testing on treatment response/remission rates for participants seeking treatment at the Mayo Clinic Depression Center.

This program was originally supported by a grant from the National Institute of General Medical Sciences (NIGMS) as part of the NIH Pharmacogenomics Research Network (PGRN: 2005-2015) and over 800 Mayo Clinic patients with major depressive disorder (MDD) treated with citalopram or escitalopram were studied. A second arm of the study involved the use of a serotonin-norepinephrine reuptake inhibitor, duloxetine, in patients who did not respond when treated with escitalopram or citalopram. In addition, this program also organized an International SSRI Pharmacogenomics Consortium (ISPC) that included samples from approximately 1000 SSRI-treated MDD patients. In 2010, the RIKEN Institute in Japan conducted a genome-wide association study (GWAS) of an initial PGRN patient cohort of 521 patients and during the past year, RIKEN also performed a GWAS for the ISPC samples.

The PGRN team also received funding from the University of Minnesota–Mayo Clinic partnership to study iPS cell-derived neurons from MDD patients treated with SSRIs. Our team partnered with Timothy J. Nelson, MD, Ph.D., at Mayo Clinic, with colleagues at the University of Minnesota and with the Salk Institute for Biological Studies in California to study iPS cell-derived neurons from a subset of patients who had participated in the PGRN SSRI study. Finally, a pharmacometabolomic study of escitalopram and citalopram response in the PGRN MDD patients has been completed that has identified novel biomarkers that provide insight into both variation in antidepressant therapy response and the pathophysiology of MDD.
GRANTS


National Institute of Alcohol Abuse and Alcoholism (R21): Pharmacogenomics of Treatment Outcomes in Alcohol Use Disorders. 07/2016 – 03/2019. Principal Investigator: Biernacka, co-Principal Investigator: Karpyak.


KEY PUBLICATIONS


Brain Rehabilitation Research Group

INVESTIGATORS

The brain rehabilitation research group is comprised of a multidisciplinary team with members from the departments of Psychiatry and Psychology, Physical Medicine and Rehabilitation, Neurology, Nursing, and Social Services. Mayo Clinic’s Traumatic Brain Injury Model System (TBIMS) Center was recently awarded a $2.2 million federal grant by the National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR), within the Department of Health and Human Services, to sustain its research through 2022. The Center has contributed data to the longitudinal TBI Model System National Database – the largest non-proprietary TBI data set in the world tracking outcomes for over 16,000 individuals – for 20 years. Mayo Clinic has completed numerous analyses using these data to understand outcome prediction and the natural history of recovery after TBI. The Center has focused its site-specific research on studying population-based epidemiology of TBI, increasing healthcare delivery system capacity and access to specialized care, and using technology to improve participation and quality of life after TBI.

The Center’s immediate work capitalizes on longstanding relationships with the Minnesota Brain Injury Alliance and Minnesota Department of Health in a community-based pragmatic clinical trial to address the ineffective connection of individuals with TBI and their families to specialized medical and community resources after hospital-based care, limited access to TBI experts, and variable knowledge by primary care providers about TBI. This trial will test a behavioral intervention to determine whether outcomes and costs are better in a group receiving an integrated telemedicine model of care. Collaborators include Mayo Clinic’s Social Media Network, Center for the Science of Health Care Delivery, Center for Connected Care, and CareHubs, Inc.

The Center is currently involved in collaborative research with other funded TBIMS Centers on trajectories of cognitive function years after TBI, return to driving after TBI, physical activity pre- and post-injury, and caregiver resilience. Several Rochester Epidemiology Project studies are underway to compare rates of Alzheimer’s disease and related dementias in a TBI cohort compared to population-based matched controls adjusted for non-brain trauma, examine correlations between pediatric TBI and long term attention deficit hyperactivity disorder and learning disability diagnoses in a birth cohort, investigate whether TBI is associated with increased long-term stroke risk, and understanding underlying causes of death after TBI. Studies providing rehabilitation services remotely using web-based means and examining the functional outcomes of our own clinical programs also continue.

These efforts further strengthen Mayo Clinic’s established reputation as a leading center of innovative brain rehabilitation research and clinical practice, supporting continued collaboration with the other 15 TBI Model System Centers around the nation.
EXTERNAL GRANTS


Department of Defense (DoD) office of the Congressionally Directed Medical Research Programs (CDMRP), Peer Reviewed Alzheimer’s Research Program (PRARP) Convergence Science Research Award. 9/15/15 – 9/14/2018. Principal Investigator: Brown.


KEY PUBLICATIONS


The Pain Rehabilitation Center Programs at Mayo Clinic Rochester, Arizona and Florida continue to evaluate functional outcomes from each of our comprehensive programs. The adult programs are investigating tapering opioid medication use and program outcomes as well as patient weight and bariatric surgery status related to program success. Drs. Gilliam, Morrison, and Sperry are examining how aspects of pain catastrophizing are affecting patient success along with patient perceptions of the pain rehabilitation program. Dr. Sletten is investigating other medical conditions commonly associated with chronic pain as well as the health care economics of pain rehabilitation programs. Our team is also examining outcomes of brief one or two day programs as well as trials of interventions tailored to meet the needs of the young adult populations.

For our novel and innovative pediatric program, we continue to be interested in the short and long-term impact of our pain rehabilitation programs. Drs. Harbeck-Weber, Sim and Ale are examining treatment mediating factors, such as parenting, mood, and pain catastrophizing. Additionally, Dr. Sim is investigating the frequency of disordered eating in our patients. The pediatric PRC team is also examining the quality of life of parents with a child with chronic pain, and the neurocognitive functioning of patients with postural orthostatic tachycardia syndrome. Finally, we are also examining the outcomes of our two day pediatric pain rehabilitation program.
GRANTS

Mayo Clinic Foundation: “Enhancing Practice Models for Chronic Pain Care” for development of enhanced after-treatment care for patients completing the pain Rehabilitation Center program. 1/2017- 12/2020. Principal Investigator: Sperry.


KEY PUBLICATIONS


The Psychosomatic Research Group, which includes faculty from Rochester and Arizona, investigates problems at the interface between medical and psychiatric illnesses, and also provides assessment and treatment of psychological and behavioral factors in medical illness. Many of the investigators on this team work in the multidisciplinary Behavioral Medicine Program. Research areas of investigation include functional disorders in multiple medical specialties such as behavioral spells, chronic dizziness, functional movement disorders, and functional gastrointestinal tract disorders, somatic symptom disorders and illness anxiety, identification and treatment of psychological and behavioral factors in patients with cancer, psychiatric morbidity in medically ill patients, and predictors of disability and health care utilization. Our research collaborations, funding, and publications have an international reach.

**INVESTIGATORS**

Daniel A. Danczyk, M.D., Shawna L. Ehlers, Ph.D., L.P., Shirlene Sampson, M.D., M.S., and Jeffrey P. Staab, M.D. (Mayo Clinic Rochester)

Cynthia M. Stonnington, M.D. and Kari A. Martin, M.D. (Mayo Clinic Arizona)

**GRANTS**


KEY PUBLICATIONS


LEADERSHIP ROLES

Shawna L. Ehlers, Ph.D., Society of Behavioral Medicine Cancer Special Interest Group: Chair.

Shawna L. Ehlers, Ph.D., NIH Study Section; Career Development.

Jeffrey P. Staab, M.D., M.S., Chair, Behavioral Subcommittee of the Classification Committee of the Barany Society.

Jeffrey P. Staab, M.D., M.S., Member, Research Subcommittee of the Academy of Consultation Liaison Psychiatry.
Cancer and Palliative Care

The primary goal of the Cancer and Palliative Care Research Team is to improve the quality of life for cancer patients and their caregivers by first assessing and treating psychiatric, psychological, and psychosocial/spiritual difficulties and then teaching skills for coping with cancer. This multidisciplinary research team spans the Jacksonville, Florida, Rochester, Minnesota, and Scottsdale, Arizona, Mayo Clinic campuses. Interventions are tailored for both adult and child cancer survivors. This research team is involved in several externally funded research projects that seek to identify the predictors of psychiatric distress and quality of life for cancer survivors. Additional projects evaluate tailored multidisciplinary interventions designed to improve the quality of life of cancer patients and their caregivers. Caregivers can be significant others, family members, or parents. Team members are also collaborating with the Karolinska Institutet for novel approaches to palliative care.

INVESTIGATORS


Teresa A. Rummans, M.D., Steven C. Ames, Ph.D., and Shehzad K. Niazi, M.D. (Mayo Clinic Florida)

Lisa M. Gudenkauf, Ph.D., L.P. (Mayo Clinic Arizona)

GRANTS


Mayo Clinic Values Council, CCaTS Stimulus Award, External Foundation through Mayo Clinic Development. Impact of Massage Therapy on the Quality of Life of Hospice Patients. 2016-2018. Principal Investigator: Lapid.


KEY PUBLICATIONS


PRESENTATIONS


NATIONAL LEADERSHIP ROLES

Neuropsychology, Aging, and Cognition

ADULT INVESTIGATORS

Melanie J. Chandler, Ph.D., Tanis J. Ferman, Ph.D., John A. Lucas, Ph.D., Otto Pedraza, Ph.D., and Beth K. Rush, Ph.D. (Mayo Clinic Florida)

Yonas E. Geda, M.D., Kristin A. Kirlin, Ph.D., Dona E. Locke, Ph.D., David Osborne, Ph.D., Cynthia M. Stonnington, M.D., Jennifer V. Wethe, Ph.D. (Mayo Clinic Arizona)

PEDIATRIC INVESTIGATORS
Tanya M. Brown, Ph.D., L.P., Andrea R. S. Huebner, Ph.D., L.P., and Michael J. Zaccariello, Ph.D., L.P. (Mayo Clinic Rochester)
Adult and Pediatric Neuropsychologists at Mayo Clinic have a robust history examining neurodevelopmental trajectories within the context of medical or neurological conditions, dementia, acquired brain injury, and aging. Growth shines through all Mayo Clinic sites as research programs evolve and become more diversified. Many neuropsychologists combine cutting-edge technologies such as neuroimaging with psychometrics to advance knowledge of neurologic conditions and improve outcomes. New projects assess the feasibility of computerized cognitive testing to enhance research paradigms and extend the reach of neuropsychological testing.

Neuropsychological research embraces an inter-disciplinary approach and a spirit of teamwork with physician and scientist colleagues across Mayo Clinic sites in Arizona, Florida, Rochester, and the Health System. Research continues to have a firm grounding in early detection of cognitive impairment and the study of cognitive phenotypes of dementia and Alzheimer’s disease. Studies use complex paradigms focusing on neuroimaging correlates of major variants of primary progressive aphasia and primary progressive apraxia of speech. Collaborative projects across sites investigate Parkinson’s disease and deep brain stimulation, as well as adjustment to motor neuron disease. Neuropsychology has longstanding projects focused on studying outcomes of brain injury rehabilitation, primarily stroke and traumatic brain injury. Other research highlights involve improving detection of concussion to better understand mild brain injury and repetitive brain trauma.

Pediatric neuropsychologists at Mayo Clinic Rochester are engaged in research to optimize outcomes for children and adolescents with complex medical or neurological conditions. Research in autism seeks to characterize co-morbidities to inform understanding of the natural history of the disorder and to improve interventions. Collaboration with adult colleagues has enabled lifespan studies that characterize the neurodevelopmental trajectory of children exposed to anesthesia and delineate neurocognitive correlates of epilepsy from childhood through adulthood. Neuropsychologists examine the cognitive effects of brain tumor treatment including proton and photon beam as well as traditional radiotherapy, both in children and adults. There is rich diversity within neuropsychology research at Mayo Clinic, with the over-arching goal of advancing understanding and treatment of a wide range of neurocognitive conditions.

**GRANTS AND AWARDS:**


National Institute on Deafness and Other Communication Disorders. The neurobiology of two distinct types of progressive apraxia of speech. 08/2017 - 07/2022. Co-Investigators: Butts and Machulda.


KEY PUBLICATIONS:


The HABIT Healthy Action to Benefit Independence and Thinking® Clinical Research Program

INVESTIGATORS

Anne L. Shandera-Ochsner, Ph.D., L.P., Julie A. Fields, Ph.D., L.P., and Alissa Butts, Ph.D., L.P. (Mayo Clinic Rochester)


Dona E. C. Locke, Ph.D., Pauline Lucas, D.P.T., Maria M. Caselli, , Andrea V. Cuc, L.C.S.W., Jeanne C. Eilertsen, Renata Khayoun, and Andrea Francone, R.N.. (Mayo Clinic Arizona)
The HABIT Healthy Action to Benefit Independence and Thinking® clinical program is informed and supported by ongoing clinical research at all three Mayo Clinic campuses. Across the nation, individuals and families confronting Mild Cognitive Impairment (MCI) can access this 10-day wellness and memory training program that includes cognitive rehabilitation, cognitive stimulation training, support groups, wellness education, and yoga. Research on HABIT is aimed at improving patient-centered services for patients and families confronting MCI at risk of developing dementia. HABIT’s clinical, research, and education activities involve a team of neuropsychologists, certified yoga specialists, dementia education specialists, master’s level therapists, psychometrists, and trained cognitive rehabilitation specialists.

Our research into behavioral interventions in MCI has been continually funded since 2005. Findings from our NIH/NINR R01 project A Multicenter Rehabilitation Intervention for Amnestic Mild Cognitive Impairment allowed our team to successfully obtain our Patient Centered Outcomes Research Institute (PCORI) project in 2015 entitled Comparative Effectiveness of Behavioral Interventions to Prevent or Delay Dementia. This grant enabled a 3-site Mayo Clinic collaboration with the University of Washington to examine which outcomes of the HABIT program are most important to which patients, and which of the five components of the HABIT program most impact those outcomes. Data collection for that study is complete and analyses are in process. The findings thus far suggest that patient quality of life, mood, sense of self-efficacy, and functional ability were the most valuable outcomes to patients and their partners.

Mayo Florida is also involved in a Florida Department of Health consortium grant to investigate the fMRI outcomes of participating in particular HABIT interventions along with the University of Florida and Tallahassee Memorial Health. The HABIT team additionally procured the Ralph C. Wilson, Jr. Foundation Endowment in 2015 that has allowed the program to expand to follow patients longitudinally in a HABIT Registry across all 3 Mayo sites and the University of Florida. This will enable Mayo Clinic to ensure the HABIT program continues to work towards meeting patient goals for MCI treatment well into the future.

**GRANTS**


**KEY PUBLICATIONS**


**PRESENTATIONS**

Chandler MJ. “Living with MCI: The HABIT Healthy Action to Benefit Independence & Thinking Program.” February 2018 Presentation at the International Symposium on Cognitive Research and Disorders, St. Augustine, FL.

This multidisciplinary research team is involved in several National Institutes of Health funded clinical trials that examine the influence of psychological functioning and neurobiology on obesity and eating disorders treatment outcomes. Clinical programs and research interventions are conducted at the Rochester, Minnesota, and Jacksonville, Florida, sites of Mayo Clinic. Current adult investigations focus on primary care–based eating disorder treatment, liraglutide and endoscopic sleeve gastroplasty treatment of obesity, the effect of bariatric surgery versus calorie restriction on metabolism, the metabolome, and the microbiome in patients with type 2 diabetes, the relationship between history of childhood trauma and food addiction, and the outcomes for patients with suspected cognitive limitations seeking bariatric surgery. Pediatric studies focus on understanding adolescents’ preferences for social support for development of a healthy lifestyle and the effect of training children and their parents in stress management and mindful eating based on body mass index and cardiovascular risk markers. Eating disorders research focuses on developing primary care interventions for eating disorders, as well as atypical anorexia and weight suppression. Through our investigations, we hope to improve long-term treatment outcomes for persons with eating disorders and obesity.

GRANTS AND AWARDS


KEY PUBLICATIONS


LEADERSHIP ROLES


Gretchen E. Ames, Ph.D. Practice Samples Reviewer, American Board of Professional Psychology. 2010-present.

Mathew M. Clark, Ph.D., L.P. Editorial Board Member, Eating Behaviors. 2000-present.


PRESENTATIONS


LEADERSHIP ROLES


Gretchen E. Ames, Ph.D. Practice Samples Reviewer, American Board of Professional Psychology. 2010-present.

Mathew M. Clark, Ph.D., L.P. Editorial Board Member, Eating Behaviors. 2000-present.

Mayo Clinic Department of Psychiatry & Psychology has historically been featured prominently in the field of sleep medicine. The late Peter J. Hauri, PhD, LP (professor emeritus, Mayo Clinic in Rochester) founded the American Sleep Disorders Association, authored the internationally renowned self-care book No More Sleepless Nights, and was widely considered to be the world’s authority on insomnia. Dr. Fredrickson is past president of the American Academy of Sleep Medicine (AASM). Drs. Auger, Kolla and Krahn continue this legacy of national visibility and scholarship. Dr. Krahn served as joint editor of an influential sleep medicine textbook, Sleep Medicine in Clinical Practice, the second edition, which was recently published. Her research interests include narcolepsy, sleep disorders in women, and the interplay of psychiatric disorders and sleep. She previously received funding from the Narcolepsy Network. Dr. Auger has served and/or chaired various AASM task forces, which have resulted in prominent publications and associated practice parameters. He was previously a member of the AASM Research Committee and of the American Sleep Medicine Foundation Executive Board. He chaired the AASM Circadian Rhythms Membership Section and has directed and participated in numerous sleep medicine sessions at national meetings. His primary research interests reside in the realm of circadian-based interventions for the treatment of sleep disorders.
GRANTS


KEY PUBLICATIONS


Transplant Center Psychiatry and Psychology research efforts have focused on pre-transplant assessment, treatment interventions, and post-transplant outcomes for solid organ and bone marrow transplant (BMT) patients. Our Mayo Clinic 3-site research team has completed a series of studies on the predictive value of the Psychosocial Assessment for Transplantation (PACT) scale in predicting post-transplant psychiatric and medical outcomes. The first of the three studies, examining the PACT predictive value in lung recipients, has been published in Psychosomatics. Two additional studies, similarly examining outcomes in Heart and Liver recipients, are in press with Psychosomatics. Drs. Jowsey-Gregoire, Niazi, and Schneekloth collaborated with American and European colleagues on the development of assessment standards for non-directed kidney donors, which has been published in the Journal of Psychosomatic Research. Drs. Jowsey-Gregoire and Schneekloth also joined with an international group of colleagues to complete an extensive guideline for the psychosocial assessment of adult cardiothoracic transplant candidates and candidates for long-term mechanical circulatory support, which has been accepted for publication in the Journal of Heart and Lung Transplantation. Dr. Jowsey-Gregoire has continued her leadership role in the assessment of composite tissue (hand and face) transplant patients and the development of a multi-center database for hand transplant candidates supported by the Tarek E. Obaid Grant. She is also collaborating with researchers at the University of Alabama, Washington University, and the University of Minnesota on the NIDDK funded RELIVE study of long-term outcomes in kidney donors. Dr. Niazi has received support from Robert D. and Patricia E. Kern Center for the Science of Health Care Delivery for a pilot project to electronically collect patient reported outcome measures in liver transplant patients. Other research initiatives include outcomes in pancreas transplant for patients with psychiatric disorders led by Dr. Thusius, the prevalence of depression in transplant populations led by Dr. Morrison, the role of health coaching and health literacy in transplantation led by Dr. Jowsey-Gregoire, the value of mindfulness-based resilience training for transplant patients and caregivers led by Dr. Stonnington and the impact of post-transplant smoking on alcohol relapse in liver transplantation led by Dr. Schneekloth.

Transplant Psychiatry And Psychology

INVESTIGATORS

Sheila G. Jowsey-Gregoire, M.D., Daniel K. Hall-Flavin, M.D., M.S., Bhanuprakash (Bhanu) P. Kolla, M.D., Eleishia J. Morrison, Ph.D., L.P., Teresa A. Rummans, M.D., Terry D. Schneekloth, M.D., Nuria J. Thusius, M.D. (Mayo Clinic Rochester), Steven C. Ames, Ph.D., Tanis J. Ferman, Ph.D., Shehzad K. Niazi, M.D., Adriana R. Vasquez, M.D. (Mayo Clinic Florida), and Cynthia M. Stonnington, M.D. (Mayo Clinic Arizona)

L-R: Morrison, Schneekloth, Camsari, Thusius

Stonnington
GRANTS AND AWARDS


Mayo Clinic Kern Scholar. For three years, Dr Niazi will study the psychosocial factors in Liver Transplant Candidates and their caregiver dyads and their impact on clinical and economic outcomes. 2018-2021. Award: Niazi.

KEY PUBLICATIONS


Integrated Behavioral Health Research

The interface between primary care and behavioral health is a rich environment for research. This multidisciplinary team of investigators is from a variety of disciplines specializing in the investigation and implementation of evidence-based quality improvement projects that are designed to improve patient outcomes in the primary care setting.

Ongoing research programs are utilizing large-scale clinical databases of patients enrolled in care coordination to improve mental health outcomes for adult (DIAMOND) and adolescent (EMERALD) depression. Additionally, pilot projects are currently underway to the feasibility of primary care based interventions for behavior problems in young children (SAPPHIRE) and adolescent eating disorders.

Research is a crucial part of our integrated behavioral health mission to find the most effective and efficient ways to deliver behavioral health services to our population of patients in a time of significant shortages in access to mental health expertise. We challenge ourselves to gather data as we implement new programs to compare our outcomes with benchmarks and also to create ongoing data from which to generate new research questions on which patients do best in our programs and which patients may need increased attention. Towards this end, we have developed a psychotherapy tracking database that has demonstrated the effectiveness of cognitive behavioral therapy in reducing symptoms of anxiety and depression in adult primary care patients. We are also using this database to evaluate outcomes among child and adolescent populations.

In 2018, we are involved in a Center for Medicare and Medicaid Studies (CMS) grant to transform the delivery of primary care services across approximately 90 sites in 3 states. This grant includes a plan to spread our model of integrated behavioral health to many new clinics with associated opportunities to research effective implementation and ways to improve the clinical outcomes of patients at lower cost. Within our Rochester practice, our group has also received support to explore the impact of care coordination on work for our large employee population and we are beginning to develop projects related to pain and the opioid epidemic with funding initially to discover the outcomes of controlled substance contracting on prescribing practices in primary care.
KEY PUBLICATIONS


INTERNATIONAL PRESENTATIONS

Mark Williams, M.D., Reykavic, Iceland, June, 2018: Implementing evidence-based treatments for depression in primary care – the opportunity and challenges of care coordination, 32nd Nordic Congress of Psychiatry.

Mark Williams, M.D., Reykavic, Iceland, June, 2017: An Ounce of Prevention is a Ton of Work, New Ways to Deliver Care and Maintain Relationships, and Helping high risk elderly patients avoid hospitalizations and readmissions through proactive multidisciplinary care transitions and palliative focused home services. 20th Nordic Congress of General Practice.

Mark Williams, M.D., Verona, Italy, June, 2018: COMPASS: Medicine and Psychiatry Joining Forces to Improve Care Delivery for the Medically Ill Depressed Patient, European Association of Psychosomatic Medicine meeting.

LEADERSHIP ROLES/HONORS

Cesar Gonzales, Ph.D., L.P., Humanitarian Award – Mayo Fellows Association, Mayo School of Graduate Medicine Education, Mayo Clinic College of Medicine, Rochester, MN 2018.

Craig Sawchuk, Ph.D., L.P., Psychology Teacher of the Year Award, Mayo Fellows Association, Mayo Clinic, Rochester, MN 2018.

David Katzelnick, M.D., Secretary for Executive Committee National Network of Depression Centers.

Mark Williams, M.D., task group for Academy of Consult Liaison Psychiatry on making the business case for consult liaison psychiatry 2018.
Cesar A. Gonzalez, Ph.D., L.P.

Cesar A. Gonzalez, Ph.D., ABPP is a multicultural community-clinical health psychologist whose mission is to promote well-being among individuals from disadvantaged backgrounds and marginalized communities who often feel misunderstood in medical settings.

As the diversity of the population increases, so does the importance of multicultural competency within the context of clinician engagement and the provision of health services. Through his dual-role as Associate Program Director of Mayo Clinic Family Medicine Residency Program and as Clinical Director of Mayo Clinic’s Transgender and Intersex Specialty Care Clinic, and through collaboration with his esteemed colleagues, Dr. Gonzalez lives his professional mission on a daily-basis through his clinical, educational, and research practices.

In collaboration with colleagues, Dr. Gonzalez co-leads the newly established Lesbian, Gay, Bisexual, Transgender, and Intersex (LGBTI) Research and Education Program, a multidisciplinary group housed in the Department of Psychiatry and Psychology that focuses on achieving the aim of fostering interdisciplinary inclusivity and diversity science and education that advances the health and wellbeing of sexual and gender minorities.

GRANTS AND AWARDS

Early Career Diversity Award, 2014. American Board of Professional Psychology.


KEY PUBLICATIONS


Christi A. Patten, Ph.D.

Dr. Patten is a licensed clinical psychologist, Professor of Psychology, Director of the Behavioral Health Research Program, and Director of the Community Engagement Program within the NIH-funded Center for Clinical and Translational Science at Mayo Clinic Rochester, Minnesota. Her research focuses on developing novel, theory-based behavioral interventions for tobacco cessation with various populations including adolescents and smokers with psychiatric comorbidity, as well as the social network of smoker. She has a successful longstanding partnership with the Alaska Native community, and has conducted several intervention studies to reduce tobacco use among Alaska Native adolescents and pregnant women. In addition, her recent funding from National Institute of Drug Abuse is to evaluate a statewide social media intervention for Alaska Native smokers. Dr. Patten is a co-investigator on several other NIH funded projects evaluating behavioral lifestyle interventions in various underserved populations including local immigrant populations. She serves as a reviewer on several NIH study sections and on national expert panels related to cancer disparities and tobacco use. Dr. Patten serves as a mentor to numerous minority trainees and junior faculty in research.

GRANTS


National Institutes of Health. Mayo Clinic Center for Clinical and Translational Science (CCaTS). Continue to build a broad-based and integrated home for clinical and translational science at Mayo Clinic that will ultimately improve human health. 09/2017-06/2022. Co-Investigator: Patten.


PCORI; Minority Women Research Network: Increased Community and Patient Engagement in Research. Goal of this training grant is to develop a network of minority women in research. 01/2017-12/2018. Co-Investigator: Patten.

KEY PUBLICATIONS


LEADERSHIP ROLES

Director, Community Engagement, Mayo NIH funded CTSA, 02/2015-present.

Steering Committee Member, Office of Health Disparities Research, 09/2014-present.

Advisory Committee Member, Health Disparities Network, Society for Research on Nicotine & Tobacco, 01/2016-present.
Jocelyn Lebow, Ph.D., L.P.

Dr. Lebow is a child and adolescent psychologist whose research interests center on improving early detection, prevention, and treatment for adolescent eating disorders. In particular, she is interested in modifying existing eating disorder treatments for delivery in the primary care setting, with the aim of improving patients’ outcomes and their ability to access evidence-based treatment. In support of this project, Dr. Lebow was accepted into the Kern Health Care Delivery Scholars Program, and received the Department of Psychiatry and Psychology’s Early Career Investigator’s Research Project Support Grant. In addition, Dr. Lebow was the recipient of the National Eating Disorder Association Feeding Hope Fund Early Career Investigator Award, for a project looking at novel interventions for adolescent eating disorders. She is also involved in other research projects within the Division of Integrated Behavioral Health, including the development of innovative population-based models of care for addressing child and adolescent mental health issues such as disruptive behavior.

GRANTS AND AWARDS

Kern Health Care Delivery Scholar Program. 7/18-7/21; Mentors: Sim, Clark, Jacobson, and Phelan.

Mayo Clinic Department of Psychiatry and Psychology Early Career Investigator Research Project Support. The Development of a Primary Care-Based Intervention for Adolescent Eating Disorders. 1/17-12/17; Principal Investigator: Lebow.

KEY PUBLICATIONS


Magdalena Romanowicz, M.D.

Dr. Romanowicz is a child and adolescent psychiatrist and Assistant Professor of Psychiatry, Mayo Clinic College of Science and Medicine, whose research efforts focus in the field of infant, toddler, and preschool mental health. Her research concentrations include early-life adversities, attachment, parent-child relationship, and the impact of parental opioid use on their child development and parent-child relationship. Dr. Romanowicz is currently a primary investigator on a project that is evaluating the use of vaccination appointments to assess quality of parent-child interaction, parental caregiving quality (videotaped visits at 4, 15, and 24 months of age), infant HPA-axis function (salivary cortisol samples at 4, 15, and 24 months of age), and monitoring of dynamic changes in microbiome flora (stool samples at 4, 15, and 24 months of age). Parent – infant dyads identified at risk, difficulties bonding, temperamental mismatch, or a parent with mental health issues, will be offered a brief intervention focused on enhancing their relationship with their child at 24 months. The overarching goal of this pilot project is to establish a foundation for development of novel approaches to primary prevention programs in child psychiatry along with biomarker screens for mental health risk factors very early in life.

GRANTS AND AWARDS


KEY PUBLICATIONS


LEADERSHIP ROLE

Program Director of Child and Adolescence Fellowship Training, Mayo Clinic. 4/2018 – present.
Ajeng Puspitasari, Ph.D., L.P.

Dr. Puspitasari is a clinical psychologist and Assistant Professor of Psychology, Mayo Clinic College of Medicine and Science, whose research efforts focus on the dissemination and implementation of evidence based psychotherapy for mood disorders. She has developed and evaluated the effectiveness of online training as a strategy to disseminate behavioral activation into diverse clinical settings. She completed a research fellowship in implementation science at Indiana University where she was a part of a National Institute of Mental Health funded research program that compared standardized versus tailored strategies to implement measurement-based care for depression in community mental health clinics. As part of this project, Dr. Puspitasari is examining the role of organizational factors such as culture and climate and providers' characteristics on the success of evidence-based practice implementation.

Dr. Puspitasari is also currently developing a research infrastructure for the Mayo Clinic John E. Herman Home and Treatment Facility, a new multidisciplinary residential treatment program for adults with serious mental illness. In this role, she will be examining the impact of a residential treatment level program of care on patients' functional and vocational outcomes during their residential experience and over long term follow-up post discharge.

Grants and Awards


Leadership Roles

Chair of New Investigator Network of Expertise, Society of Implementation Research Collaboration. 2015-present.

Key Publications


Jennifer V. Wethe, Ph.D.

Dr. Wethe is Assistant Professor of Psychology and the Co-Director and lead Neuropsychologist for the Mayo Clinic Arizona Sports Neurology and Concussion Program. Dr. Wethe’s research interests include clinical test validation, identification of factors that influence concussion and rehabilitation outcome, cognitive factors in chronic traumatic encephalopathy (CTE), effectiveness of cognitive rehabilitation, and neurobehavioral functioning in patients with hypothalamic hamartoma. Since joining the Mayo Clinic in 2013, Dr. Wethe has been the principal investigator for the Clinical Correlates of Youth Sports Participation Study (the Youth Athlete Study) and the Emerging Tools in the Evaluation and Management of Concussion study. Dr. Wethe was awarded the Penske Career Development Award for Research at Mayo Clinic Arizona for expanding the Youth Athlete Study to include comprehensive longitudinal follow-up of concussed athletes and to now include matched control patients. An outgrowth and current focus of the Youth Athlete Study is the Concussion Program Rapid Response (CPR2), a program that seeks to reduce disparities in access to medical care and promote athlete safety by training lay people in a simple, evidence-based sideline concussion protocol. Dr. Wethe is also co-investigator on the NIH-funded DIAGNOSE CTE study.

GRANTS


KEY PUBLICATIONS


Shehzad Niazi, M.D.

Dr. Niazi is a consultant in Department of Psychiatry & Psychology at Mayo Clinic Florida, and is Assistant Professor of Psychiatry at Mayo Clinic College of Medicine and Science. He was selected as a Mayo Clinic Kern Scholar for 2018-2021. He is a graduate of King Edward Medical College, Lahore, Pakistan. He is board certified by the American Board of Psychiatry and Neurology in Psychiatry and in Consultation & Liaison Psychiatry; he has a Specialty Certificate in Psychiatry from the Royal College of Physicians and Surgeons of Canada and is a Fellow of Royal College of Physicians and Surgeons of Canada. He is also a Distinguished Fellow of the American Psychiatric Association and a Fellow of the Academy of Consultation & Liaison Psychiatry. He is interested in medical informatics and machine-based learning, implementing patient-reported outcomes measurements in patient populations with complex medical needs and understanding impact of psychiatric conditions on outcomes including cost in cancer and transplant patients.

Cancer:

Dr. Niazi is interested in promoting, maintaining, and restoring wellness in cancer patients. To that effect, he has been working on projects that can help with risk stratification of cancer patients as early as possible to allocate resources appropriately. He has studied how baseline psychosocial factors impact total cost of cancer care among radiation oncology patients, hematological malignances and multiple myeloma patients. He studied SEER-Medicare data for multiple myeloma patients and reported how the presence of psychiatric comorbidities significantly increased cost of care, care utilization, and complications in multiple myeloma patients. He has completed a project in collaboration with Center for Science of Health Care Delivery (CSHCD) and Enterprise Analytics that found increased cancer care cost when psychiatric comorbidities are present. He has also developed a predictive analytic model to predict cost of cancer care. He is currently working with Radiation Oncology and CSHCD to study the impact of psychosocial factors on value of care in radiation oncology by assessing outcomes and cost of care. He has received a career grant award to support a trial in breast cancer patients where the clinical treatment team will follow those who are distressed or depressed and those who are not endorsing distress. The goal of this project is to study effect of psychoeducation on wellness enhancement and maintenance and comparing treatment as usual with integrated behavioral health team-based care model for those who are depressed or distressed at time of cancer diagnosis.
Transplantation:

Similar to his work in psycho-oncology, Dr. Niazi has been studying the impact of psychosocial factors across several important outcomes in transplantation recipients, particularly those above the age of 65 years. His team conducted a longitudinal study to compare cognitive functioning after liver transplantation and compared outcomes between elderly and younger transplantation recipients. He recently published results of the study that found the adverse impact of pre-transplantation mood problems on length of stay and survival in elderly liver transplantation recipients.

GRANTS AND AWARDS


KEY PUBLICATIONS


Ahmed T. Ahmed, M.B., B.Ch.
Mark A. Frye, M.D., Richard Weinshilboum, M.D., Marin Veldic, M.D., Simon Kung, M.D., and Joanna Biernacka, Ph.D., Mentors

Dr. Ahmed T. Ahmed is one of the Department of Psychiatry and Psychology NIH T32 Clinical Pharmacology Training Program Postdoctoral Fellows. Dr. Ahmed’s research interests are focused on major depressive disorder, biomarker related to depression subtypes, psychiatric pharmacogenomic and pharmacokinetic–pharmacodynamic genetic variations in prediction of antidepressant treatment remission. For the past two years, he has worked under the mentorship of Drs. Mark Frye and Richard Weinshilboum, in which he has published several high impact scientific publications. Currently, he leads several projects in the field of precision medicine, in particularly; he is one of the leading investigators on the RIGHT Antidepressant Project, which is a part of the RIGHT 10K initiative. In October 2017, he has completed the Clinical and Translational Science Master’s Program. For his master's thesis, he studied the pharmacogenomics of SNRI antidepressant remission after SSRI treatment failure in major depressive disorder. Dr. Ahmed has presented his work at several prestigious national meetings such as the Society of Biological Psychiatry, The National Network of Depression Centers (NNDC), The American Society for Clinical Pharmacology and Therapeutics (ASCPT), and Individualizing Medicine Conference.

Margaret O. Akinhanmi
Mark A. Frye, M.D. and Joanna Biernacka, Ph.D., Mentors

Margaret Akinhanmi graduated with a B.S. in Biological Science from the University of Georgia. She pursued her research interests in genomics as an Extensive Study Fellow at Washington University in St. Louis. She is currently a predoctoral student at the Mayo Clinic Graduate School of Biomedical Science, with a concentration in Clinical and Translational Science. She is interested in addressing and reducing mental health disparities, particularly the phenomenon of misdiagnosis in bipolar patients of African ancestry. Her doctoral thesis takes a multidisciplinary approach to addressing this disparity through clinical, genomic, and community engagement studies. Through a community engagement study, she plans to investigate the benefits and barriers of minority recruitment to biobanks that are important for enhancing clinical treatment and providing genomic studies for individualized medicine. Ms. Akinhanmi has presented her work at the 19th annual conference of the International Society for Bipolar Disorders, the annual Translational Science Meeting, and most recently, at the Mayo Clinic Department of Psychiatry Research Summit.
Brandon J. Coombes, Ph.D.
Joanna M. Biernacka, Ph.D., Mentor

Dr. Brandon Coombes completed his Ph.D at the University of Minnesota in the Division of Biostatistics in 2016. He joined the Mayo Clinic in the end of 2016, and has focused his research on investigating gene-environment interactions in the Mayo Clinic Bipolar Biobank and developing statistical methods to improve detection of these interactions. He recently published a paper that describes a method which allows researchers to test for interactions associated with bipolar disorder at the pathway-level. He also recently co-authored a paper showing that bipolar cases with manic psychosis are more genetically similar to schizophrenia cases than are bipolar cases with no psychosis. Currently, he is working on several projects, including collaborations with the Psychiatric Genomics Consortium (PGC) and the Consortium on Lithium Genetics (ConLiGen). Dr. Coombes has presented his work at the annual meetings of the American Society of Human Genetics, International Genetic Epidemiology Society, and the World Congress of Psychiatric Genetics.

Man Choi (Ada) Ho, Ph.D.
Marin Veldic, M.D. and Doo-Sup Choi, Ph.D., Mentors

Dr. Ho is a postdoctoral research fellow who has longstanding research interests in substance addiction and mood disorders. Dr. Ho aspires to apply her broad training in clinical and preclinical research to develop novel treatment strategies for these disorders. Upon finishing her postgraduate study in Australia, she continued her research career at the Mayo Clinic conducting preclinical research using rodent models to study the biological basis of alcoholism and mood dysregulation, such as exploring novel molecular pathways associated with alcohol withdrawal and the hormonal regulations of alcohol consumption and manic-like behaviors. Dr. Ho’s current research projects include the epigenetic changes in brains of bipolar disorder, the pharmacogenomics of bipolar disorder therapeutics, and sex differences in alcoholism phenotypes. Dr. Ho has presented her work at meetings of the Research Society on Alcoholism, the Society of Neuroscience, and the Society of Biological Psychiatry.

Charles P. Lewis, M.D.
Paul E. Croarkin, D.O., Mentor

Dr. Lewis completed clinical training in psychiatry and child and adolescent psychiatry at the Mayo Clinic School of Graduate Medical Education, followed by a two-year clinical research fellowship at Mayo Clinic. His research focuses on the neurobiological correlates of suicidal behavior in adolescents with mood disorders, with the aims of improving risk assessment and identifying novel treatment approaches. Dr. Lewis’s recent work has demonstrated impaired cortical inhibition measured by transcranial magnetic stimulation (TMS) in youth with suicidal behavior compared to healthy and non-suicidal depressed adolescents. Related projects involve using neuroimaging techniques, such as resting-state functional magnetic resonance imaging (RS-fMRI) and proton magnetic resonance spectroscopy (1H-MRS), to study neural networks and excitatory and inhibitory neurochemistry in depressed youth with suicidal behavior. Dr. Lewis also is involved in ongoing projects utilizing noninvasive brain stimulation, including repetitive TMS and transcranial direct current stimulation (tDCS), as treatment interventions for children and adolescents with depression. Dr. Lewis is the recipient of a 2018 NARSAD Young Investigator Grant from the Brain & Behavior Research Foundation, which will support his work in studying state-dependent impairment in cortical inhibition and network connectivity in adolescents with suicidal behavior.
Joshua M. Baruth, M.D., Ph.D., PGY-3 - Geriatric Psychiatrist
Maria I. Lapid, M.D., Mentor

Dr. Baruth has been collaborating with Dr. Lapid since the beginning of his residency in the area of geriatric psychiatry which has yielded peer-reviewed publications in both the American Medical Association Journal of Ethics and Current Psychiatry Reports. As part of the research track Dr. Baruth is investigating end-of-life health care disparities in patients with schizophrenia. Schizophrenia is considered one of the most debilitating of all health conditions, and unfortunately, evidence suggests these patients often have relatively less access to important healthcare interventions at the end-of-life. The project will consist of a retrospective population-based cohort study using the Rochester Epidemiology Project (REP) database to critically analyze elements of health service utilization within the last 12 months of life (e.g., palliative care) and, at the same time, characterize the trajectory of functional decline for this vulnerable population. The study has the potential to improve our understanding of healthcare disparities uniquely affecting this patient population, while providing preliminary data for studies aimed at improving care or reducing healthcare costs. Dr. Baruth received a Departmental Small Grant Award to assist with offsetting the research costs of the project.

Deniz Doruk Camsari, M.D., PGY-3 – Psychiatry Resident
Paul E. Croarkin, D.O., M.S., Mentor

Dr. Doruk Camsari’s primary research interests are focused on the use of quantitative electroencephalography (qEEG) and non-invasive brain stimulation techniques in identifying biomarkers in youth mood disorders and suicidality with a goal to develop target engagement markers for neuromodulatory treatments. Together with her mentor, Dr. Croarkin, they have been recently awarded a departmental small grant to study qEEG markers of adolescent suicidality. In this study they will investigate the qEEG correlates of suicidal ideations and suicidal behaviors in the context of concurrent affective and cognitive processes. Dr. Doruk Camsari has published more than 15 peer-reviewed articles, has given numerous national and international presentations, and has served as a review editor for Frontiers in Psychiatry - Neuroimaging and Stimulation. She is the recipient of the 2018 Howard D. Rome Academic Writing Award given to psychiatry residents and fellows.
Kriti D. Gandhi, M.D. - Child and Adolescent Psychiatry Fellow  
*Kathryn Schak, M.D., Mentor*

Dr. Kriti Gandhi’s scientific work focuses on clinical and translational research on mood disorders, with a special interest in treatment-resistant depression. She is currently involved in translational research on anti-suicide mechanisms of ketamine, lithium and clozapine with Dr. Schak, and is working on manuscripts about the interrelated role of lifestyle factors and inflammation on the pathogenesis and treatment of major depression. Dr. Gandhi recently won a National Network of Depression Centers Travel Award. A passionate advocate for neuroscience education in psychiatry, she has created and taught curricula on psychiatric neuroscience to Mayo Clinic General Psychiatry residents at all levels of training.

Matej Markota, M.D. - Child and Adolescent Psychiatry Fellow  
*William Bobo, M.D., Paul E. Croarkin, D.O., M.S., Joanna Biernacka, Ph.D., and Mark Frye, M.D., Mentors*

Dr. Markota graduated from the Faculty of Medicine at the University of Ljubljana, Slovenia. He then started a Research Fellowship at Harvard Medical School where he focused on studying the pathophysiology of psychoses. He continued with residency training in Psychiatry at the Mayo Clinic in 2015, and is currently a First-Year Fellow in Child and Adolescent Psychiatry. His research work continues to focus on psychotic illnesses. During his research and clinical training he published 9 peer reviewed articles, has received the Livingston Award and the Neal Alan Mysell Award from Harvard Medical School, he was awarded the Howard P. Rome and the Resident Teacher of the Year Award from the Mayo Clinic, and he received a research grant from the National Institute on Drug Abuse and the American Academy of Child and Adolescent Psychiatry.

Reem M. Shafi, M.B.B.S., PGY-4 - Psychiatry Resident  
*Paul E. Croarkin, D.O., M.S. and Magdalena Romanowicz, M.D., Mentors*

Dr. Shafi has developed a research interest in the role of social media in adolescent life and its potential implications for psychiatric practice. She is investigating the effect of social media use on the self-esteem, depressive symptoms and physiological biomarkers of stress in psychiatric adolescent patients versus healthy controls. She has been awarded a departmental small grant and an American Psychiatric Association Research Colloquium Award for her project. Dr. Shafi has presented about social media at several national and international conferences. She has upcoming presentations at the American Academy of Child and Adolescent Psychiatry and Faculty of Child and Adolescent Psychiatry in Australia. Since beginning residency she has had 4 peer reviewed articles accepted for publication with several additional manuscripts under review.

Laura Suarez, M.D., PGY-4 – Psychiatry Resident  
*Jeffrey Staab, M.D., Mentor  
Shannon Dunlay, M.D., M.S., Cardiology, Co-Mentor*

Dr. Suarez has an interest in the overlap between cardiovascular conditions and Psychiatry. She has focused her research work on the end-stage heart failure population who undergo left ventricular assist device (LVAD) placement in collaboration with cardiology and cardiovascular departments. She examined the characterization of depressive symptoms and the impact these may have on negative outcomes including all-cause mortality and readmissions to the hospital. She was elected to be part of the Psychiatry and Psychology Research Summit and has upcoming presentation at Academy of Consultation-Liaison Psychiatry 2018 Annual Meeting on this topic. Dr. Suarez is also participating in the Association for Geriatric Psychiatry Honors Scholar Program and is studying the psychosocial characteristics of older adults who undergo LVAD placement. Lastly, Dr. Suarez plans to develop a qualitative study on LVAD population with a long-term goal of generating an intervention to help improve psychiatric measures and Quality of Life.
Julia Z. Benjamin, Ph.D. – Clinical Child Psychology Fellow  
Cynthia Harbeck-Weber, Ph.D., L.P., Mentor  

Dr. Benjamin’s primary research interests center on the psychosocial impact of pediatric health concerns and the efficacy of interventions to bolster resilience and coping. Additionally, she is dedicated to research related to providing competent and affirming care to historically marginalized or under represented populations. Past research projects have focused on identity development and supportive processes for young people who are diverse with regard to sexual orientation and/or gender identity. Her current research projects include evaluating how participation in an intensive pediatric pain rehabilitation program affects parental well-being and exploring the co-occurrence of autonomic dysfunction and disordered eating.

Thida Han, Psy.D., L.P. – Adult Clinical Neuropsychology Fellow  
Thomas Bergquist, Ph.D., L.P., Mentor  

Dr. Han’s research background is in cognitive and affective neuroscience, studying impaired social and emotional behavior in psychiatric and neurological populations. Dr. Han’s current research interests focus on gaining a better understanding of how factors such as mood, sleep, neurobehavioral symptoms, and social support impact functional outcomes for individuals with brain injuries. She is collaborating on multidisciplinary research with colleagues in Physical Medicine and Rehabilitation to examine outcomes of the Outpatient Brain Rehabilitation Clinic and the Brain Injury Coping Skills program for patients and their caregivers.

Dagoberto Jr. Heredia, Ph.D. – Clinical Health Psychology Fellow  
Cesar Gonzalez, Ph.D., L.P., Mentor  

Dr. Heredia’s research focuses on promoting the health of marginalized populations through interdisciplinary collaboration. He previously investigated sociocultural determinants of health and education including gender roles, acculturation, and cultural health beliefs as they relate mood and anxiety disorders, HIV prevention, and academic persistence. He is currently extending this background through his work with interdisciplinary teams evaluating treatment outcomes for multisite CBT programs in primary care, examining sexual health outcomes among transgender and gender diverse individuals, and advancing health equity through community-based participatory research. He contributes to international research initiatives within the Orgullo Latinx: Sexual Orientation and Gender Diversity group of the National Latinx Psychological Association and the Latin American regional group of the International Psychological Network for LGBTI Issues. He was recently awarded a scholarship focused on increasing the number of board certified, Spanish-speaking integrated care psychologists.

Allison A. Holgerson, Ph.D. – Clinical Health Psychology Fellow  
Karen B. Grothe, Ph.D., L.P. and Matthew M. Clark, Ph.D., L.P., Mentors  

Dr. Holgerson’s primary research interests are focused in the management and treatment of obesity. She has been involved in clinical trials for obese adolescents, individuals with binge eating disorder, and obese adults. During her fellowship, she published a paper in Obesity Surgery that examined the association of food addiction to bariatric surgery outcomes. She was also a co-author on a paper...
examining how to guide patients towards making an appropriate decision about having bariatric surgery. She also presented her research at national and international conferences.

Lisa M. Gudenkauf, Ph.D. – Clinical Health Psychology Fellow
Shawna L. Ehlers, Ph.D., L.P. and Matthew M. Clark, Ph.D., L.P., Mentors

Dr. Lisa Gudenkauf’s research has focused primarily on examining the efficacy of psychosocial interventions for enhancing coping among cancer survivors and implementing these interventions in clinical practice. Dr. Gudenkauf serves as co-Principal Investigator of a Department of Psychiatry & Psychology Small Grant-Funded translational trial of cognitive-behavioral cancer stress management. During fellowship, she has also been part of a multidisciplinary team studying quality of life and resiliency among advanced cancer patients, and she has presented research findings at national and international meetings.

Alexandra C. Kirsch, Ph.D. – Clinical Pediatric Neuropsychology Fellow
Tanya M. Brown, Ph.D., L.P. and Michael J. Zaccariello, Ph.D., L.P., Mentors

Dr. Kirsch’s research interests focus on neuropsychological functioning of children with acute and chronic illness or neurodevelopmental conditions that affect cognitive and social-emotional development. She has previously assessed psychosocial changes across the transition to college and the effectiveness of prevention and intervention programs across various populations. She is currently contributing to projects examining the neuropsychological outcomes of young children exposed to anesthesia and comorbidities associated with autism spectrum disorder. She is also developing a clinical database, and managing research projects assessing the neuropsychological functioning of children with pediatric cancer, craniofacial abnormalities, and other neurological complications.

Angelina J. Polsinelli, Ph.D. – Clinical Neuropsychology Fellow
Mary M. Machulda, Ph.D., L.P., Alissa M. Butts, Ph.D., L.P., and Jane H. Cerhan, Ph.D., L.P., Mentors

Dr. Polsinelli’s current research focuses on investigating cognitive and neurobiological correlates of primary progressive apraxia of speech (PPAOS) and neurodegenerative language disorders. Recently, she explored the presence of simultaneous Alzheimer’s Disease pathology (i.e., beta-amyloid) and its potential for modifying symptom presentation and cognitive functioning in PPAOS. She also maintains an interest in mindfulness practices and their potential for enhancing cognitive functioning, particularly in older adults with and without cognitive impairment. Past investigations include a Randomized Controlled Trial of focused attention mindfulness training for improving attentional control in healthy, previously non-meditating older adults (funded by Mind and Life).

Matthew E. Schumann, Ph.D. – Clinical Psychology Fellow
Wesley Gilliam, Ph.D., L.P., Mentor

Dr. Schumann has a research background in psychosocial factors associated with healthy aging. Dr. Schumann’s current program of research includes evaluating evidence approaches to chronic pain management, psychosocial factors and comorbidities that impact response to interdisciplinary pain rehabilitation treatment across the lifespan. In the past year, he received the Mayo Clinic Department of Psychiatry and Psychology Research Summit Award in Behavioral Health for his research project titled “Interdisciplinary Pain Rehabilitation Outcomes for Older Adults: An Investigation Based on Opioid Use Status.”

Kate J. Zelic, Ph.D. – Clinical Child Psychology Fellow
Jarrod M. Leffler, Ph.D., L.P., Mentor

Dr. Zelic’s primary research interests are focused broadly on mood disorders in children and adolescents. Her research background includes evaluating the relationship between internalizing symptoms and relational victimization in youth, exploring depressive vulnerability and coping in youth and young adults, and evaluating brief mindfulness intervention for mood and sleep difficulties in adolescents. She is currently involved with projects examining the effectiveness of evidence-based treatments in an integrated family-based partial hospitalization program for children and adolescents with mood disorders. Within this partial hospitalization program, she is also particularly interested in the feasibility and acceptability of mindfulness-based intervention components and the feasibility of measuring physical activity and sleep indices.
Residents and Fellows Awards and Grants

Lisa Gudenkauf, Ph.D., L.P.

Best of the Best Poster and Research Poster Award, American Psychosocial Oncology Society 2018 Annual Meeting, Tucson, AZ, February 2018.

Early Career Psychologist Credentialing Scholarship, awarded by the National Register of Health Service Psychologists, 2018.

Young Investigator Colloquium Award, American Psychosomatic Society 2017 Annual Meeting, Seville, Spain, March 2017.

Dagoberto Heredia Jr., Ph.D.

American Board of Professional Psychology Foundation, Scholarship Award, 2018

National Register of Health Service Psychologists Scholarship Fund, 2018.

John Patrick (JP) Janowski, M.D.

U.S. Department of Health and Human Services, Students-to-Service Award, National Health Service Corps, 2018.

M.D. with Distinction in Research (Clinical Investigation), Albert Einstein College of Medicine, 2017.

Charles Lewis, M.D.


Ed Makhlouf, M.B., B.Ch.

Transcranial Magnetic Stimulation Health Solutions Scholarship, TMS Meeting, California, 2018.

Matej Markota, M.D.


2018 Research Colloquium Award, American Psychiatric Association, 2018

Daniela Rakocevic, M.D., M.S.

Resident Psychiatric Educator Award, Association for Academic Psychiatry, 2018.

Reem Shafi, M.B.B.S.

2018 Research Colloquium Award, American Psychiatric Association.

Laura Suarez, M.D.

American Association for Geriatric Psychiatry (AAGP) Honors Scholars Program, 2018.
The primary role of the Departmental Research Team is to provide administrative and protocol support services for all departmental faculty who have an interest in engaging in research. The scope of expertise includes administration of both pre and post grant submission related activities, budget and protocol development, regulatory documentation and management, manuscript submission, and preparation for national and international scientific educational sessions. This research team can provide support for patient care projects, clinical trials research, and basic science research.

To support the Department’s growth of research activities related to clinical trials, Ms. Michelle Skime, Program Manager, and Ms. Cindy Stoppel, Clinical Research Coordinator-Supervisor, lead teams of well-trained associate and clinical research coordinators. On average, 10 dedicated clinical coordinators support over 80 active clinical research protocols throughout the Department including, but not limited to, the Pain Rehabilitation Program, Addiction Center, and Mood Clinic in both adult and adolescent populations. The team also includes Barb Hall, Protocol Specialist III, Lori Solmonson, Research Secretary, and Hope Edgar, Research Administrative Assistant, who support the administrative functions of the department’s research mission.

A second group, dedicated to Community Health Education Outreach, is the Behavioral Health Research Program led by Dr. Christi Patten. Ms. Christine Hughes is the Program Coordinator. Their research focuses on developing behavioral interventions for tobacco cessation for underserved populations and reducing cancer health disparities. Their current research is providing tailored programs for Alaska Natives, Native Americans, pregnant women, smokers with psychiatric comorbidity and the social network of smokers.

In addition to clinical studies, two research technicians and a wealth of research facilities are located on the second floor of the Generose Building alongside the inpatient and outpatient Psychiatry and Psychology Department. The laboratory is equipped for protein work (western blotting and ELISA), molecular biology (PCR, RT-PCR, SNP analysis, and gene expression), immunohistochemistry of tissues, cell culture and immortalization of cells, and also the processing of clinical samples.

INVESTIGATORS


Back L-R: Dammen, Fink, Solmonson, Stoppel, Ward, Morath
Front L-R: Edgar, Skime, Timm

Department of Psychiatry & Psychology Research Team

INVESTIGATORS

International Research Collaborators

Alfredo Cuellar Barboza, M.D., Autonomous University, Nuevo Leon, Mexico

Mark A. Frye, M.D., Mayo Clinic

Dr. Cuellar Barboza is a mood psychiatrist focused on studying bipolar disorder genetics. He is a Professor of Psychiatry and Vice-Chair of Education and Director of the Affective Health Center, at the Universidad Autonoma de Nuevo Leon, Monterrey, Mexico. Through his collaboration with the Individualized Medicine Biobank for Bipolar Disorder; Dr. Cuellar Barboza has contributed to the understanding of bipolar disorder genetic risk, and its interactions with obesity and eating behaviors. He is the leading investigator of a pharmacogenomics trial testing genetic expression in unipolar depressed patients with support from a CONACYT (Mexico) Grant. Together with Dr. Marin Veldic, he is leading a study on the impact of metabolic syndrome in the clinical presentation, treatment response and genetic risk of bipolar disorder. Previous to returning to his alma mater in Mexico, Dr. Cuellar Barboza completed a research fellowship at the Mayo Clinic Depression Center, in Rochester, MN, under mentorship from Dr. Mark A. Frye. He was recently appointed Adjunct Assistant Professor of Psychiatry and Research Collaborator of Mayo Clinic’s Department of Psychiatry and Psychology. He is an active collaborator of the Psychiatric Genomic Consortium and the Consortium of Lithium Genetics. Dr. Cuellar Barboza is a recipient of several awards such as the Eli-Lilly Fellowship on Bipolar Disorder and the Samuel Gershon Junior Investigator Award.

Sir Jonathan Bate, Provost of Worcester College, Professor of English Literature, University of Oxford

Daniel Hall-Flavin, M.D., M.S., Mayo Clinic

Sir Bate is a Fellow of the British Academy and the Royal Society of Literature and was knighted for his service to literature in 2015. He has lectured extensively on the use of literature as a therapeutic tool in mental health settings. He is co-editor of Stress/Unstressed, the literary work at the core of a study of empathy in undergraduates at the University of Oxford. He is involved in a study with Arizona State University, Mayo Clinic and Oxford University examining the potential for poetry to serve as a point of service intervention to help promote resilience in hospice workers. The study is funded by the Gonda Foundation.
Miguel Prieto, M.D., M.S., Universidad de los Andes, Santiago, Chile

Mark A. Frye, M.D., Mayo Clinic

Dr. Prieto’s research is currently focused on the genetics and biomarkers of bipolar disorder and in the interphase between mood disorders (with focus on bipolar disorder) and cardiovascular and neurovascular disease. Dr. Prieto is a collaborator with the Mayo Clinic Individualized Medicine Bipolar Biobank. He is currently funded by a four-year grant (R01 equivalent) from the Chilean National Commission on Science and Technology (CONICYT), focused on genetic variants in bipolar disorder that may increase the risk for cardiovascular disease. He has received several recognitions: Becas Chile scholarship for Masters’ programs abroad (Government of Chile), Travel Award for the World Congress of Psychiatric Genetics, Copenhagen, Denmark (2014), Finalist for best poster/oral presentation for the World Congress of Psychiatric Genetics, Copenhagen, Denmark (2014), and Career Development Institute for Bipolar Disorders Fellowship, University of Pittsburgh/ National Institute of Mental Health, USA. He has published over 20 papers in peer-reviewed journals.

Martin Schalling, M.D., Ph.D., Professor of Medical Genetics, Karolinska Institutet

Mark A. Frye, M.D. and Marin Veldic, M.D., Mayo Clinic

Martin Schalling, M.D., Ph.D., is Professor of Medical Genetics, Department of Molecular Medicine and Surgery, and the Center for Molecular Medicine at Karolinska Institutet, Stockholm, Sweden. Dr. Schalling’s interests include understanding mechanisms behind psychiatric and metabolic disorders thus enabling better diagnosis, prevention and more individualized treatment. He is the academic coordinator for the Karolinska Institutet collaborations with Mayo Clinic and the University of Minnesota. He has supervised over 20 PhD students and has published over 290 scientific papers.

Lise Solberg Nes, Ph.D., Oslo University Hospital Norway

Shawna Ehlers, Ph.D., L.P. and Matthew Clark, Ph.D., L.P., Mayo Clinic

Lise Solberg Nes, Ph.D., Center Director, Head of Research, Center for Shared Decision Making and Collaborative Care Research Division of Medicine, Oslo University Hospital, Norway, and Adjunct Associate Professor of Psychology, Mayo Clinic College of Medicine and Science. Dr. Solberg Nes has several clinical trials funded by the Norwegian Research Council (RO1 equivalent) and the Norwegian Cancer Society. Her research currently focuses on using eHealth to help patients utilize self-management strategies and make lasting health behavior changes. She has published her findings in numerous scientific journals including; Annals of Behavioral Medicine, Pain, Lung Cancer, Psychological Science, Personality and Individual Differences and the International Journal of Behavioral Medicine.
The Mayo Clinic Research shield provides a broad range of support for the research efforts and accomplishments highlighted in this annual report. This support ranges from obtaining research space and equipment to the various administrative services including grants preparation and submissions, publishing, statistics, funding and finance, legal contracting, human resources, patent applications and commercialization, protocol development and patient accrual, IRB and IACUC support, and much more. Many of these have the direct and outstanding support of the Department’s own Research Unit highlighted on the previous pages.

In addition, the Mayo Clinic Research shield provides an Operations Administrator, Mr. Ken Saling, to help guide and advocate for the overall research efforts in the Department. Mr. Saling has extensive experience at Mayo Clinic in this position, and our Department was fortunate to have him join us 2016. Mr. Saling is a dedicated advocate for the research goals of the Department, the individual consulting staff, and the allied health staff involved in research. This advocacy includes everything from helping to plan for future department-wide research opportunities and needs to obtaining research funding, faculty research time, space, and staff for supporting research, to ensuring that all of Mayo Clinic’s support resources work optimally for the Department’s research goal and objectives. All of this is done with a commitment towards advancing medicine and science and ultimately improving the lives of patients.

The graphs shown above present the collective research accomplishments of the Department staff. While not a straight line of growth for research funding and publications, the trends are positive and commendable. The Department has steadily invested more resources for research over the past several years, and the return has been advances in understanding and treating patients with mental health illnesses, as evidenced throughout this annual report. The plan is to continue to burnish its Research shield, by investing and augmenting the research resources in support of the staff.