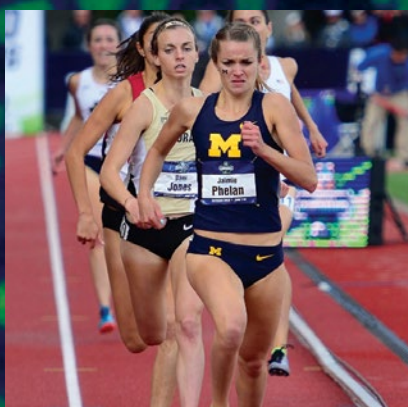
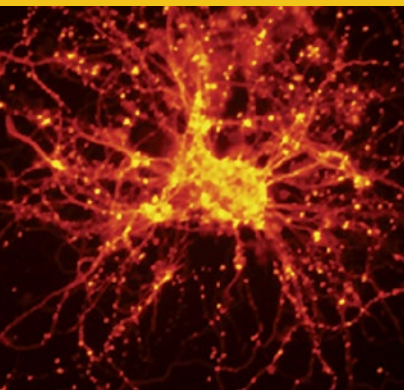


2016-2017 IMPACT REPORT

Precision Medicine. Personalized Results.



DEPRESSION CENTER
MICHIGAN MEDICINE



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Many of the Depression Center programs are made possible by the support of our generous donors. If you are interested in making a contribution, please visit depressioncenter.org/giving.

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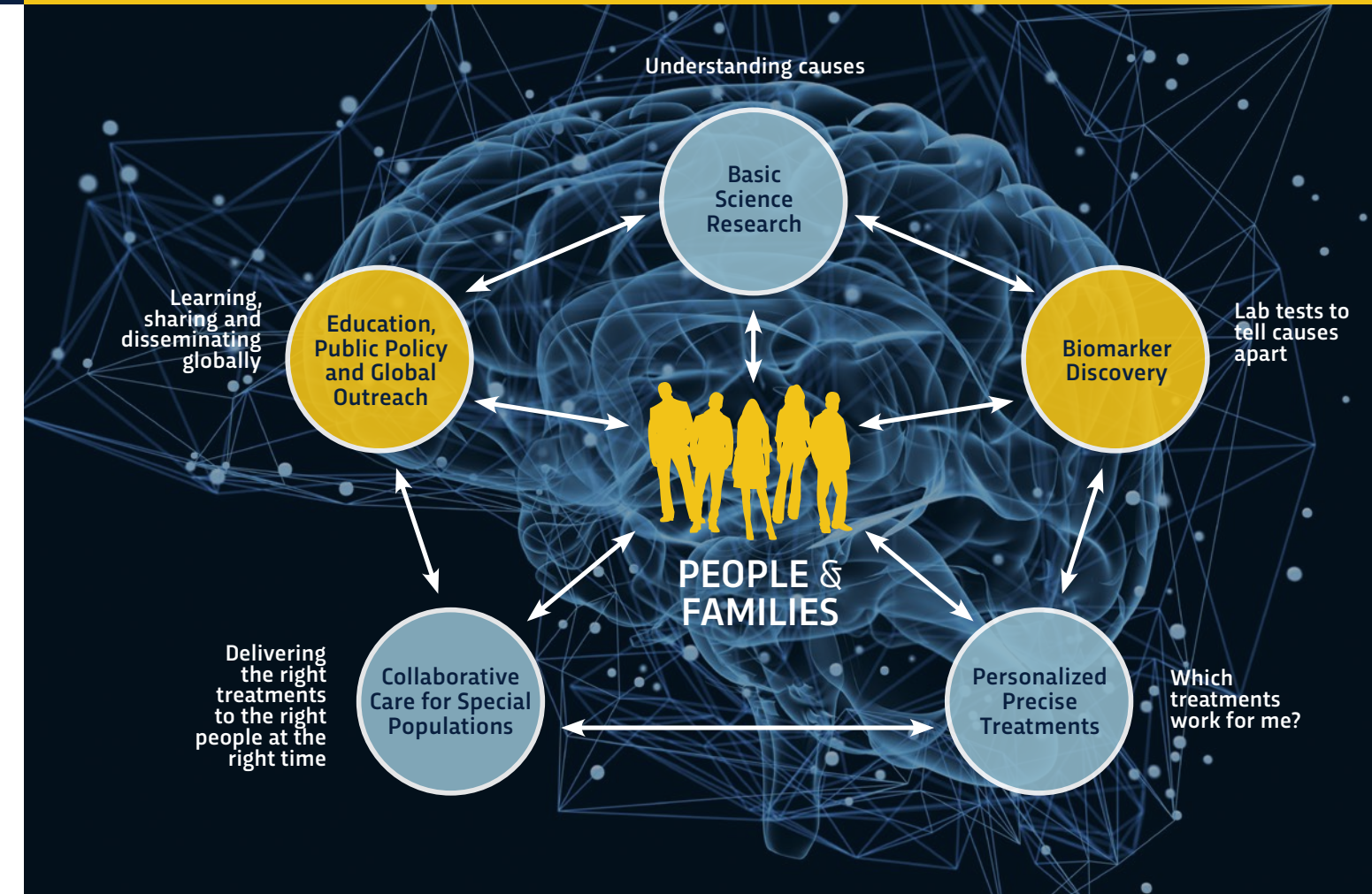
WITNESSING PROGRESS



The Depression Center aims to produce and translate the new knowledge that dramatically improves treatments and saves lives. We are excited by our progress. So much remains to be done, but great things are happening, meaningfully fueled by support from hundreds of wonderful donors and the grants that these gifts catalyze.

This past year has been a milestone for such gifts. The Center received a transformative donation from the Eisenberg family that propels us into a new chapter. The Prechter bipolar program also continues to thrive. We recently received another wonderful gift from the Prechter family and we are witnessing real progress in the building blocks essential for personalized, precision medicine. The time has come. I hope you agree.

This edition of our annual report briefly reflects upon the successes that our long-time programs continue to experience, as well as the programs the new gifts and grants support. Flip through this issue to learn who was named as the Frances and Kenneth Eisenberg Professorship of Depression and Neurosciences; the recipient



"This past year has been a milestone for such gifts. The Center received a transformative donation from the Eisenberg family that propels us into a new chapter. The Prechter bipolar program also continues to thrive."

of the inaugural Eisenberg Scholar; the launching of an annual research prize, how we are collaborating with other Centers across campus; a brand new Mental Health BioBank; additional advances in stem cell and mobile monitoring; our cornerstone student advocacy and awareness programs; the intense efforts underway throughout to counteract suicide; the annual Depression on College Campuses conference; updates from our Athletes Connected program (which supports student-athlete mental health); the national impact of our Veterans programs; and so much more.

We also invite you to learn more about a new workplace mental health initiative underway in

collaboration with the UM Ross School of Business. We are calling it, "Healthy Mind At Work."

As you flip through subsequent pages, I hope and believe you will experience some of the excitement we are enjoying. Should that occur, we invite you to develop ideas and convey suggestions and support to aid us in our journey.

The future for improving brain mental health is bright! We are so glad you have joined us for the ride.

John Greden, M.D.

Founder and Executive Director

RESEARCH IN ACTION

Depression Center research draws from the expertise of investigators across the University of Michigan, one of the nation's premier research institutions. Depression Center researchers are committed to learning more about the causes of depression, bipolar disorder, stress fears and related conditions; preventing and treating those diseases with tailored, personalized treatments; and helping people stay well.

DEPRESSION CENTER MEMBERSHIP

347
members across

17
U-M colleges, centers and institutes

DEPRESSION CENTER GRANTS

64
unique grants in Fiscal Year 2016-17 related to depression, bipolar disorder, anxiety, related illnesses or neuroscience totaling nearly

\$62 million



Transformative Gift. Transformative Outcomes.

In October 2016, the Depression Center received a transformative \$10.75 million gift from U-M alumni Frances and Kenneth Eisenberg and family of Bloomfield Hills, Michigan. The gift has already begun to accelerate the development of the personalized, precision treatments necessary to conquer clinical depression, bipolar disorder and related brain-behavior illnesses.

For more than 15 years, U-M Depression Center researchers have worked collaboratively to make key discoveries and test innovative treatment options for depression and bipolar illnesses. The Eisenberg gift will enhance these efforts.

Dr. John Greden, executive director of the U-M Depression Center weighed in: "We've come remarkably far in the last 15 years — in science, genomics and understanding the importance of brain function in mood disorders, but there's so much more we must do," he said. "Donors like Frances and Kenneth Eisenberg and their family are catalysts to getting there. This is a huge step. We will conquer these illnesses."

The gift expands the number of research projects focused on personalized, precision medicine; funds a new named professorship; creates the Eisenberg Collaborative Innovations Fund to support community outreach and partnerships; establishes a scholar award and national research prize; and builds an endowment to sustain future research.

Since depressions and bipolar illnesses have multiple, heterogeneous causes and "one size treatment" will never fit all, the Depression Center has long been dedicated to developing precision medicine approaches — the right treatment for the right person at the right time. Mental health has recently been designated, along with cancers, metabolomics and opioid abuse, as one of the four pillars that will be primary targets for research in Michigan Medicine. This gift and others will help catalyze the Depression Center's efforts.

Read through the ways that this generous gift is already impacting the research being done at the Depression Center throughout the next few pages.



Frances and Kenneth Eisenberg



- *Dr. Srijan Sen is installed as Frances and Kenneth Eisenberg Professor of Depression and Neurosciences. L to R: Carol R. Bradford, M.D., M.S., executive vice dean for academic affairs, U-M Medical School, Srijan Sen, M.D., Ph.D., and Marschall Runge, M.D., Ph.D., dean, U-M Medical School.*

THE FRANCES AND KENNETH EISENBERG PROFESSORSHIP OF DEPRESSION AND NEUROSCIENCES

The gift has funded the Frances and Kenneth Eisenberg Professorship of Depression and Neurosciences, which was awarded to psychiatrist Srijan Sen, M.D., Ph.D. Sen is a leading expert in the biology of stress and depression, and already holds the title of Frances and Kenneth Eisenberg Emerging Scholar at U-M's Taubman Medical Research Institute. He leads the remarkable and unique national Intern Health Study, a project that is tracking over 13,000 physicians across the country as they transition into the highly stressful intern year. His work has furthered understanding of the links between stress and depression and is poised to identify different genes and other biological factors involved in how stressful life events may precipitate depressions and bipolar illnesses.

U-M DEPRESSION CENTER AND FRANKEL CARDIOVASCULAR CENTER PARTNER TO FUND CENTER-TO-CENTER COLLABORATIONS

The U-M Depression Center and Frankel Cardiovascular Center announced two funding awards for their Center-to-Center (C2C) research collaborations in the spring of 2017. C2C awards address the underlying conditions of cardiovascular and brain mood co-occurrences, allowing physicians and other clinicians to use research findings to better treat patients with these common comorbidities. Funding was made possible from the Depression Center Eisenberg Translational Research Fund and the Frankel Cardiovascular Center.

The first project title is, "Evaluation of Mental Health Outcomes in a Cardiovascular Disease Population."

Project goals are to: (1) uncover "at risk" cardiovascular disease (CVD) subtypes, (2) characterize depressive symptoms related to genetic testing for CVD genes, and (3) highlight potential association between markers of inflammation and depression and/or anxiety with CVD subtypes. The team believes that discoveries from this proposal will lead to new, more effective therapeutic strategies aiming to mitigate symptoms of depression and anxiety, as well as improve CVD outcomes. The collaborating investigators include: Cristen Willer, Ph.D.; Srijan Sen, M.D., Ph.D.; Whitney Hornsby, Ph.D.; Kenneth Jamerson, M.D.; Scott Hummel, M.D.; Matthew Konerman, M.D.; Bo Yang, M.D., Ph.D.; and Sue Ryskamp, M.S., R.D.

The second project team will look at "Bipolar Patient Specific 3D Cardiac Microtissues for Personalized Medication Testing in Vitro." These investigators propose to generate bipolar patient-specific 3D cardiac tissues for mechanistic study, as well as for medication testing. The goals are to provide basic mechanistic insight into the pathogenesis of bipolar patient cardiovascular health and create a patient-specific medication testing platform that may inform clinicians on optimal medication recommendations. Project investigators include Todd Herron, Ph.D.; Sue O'Shea, Ph.D.; and Melvin McInnis, M.D.

MIP SCHOLARS AWARD FOR INTERVENTION ON VIOLENCE AND ALCOHOL USE PREVENTION

Patrick Carter, M.D., assistant professor within the U-M Department of Emergency Medicine, was the 2017 recipient of the Michigan Mental Health Integration Partnership (MIP) Scholars Award. The MIP Scholars Award supports U-M faculty implementing and evaluating mental health services that promote integrated care and seek to improve access to evidence-based practices for lower income and Medicaid eligible populations with behavioral health care needs in the state of Michigan. An original \$50,000 award was provided by the University of Michigan Comprehensive Depression Center Eisenberg fund and this was matched through Michigan Medicaid funding.

Dr. Carter, along with co-investigators Maureen Walton, M.P.H., Ph.D., and Rebeca Cunningham, M.D., will implement their project, "SafERteens: Violence Prevention for Urban Youth Seeking Emergency Care" at Hurley Medical Center in Flint, Michigan, beginning in fall 2017. The project aims to implement and evaluate the evidence-based intervention SafERteens to prevent violence and alcohol use in at-risk youth. Learn more about the SafERteens intervention at www.saferteens.org.

U-M Depression Center and Department of Psychiatry Launch Mental Health BioBank

New DNA registry will help point the way to personalized precision medicine

A brand new Mental Health BioBank (MHB2) launched within the Depression Center and Department of Psychiatry in June 2017 to establish a DNA biobank for depressions, bipolar illnesses and related brain-behavior illnesses. A biobank is the banking of either biological materials or data in a database for future use. It can be compared to depositing your cash into a savings account.

Genotyping, the process of determining specific genetic patterns of an individual by examining the individual's DNA, has become more cost-effective and efficient in the past few years. When coupled with large population samples that are monitored longitudinally, the groundwork is laid to examine genetic variants associated with complex health disorders. Depressions, bipolar illnesses and related brain disorders are prime candidates for clinical breakthroughs.

The U-M MHB2 aims to universally enroll every adult outpatient psychiatry patient who consents into the genetic biobank. Patients will also be asked if they are willing to provide permission to re-contact them to determine future interest for additional or more specific research studies. Patients provide a saliva sample to be used for DNA extraction and access to medical record data. With the establishment and growth of this large-scale DNA biobank for mental health, scientists will be able to perform genome-wide association studies (GWAS) to identify genetic variants associated with brain illnesses and, most importantly, to link genomics with

treatment responses. This will be a huge step toward personalized, precise treatments for mood disorders and other mental illnesses.

"Providing our patients with more personalized mental health treatments has long been a dream of the Depression Center and department," said John Greden, M.D., executive director of the U-M Depression Center. "No single treatment is effective for all bipolar patients or those with depressions. Instead, it is vital to understand the underlying pathophysiology for each person. The Mental Health BioBank is a crucial step to help us achieve personalized medicine breakthroughs more quickly."

"We are excited about the research possibilities that the Mental Health BioBank will offer to our department," said Gregory W. Dalack, chair, U-M Department of Psychiatry. "Our hope is that by continually expanding and studying the data we collect, we will be able to build a data base for the future. Targeted treatments are the goal."

The MHB2 is currently in the pilot phase to examine the feasibility of DNA collection and assessment of genomic markers associated with depression and treatment response.

"When combined with other genomic measures such as pharmacokinetics and pharmacodynamics, emerging genetic profiles will emerge to guide medication selection and optimization, hopefully putting an end to the current pattern of 'let's try this.' Knowledge heals, and this will be a huge step in generating what we need to know to treat more precisely," added Dr. Greden.

This project is led by Vicki Ellingrod, PharmD, John Gideon Searle, professor with the College of Pharmacy, and Srijan Sen, M.D., Ph.D., who is the Frances and Kenneth Eisenberg Professor of Depression and Clinical Neurosciences. It was catalyzed by philanthropic support from the Eisenberg's gift to the U-M Depression Center. More information about Frances and Kenneth Eisenberg, as well as additional funding opportunities, can be found on our website.

- *Liquid nitrogen cryofreezers (-190oC) used for tissue storage. Cryo-preservation is a process of storing samples at an ultralow temperature to avoid tissue damage.*



Frances & Kenneth Eisenberg Research Awards

The following two awards were made possible through a generous gift to the U-M Depression Center in October 2016 from Frances and Kenneth Eisenberg

FRANCES & KENNETH EISENBERG INAUGURAL SCHOLAR



Sarah Ketchen Lipson, Ph.D. was announced as the inaugural Frances and Kenneth Eisenberg Scholar in June 2017. The \$100,000 research prize was awarded to Dr. Lipson to support two years of investigations for her proposed research on promoting the treatment of depressions, bipolar illnesses and related disorders in college students.

Dr. Lipson is a mental health services researcher with a focus on adolescent and young adult populations, particularly college students. Her research aims to identify students with untreated symptoms of depression (and other common mental health conditions) as early as possible and to encourage these students to seek the help they need. Earlier treatments save lives, so Sarah's planned outcome is to have more students who need help taking advantage of the clinical services available to them.

Dr. Lipson's proposed study, titled, "Tailored eHealth Intervention to Promote Depression Treatment in College Populations," will begin with an online screen to identify the students with untreated symptoms of depression from a random sample of U-M undergraduates. Following the baseline screen, the students will be randomly assigned to three different groups: 1) tailored messages, 2) untailored messages, and 3) no messages. The tailored messages will be customized according to the reasons students report not seeking help (i.e., their individual treatment barriers).

"Today, one in five college students report symptoms that characterize depressions or bipolar illnesses," said Srijan Sen, M.D., Ph.D., the inaugural Eisenberg professor. "Sarah's intention to streamline behavioral health treatment for college students through tailored eHealth interventions is the perfect inaugural Eisenberg Emerging Scholar project. We are optimistic that these approaches are poised to improve outcomes for students. If so, they have potential for widespread dissemination and for moving the bar for college students everywhere, benefitting millions at the time period in life when risks for these illnesses are highest." Dr. Lipson's two-year pilot study began in fall 2017.

FRANCES & KENNETH EISENBERG INAUGURAL TRANSLATIONAL RESEARCH PRIZE



Karl Deisseroth, M.D., Ph.D. was announced as the inaugural winner of the U-M Depression Center's Frances and Kenneth Eisenberg Translational Research Prize. The newly established \$50,000 award is intended for a world-renowned scientist and honors breakthrough translational research accomplishments that advance

knowledge in the understanding of underlying mechanisms and treatments in depressions, bipolar illnesses or related mood disorders.

Dr. Deisseroth is the D.H. Chen Professor of Bioengineering and of Psychiatry, and Behavioral Sciences Investigator at Howard Hughes Medical Institute at Stanford University. As a scientist, Dr. Deisseroth has expertise in electrophysiology, ion channel structure function analysis, and optics. He has created, investigated and applied truly novel molecular tools for neuroscience, and has been the global catalyst for the new field of optogenetics in neurosciences. As a board certified psychiatrist, he conducts care at Stanford, specializing in treatment resistant depression using pharmacological and interventional treatments. He is also a member of the U.S. National Academies of Sciences and of Medicine.

"I am deeply honored to receive this recognition," said Dr. Deisseroth. "Our plan is to use the support to advance the understanding of the neural circuit basis for depression and uncover new avenues for treatment and cures."

"We are excited about Dr. Deisseroth's past and future contributions to precision medicine for depressions, bipolar illnesses and related brain disorders," said John F. Greden, M.D., executive director of the U-M Depression Center. "Karl is leading an array of groundbreaking investigations and is a stellar inaugural recipient of the Eisenberg Prize. The vision of the Eisenberg family is to advance research capabilities for clinicians at the pinnacle of their field, and to support those who are dedicated to training a new generation of translational investigators. Dr. Deisseroth excels in both. He is the perfect choice for this award."

Depression Center Scholar Awards

Through generous donor support, the Depression Center proudly fosters the work of promising early-career investigators through various scholar award programs. In supporting a new generation of investigators and promising pursuits of innovations, the Depression Center strives to reach breakthroughs in research and treatment that can improve the quality of life for those living with depression or even help prevent the disease from surfacing in the first place.

These "scholar awards" are given throughout the year and are awarded to professionals who have the goal of diagnosing, treating, and eventually preventing depression, bipolar disorder, and related illnesses. The studies mentioned below help drive the translation of discoveries into clinical applications and best practices to improve the care of those struggling with depression and other related illnesses.

RACHEL UPJOHN CLINICAL SCHOLARS



The goal of this award, established in 1998, is to train a new generation of clinical investigators focusing their research on depression, bipolar disorder and related illnesses.

The 2017 winner of the Rachel Upjohn Clinical Scholars award was Katherine J. Gold, M.D., M.S.W., M.S., who is studying "MOMSonLINE," which looks at online support for mothers after having lost a baby.

TODD OUIDA CLINICAL SCHOLARS AWARD



Established in 2002, the Todd Ouida Clinical Scholar Awards are designed to further the work of outstanding young researchers working in childhood anxiety and depression.

The 2016 Todd Ouida Clinical Scholar award winner was Wael Shamseddeen, M.D., M.P.H., who is studying "Electroconvulsive Therapy for Adolescents with Resistant Depression."

JACK L. BERMAN, M.D. AND BARBARA A. BERMAN, PH.D. DEPRESSION RESEARCH FUND

The Berman Research Fund supports junior investigators seeking pilot or seed funding for innovative research projects in the area of depressive illness.

The 2016 winner of the Jack L. Berman, M.D. and Barbara A. Berman, Ph.D. Depression Research Fund Award was Todd Herron, Ph.D., who is studying "Cardiovascular Disease in Bipolar Disorder Patients:

Patient specific disease modeling and medication testing."

STRATEGIC TRANSLATIONAL RESEARCH AWARD (STAR)

Established in 2015, STAR awards are available to Depression Center members who are students, residents, fellows or post-doctoral candidates. STAR funding is designed for exploring or testing research ideas.

The 2017 STAR award winner was Ann Zarina Kraal, M.S., who is studying "Mechanisms Linking Depressive Symptoms to Cognitive Impairment in Diabetes."

OSCAR STERN AWARD FOR DEPRESSION RESEARCH



In 2011, the University of Michigan received a generous gift from the late Helmut F. Stern of Ann Arbor to endow a research award at the Depression Center. The intent of this award is to promote high impact, innovative ideas leading to strategic interventions to prevent or manage mood disorders.

The 2016 Oscar Stern Award for Depression Research winner was Leslie Swanson, Ph.D., who is studying "Intensive sleep retraining as a novel adjunctive therapy for comorbid major depressive disorder and insomnia."



The Heinz C. Prechter Bipolar Research Program: A Global Leader

Another milestone: \$5 million challenge gift assures continuity of Prechter programs' flagship longitudinal study

In May 2017, the University of Michigan named its bipolar disorder research program for Heinz C. Prechter, in honor of a new gift commitment by the World Heritage Foundation - Prechter Family Fund. The generous gift comes with a challenge to others who care about the illness: The Prechter family will match every dollar given to U-M bipolar disorder research up to \$5 million.

THE LONGITUDINAL STUDY OF BIPOLAR DISORDER

The Longitudinal Study of Bipolar Disorder is the Prechter Program's flagship foundation for its trend-setting research. Thus far, 11 years of data from the Longitudinal Study are available to the scientific community for innovative research projects. The Longitudinal Study has enrolled more than 1,200 individuals. From these participants, billions of data points have been generated through biological samples (DNA), neuropsychological testing, clinical interviews, bi-monthly follow-up and innovative monitoring using mobile devices.

Bipolar disorder affects millions of individuals across their lifespan and must be studied over the course of decades. While long-known to run in families, most genes involved have not yet been identified. Additionally, every individual's response to the illness, life circumstances and treatment can vary widely. Studying many individuals over time will allow scientists to better understand how to diagnose earlier, attain and maintain wellness, and, eventually, prevent bipolar disorder.

THE MICROBIOME SUB-STUDY

The study of the human microbiome, the billions of microorganisms that live in our digestive

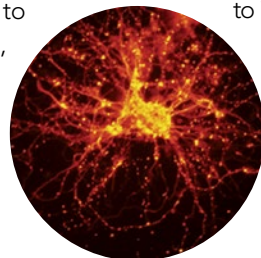
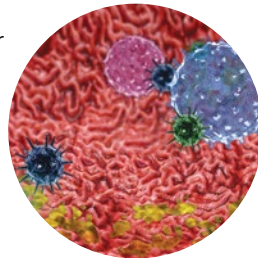
system, is a major priority in the frontier of medical research. Surprisingly little is known about our microbiome and the influences that it has on our daily lives. The composition of our microbiomes reflects many things — the foods we eat, the environments in which we live, the drugs and medications we take, and the stresses we face. It is becoming increasingly clear that our microbiome can influence mood state and potential risk of psychiatric illness.

The Prechter team is investigating the microbiome of bipolar and control research subjects to examine differences associated with several factors, including severity of disease state, medication exposure, early life stress exposure, personality factors, and rapidity of mania/depression cycling. The findings will open new avenues for better diagnoses and treatments.

INDUCED PLURIPOTENT STEM CELLS (IPSC) IN BIPOLAR DISORDER

Our trendsetting stem cell program expanded this past year to identify fundamental characteristics of cells derived from patients with bipolar disorder compared with unaffected individuals using real-time assessments under the microscope to identify differences in growth patterns.

In one series of investigations, we are evaluating the role of astrocytes in bipolar disorder. Astrocytes are the supporting cells of the nervous system ("armor for the nerve cells") and, in fact, outnumber neurons by 10:1. Astrocytes have a number of important functions:



It is the research team's aim that results of this study will have implications for both prevention and early intervention of suicide, and that the smartphone technology will provide methods for monitoring patients' suicide risk over time.



The PRIORI project is a collaboration between Melvin McInnis, M.D., the Prechter Program's scientific director, and Emily Mower Provost, Ph.D., an assistant professor in the College of Engineering.

they serve to protect the nerve cells, forming a barrier between the peripheral blood circulation and the brain; they also support and myelinate neurons, insulate synapses, and control neural plasticity. What are we learning? People with bipolar disorder have fewer astrocytes in their brains, and measures of astrocyte health are lower.

Astrocytes play a critical role in brain equilibrium, but have been largely overlooked in research on the biology of bipolar disorder and are a promising target of novel treatments. The iPSC project is a joint collaboration headed by Melvin McInnis, M.D., the Prechter Program's principal investigator, and K. Sue O'Shea, Ph.D., director of the U-M Center for Pluripotent Stem Cell Research. The U-M Depression Center and the innovative Prechter team are proud to be pioneers in this arena.

THE REENGINEERING OF PSYCHIATRY – PRIORI (PREDICTING INDIVIDUAL OUTCOMES FOR RAPID INTERVENTION)

A unique collaborative effort between the University of Michigan College of Engineering and the Depression Center focuses on the development of computational methods to better predict and then seek to prevent mood swings in bipolar disorder. This effort is based on characterizing the specific patterns that accompany transitions in some of our routine biological features and comparing healthy euthymic states to either mania or depression. Investigations suggest that manic and depressive mood states can be recognized from speech data collected via a smart phone app, now becoming known by the acronym PRIORI.

One prominent symptom of bipolar disorder is a change in speech patterns. During mania, speech increases in rate, rhythm and volume. During depression, the opposite occurs. The purpose of the PRIORI study is to design new computational approaches to detect these meaningful changes early in a mood episode, possibly even before a depression or mania occurs. The ability to predict mood changes with time to intervene will mitigate the episodes of mania and depression and prevent serious or even tragic outcomes such as suicide.

In 2016, a multidisciplinary team from Care New England's Butler Hospital, Brown University and the University of Michigan embarked on a project to advance screening capabilities for suicide risk. The group received a grant from the National Institute of Mental Health (NIMH) to conduct a five-year research study utilizing the PRIORI technology.

Researchers will record and analyze changes in speech patterns to identify how they relate to changes in suicide risk. It is the research team's aim that results of this study will have implications for both prevention and early intervention of suicide, and that the smartphone technology will provide methods for monitoring patients' suicide risk over time. Participants in the study will be recruited in a psychiatric inpatient setting, an important population given the elevated suicide rates in the weeks and months following hospital discharge. As the world of technology advances, Prechter investigators are dedicated to adapting these advances to improve diagnoses, treatments and wellness.



Mobile Monitoring, Wearable Sensors, Smart Watches, Cell Phones and Computational Profiles to Identify Digital Predictors of Depression; The New Era Has Arrived

Depressions and bipolar illnesses have early onset and episodic and recurrent courses; a major goal is to prevent recurrences. A new project will use data passively and continuously collected from the cell phones and wearable sensors from more than 1,000 medical interns to chart the relationships between mood, sleep cognition and circadian rhythms as they relate to the onset of depressive episodes. The goal is to recognize patterns that predict depression in order to identify at-risk individuals and provide preventive treatment.

Srijan Sen, M.D., Ph.D., the Frances and Kenneth Eisenberg Professor of Depression and Neurosciences in the Medical School's Department of Psychiatry and Molecular and Behavioral Neuroscience Institute, is leading the project. Sen is associate director of the U-M Depression Center, the Molecular and Behavioral Neurosciences Institute, the Institute for Healthcare Policy and Innovation, and is associate chair for research for the Department of Psychiatry.

"This work has the potential to transform our ability to predict the development of depression under stress and to get personalized interventions to patients when they most need them," he said. Dr. John Greden predicted that such mobile monitoring approaches, including innovative strategies such as the PRIORI project being developed with smart phones by the Prechter Bipolar team, would be routinely employed in future years to alert

"This work has the potential to transform our ability to predict the development of depression under stress and to get personalized interventions to patients when they most need them." – Srijan Sen, M.D., Ph.D.

patients, families and clinicians to emerging relapses. He postulated that "they may become as integral to care for those with bipolar and depressive illnesses as blood pressure cuffs are to hypertension treatments."

This project was recently funded through The Michigan Institute for Data Science (MIDAS), the Depression Center's Eisenberg Translational Research Fund, the Department of Psychiatry, and the Molecular and Behavioral Neurosciences Institute, and involves computational collaborations with the Department of Mathematics.



Researching Overmedication of Older Adults

Depression Center member Donovan Maust, M.D., M.S., who is also an assistant professor of psychiatry at Michigan Medicine received a grant from the Ravitz Foundation in November 2015 to study overmedication of older adults. Dr. Maust developed a model for physicians and patients to follow with the goal of reducing and preventing the long-term use of benzodiazepines, a class of drugs used as sedatives or to treat anxiety and other conditions.

Dr. Maust's goal is to educate older adult patients about the negative side effects of these medications and to educate their care providers about how to partner with patients to reduce their use of these prescriptions. The team has been able to expand the reach of the Ravitz Foundation support through two ways: 1) partnering with providers in U-M's Department of Internal Medicine and Department of Family Medicine in order to reach these patients, most of whom are not in psychiatric care; and 2) applying for Medicaid match dollars from the federal government that allow the study team to effectively double the Ravitz funding.

PROJECT GOALS INCLUDE:

1. Sending patients currently taking a benzodiazepine an educational brochure explaining the risks of these drugs in advance of their next primary care appointment.
2. Equipping primary care physicians with strategies to engage the patient with a collaborative care manager to address the benzodiazepine. These care managers are specially trained members of the care team who provide a direct link between the primary care physician and a psychiatrist.
3. Training collaborative care managers on how to further assess and educate patients, with the goal having patients taper off of their benzodiazepine with help of the care manager and psychiatrist.



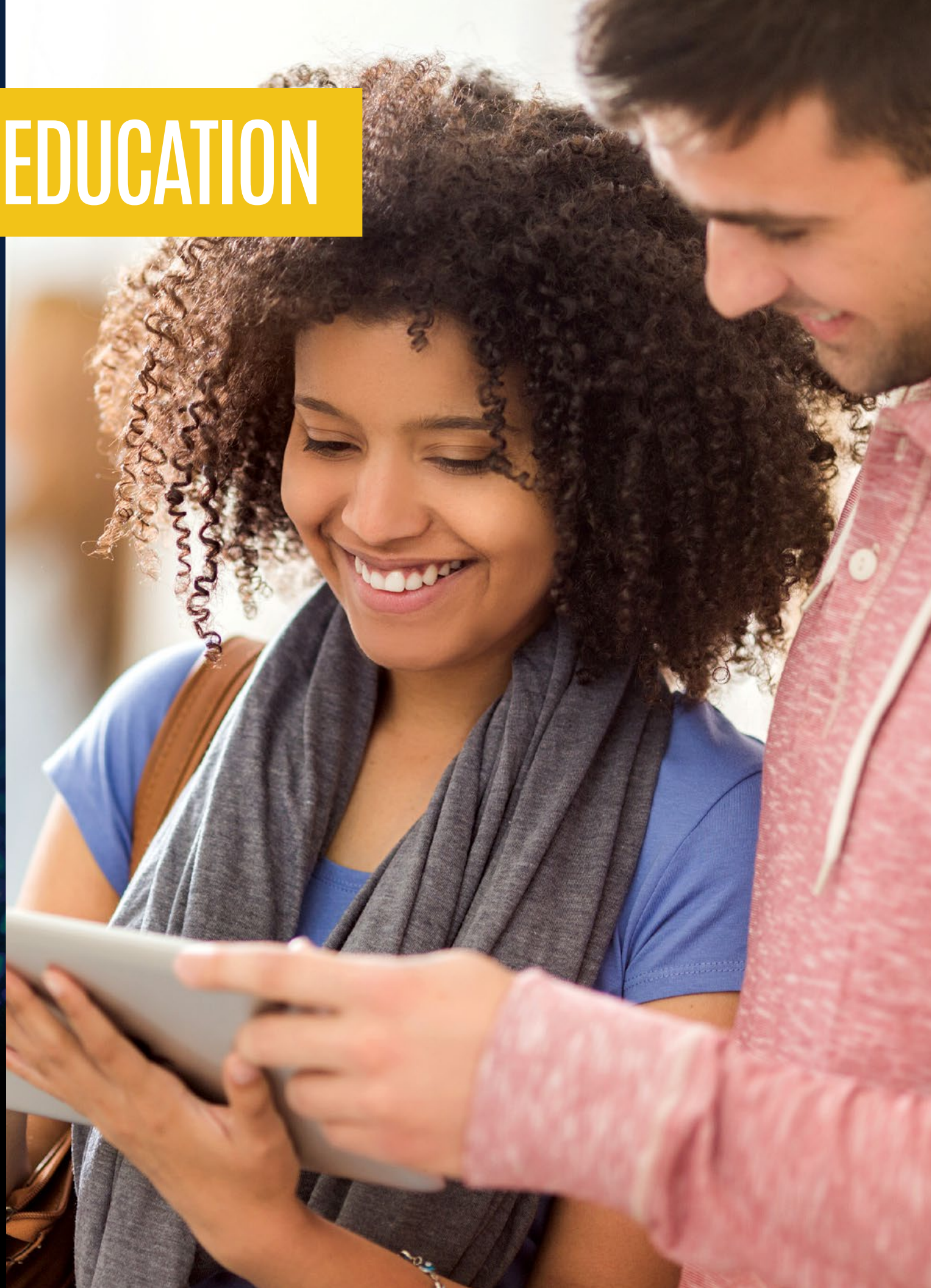
○ Dr. Maust specializes in geriatric psychiatry. He earned his medical degree at Johns Hopkins University and his bachelor's degree at the College of William and Mary.

"Right now, we are providing education directly to patients and partnering with their providers to reduce use of these medications, which many patients have received for years," said Dr. Maust. "Then, after our intervention, we will measure whether patients have reduced use of these drugs to determine how effective our strategies are."

– Donovan Maust, M.D., M.S.

COMMUNITY & PROFESSIONAL EDUCATION

The U-M Depression Center serves as a source of reliable and comprehensive patient, family, public and professional education about depression, bipolar disorders and related illnesses. Effective education helps people break through the barriers of stigma and misinformation. We reach out to unique populations, providing resources, education, tools and various services to individuals and communities touched by the broad spectrum of depression, bipolar disorder and related illnesses.



Community Programs

BRIGHT NIGHTS COMMUNITY FORUMS

The Bright Nights Community Forum series attracts hundreds of people each year for educational presentations and discussions on a variety of topics related to depression. The forums, typically held at local libraries, feature a panel of topical experts from the Depression Center and the community, followed by question and answer sessions with audience members. Bright Nights, launched by Dr. Melvin McInnis 11 years ago, began as a partnership between the Depression Center and the Ann Arbor District Library, and has since grown to include presentations in neighboring communities of Plymouth, Saline and Ypsilanti, Mich.

2016 – 17 PANEL PRESENTATIONS:

- Understanding Electroconvulsive Therapy
- An Opioid Crisis in Washtenaw County: What Can We Do?
- Adolescent Depression, Resiliency and Coping Skills
- Understanding Bipolar Disorder

COLLOQUIUM SERIES

Each academic year, the Colloquium Series provides cutting-edge information for health professionals through eight presentations, featuring Depression Center faculty members who discuss current topics in the field of depression, bipolar illnesses and related disorders. Physicians and social workers earn continuing education credits for attending. Audience members hail from many disciplines, including psychiatry, psychology, social work, public health, pharmacy, neurology and family medicine.

2016 – 17 COLLOQUIUM TOPICS:

- Stroke and Depression
- ECT & Neuromodulation After Stroke
- Managing the Wellness Voyage: Treatment Gaps & Policies Influencing Mental Health & Employment
- Work Long and Prosper: Cost, Productivity and Treatment Implications in Workplace Depression
- Exercise and the Adult Brain
- Exercise and the Young Brain
- Depression Biomarkers and Antidepressant Response
- Challenges in Using Biomarkers: the Story of Genetics & Bipolar Disorder

Student Programs

PEER-TO-PEER (P2P) DEPRESSION AWARENESS INITIATIVE

In collaboration with high schools throughout Washtenaw County, the Depression Center provides information and support to student teams, empowering them to effectively reach peers within their schools through unique depression awareness and stigma reduction campaigns. Evaluation is vital, of course, so it is informative that following campaign rollouts in the fall, students who attended participating schools were:

- More knowledgeable about depression;
- More confident in their ability to identify and refer peers who may be struggling with depression or anxiety;
- More willing to seek help for themselves if they were experiencing symptoms of depression; and
- Reported lower stigma in their school environment related to students with mental health problems.

Since the program began in 2009, more than 550 students have participated directly on P2P teams in 11 different schools across Washtenaw County, more than 150 P2P student-run events have taken place, and thousands of students have been reached through the awareness campaigns.

EIGHT PARTICIPATING SCHOOLS IN 2016-17:

- Community High School
- Huron High School
- Lincoln High School
- Milan High School
- Pioneer High School
- Saline High School
- Saline Alternative High School
- Skyline High School

CLASSROOM MENTAL HEALTH

To expand outreach, in 2015 the University of Michigan Depression Center launched classroommentalhealth.org, a website designed to support educators of grades 8 – 12 in communicating with their students about mental health concerns. The website was developed in collaboration with multiple organizations including the State of Wyoming Department of Education, Prevention Management Organization of Wyoming, Teton County School District, Gull Lake Community Schools (Gull Lake, Mich.), and Ann Arbor Public Schools. Special efforts were made to tailor the messages to each school and community. The Classroom Mental Health website provides school staff with a variety of tools and resources which can be easily accessed and utilized within the context of a teacher’s regular classroom routine. The website can also serve as an additional resource for existing school-based mental health and suicide prevention programs by:

- Providing brief, environmental and action-based strategies that can help to create a classroom atmosphere beneficial to student mental health;
- Supporting communication and collaboration between school staff and the parents/families of students who are struggling with mental health concerns; and
- Helping to facilitate the referral process for students in distress through a customized database of local support resources.



2017 Student Mental Health Advocate Award winners Nate Sawyer (L) and Forrest Cao (R)

2017 DEPRESSION ON COLLEGE CAMPUSES CONFERENCE

The 15th annual Depression on College Campuses Conference, held in March 2017, brought together a multi-disciplinary group of 600 registrants from across the country (plus Canada), with representation from 19 states and more than 80 different colleges, universities and organizations.

Workshops and presentations explored best practices to meet the growing demand for mental health services and innovative ways to address the mental health concerns among the current generation of college students. This conference is the “grandparent” of all such conferences and has become an established national tradition.

SAVE-THE-DATE: Join us for the 16th annual Depression on College Campuses Conference March 13 and 14, 2018, in Ann Arbor. The 2018 conference will focus on “Redesigning Structures, Spaces and Processes to Promote Wellness.” Learn more at www.depressioncenter.org/doccc/.

CAMPUS MIND WORKS

The Depression Center created the Campus Mind Works program in 2009 to support student mental health at the University of Michigan. The Campus Mind Works website (campusmindworks.org) was designed to provide

customized mental health support for U-M students through an easy-to-search comprehensive database of community resources, educational modules and a variety of self-care tools to be used in conjunction with treatment or independently. The launch of the website, also in 2009, was accompanied by intensive outreach efforts that targeted U-M faculty, staff, students and their families. The goal is to raise awareness about depression and related illnesses, and to promote help-seeking behaviors. Between July 1, 2016, and June 30, 2017, there were 229,470 visits to the website.

CAMPUS MIND WORKS WELLNESS GROUPS

The Campus Mind Works outreach initiative offers free educational support groups on U-M’s Ann Arbor campus to undergraduate and graduate students who are managing a mental health condition. The support groups are organized through a partnership between the U-M Depression Center, College of Engineering, and the Newnan LS&A Academic Advising Center. Groups convene twice a month during the school year.



ATHLETES CONNECTED

Many student-athletes experience mental health problems, such as depression and anxiety, but, for a variety of reasons, they often are reluctant to seek help. The Athletes Connected program, developed with initial funding from an NCAA Innovations in Research Grant, is a unique collaboration between the University of Michigan Depression Center, School of Public Health, and Athletic Department. Athletes Connected uses a comprehensive approach that involves student engagement, targeted interventions and scientific research to increase awareness of mental health issues, reduce the stigma of help-seeking, and promote positive coping skills among student-athletes. Core components of the program are education and awareness using team presentations and digital content

through videos, social media, and the website, as well as biweekly wellness groups.

2016 – 2017 UPDATES:

- Creation and dissemination of four new videos:
 - “Life After Athletics,” featuring Ashley Cohagen, former swimmer
 - “You Don’t have to be Sick in Order to Get Better,” featuring Stacey Ervin, former gymnast
 - “Coping Skill: Meditation,” featuring Stacey Ervin, former gymnast
 - “Coping Skill: Mindful Self-Compassion,” featuring Jaimie Phelan, cross-country and track
- Relaunch of Athletes Connected website (athletesconnected.umich.edu/) with expanded topics and resources
- Thirteen wellness groups, 48 attendees
- Eighteen team presentations

Many of the athletes aided by these programs choose to continue participation by volunteering to aid others, an illustration of “peers helping peers.”



Jaimie Phelan, a mental wellness ambassador, became Michigan’s first NCAA champion in the 1,500m run in June 2017. Phelan is a member of the Athletes Connected Campus Advisory Board and is featured in a coping skills video titled ‘Mindful Self-Compassion.’

.....
“[I came to the group because] I recently started psychotherapy and was interested in learning more about it and what I can do to improve/ensure success.” – Campus Mind Works wellness group attendee

A BROADER IMPACT

Different people have different needs. The U-M Depression Center seeks to treat the patients coming through our doors through personalized and precise treatment methods. We are tailoring our approach to our unique audiences: veterans; students and teachers, young children, parents and others.



M-SPAN: Military Support Programs and Networks

M-SPAN (Military Support Programs and Networks) was founded in 2008, catalyzed by Mr. Fred Wilpon following his trip to Walter Reed Hospital with his New York Mets baseball players. After conversing with Dr. John Greden, the University of Michigan was asked to help coordinate involvement of three academic medical centers to be part of the Welcome Back Veterans (WBV) initiative. Three sites from the National Network of Depression Centers (University of Michigan, Weill-Cornell, and Stanford) were selected and the WBV was established as a partnership between the Robert J. McCormick Foundation and Major League Baseball Charities. WBV was aimed at addressing clinical and re-entry needs of those who were serving or had served our country in Iraq or Afghanistan, but returned home with depression, post-traumatic stress, traumatic head injuries, or related brain-behavior clinical problems.

M-SPAN's continued dedication to military mental health emphasizes innovative approaches to outreach and engagement, strategies for reducing stigma and isolation, and the design and delivery of evidence-based programs for active service members, veterans and their families. There are now 20+ faculty and staff affiliated with the M-SPAN.

It includes five flagship programs:

- Buddy-to-Buddy;
- Peer Advisors for Veteran Education (PAVE);
- Strong Military Families;
- HomeFront Strong; and
- After Her Service.

BUDDY-TO-BUDDY

Buddy-to-Buddy leverages the power of peer support to overcome the stigma related to asking for help. It builds upon the military ethic of "we take care of our own" and "you never leave a buddy behind." Volunteer military veterans are trained to provide outreach, support and linkage to resources to service members and veterans in need. Buddy-to-Buddy is a partnership with the Michigan Army National Guard; veterans from all branches of the military and service eras are eligible for assistance.



○ Buddy-to-Buddy program volunteer Bob Short assisting a soldier

Buddy-to-Buddy's impact has been profound. One hundred twenty trained volunteer veterans are experts in local, state and federal resources, and are available throughout the state to handle veteran concerns. Since the program's founding in 2009, volunteers have logged over 20,000 hours assisting more than 4,000 service members and veterans with a wide variety of concerns, including depressions, anxiety, substance abuse, employment, marital and family crises, finances, housing, and more. Buddy-to-Buddy has garnered support from Welcome Back Veterans (the Robert R. McCormick Foundation

and Major League Baseball Charities), the Judy and Fred Wilpon Family Foundation, Cinnaire, Avfuel Corporation, and many individuals who contributed toward a crowdfunding campaign. It has been emulated by many programs elsewhere in the country.



○ A training session at the PAVE National Training Conference in August 2016

PEER ADVISORS FOR VETERAN EDUCATION (PAVE)

PAVE is an outreach and peer support program developed for student veterans returning to college on the Post-9/11 GI Bill. It is designed to assist student veterans in successfully achieving their educational and personal goals. PAVE connects student veterans on campus with Peer Advisors at their schools who then provide support and link them with resources to facilitate a smooth transition to college or navigate challenges they are facing. The program includes a web-based platform featuring online training modules for student veteran Peer Advisors; best practice outreach, support and linkage to resource strategies; a mobile app for Peer Advisors to track their work and quickly identify resources; and a management console that allows schools to track data and identify trends and gaps in services.

Initially piloted at three schools, PAVE rapidly proved its worth. It quickly expanded to 10 campuses and now has a presence on 40 campuses across the country including state universities and private and community colleges. More than 7,000 student veterans have been impacted by the program since its inception in 2012. PAVE staff members have trained more than 700 Peer Advisors and

nearly 100 Veteran Services Coordinators and school administrators. A large scale survey of student veterans was fielded at 10 campuses to yield data on the student veteran experience and the impact of PAVE. The PAVE team has written a book chapter (in press as of August 2017) and an article on the program is under review. The program has received funding through grants from the Bristol-Myers Squibb Foundation, and continues to seek financial partners in order to expand the program. Partners and supporters are welcomed and appreciated.

STRONG MILITARY FAMILIES: A PROGRAM FOR MILITARY FAMILIES WITH YOUNG CHILDREN

Strong Military Families (SMF) is a parenting intervention for military families with young children. It is targeted to military service members, their spouses or partners, and their children from birth through eight years of age. SMF is designed to support and enhance the resilience of military families by creating opportunities for families to come together to learn, support one another, and grow in navigating the unique everyday challenges they face.

To date, the program has served more than 250 parents and young children in Southeast Michigan, Virginia and Wisconsin, via either a 10-week multifamily group or an intensive weekend version of the program. Results of a rigorous evaluation indicate that parents who participated in the SMF multifamily group program, compared to those who did not, reported feeling more confident regarding their parenting, and that they had improved their own personal mental health and resilience. They also demonstrated more positive engagement with their children after the intervention period. Similar gains were found in the intensive weekend program. Team members of the SMF program have presented at national and regional conferences and published four manuscripts in peer-reviewed journals. Funders include Welcome Back Veterans, the National Institutes of Health, and Wins for Warriors. Participants have described it as a "marriage-saving experience."

HOMEFRONT STRONG: BUILDING RESILIENCE IN MILITARY FAMILIES

A related eight-week resiliency program, HomeFront Strong (HFS), is designed to support Post-9/11 military and veteran spouses and partners as they navigate the challenges and stressors common to military and veteran life. Through a structured curriculum, HFS aims to enhance individual resilience, boost positive coping, and improve the psychological health of participants. A parallel group is available for children and teens of participating families.

HomeFront Strong has been offered in-person in

Southfield Eaton Rapids, Center Line and Grand Rapids through funding from the Department of Defense. The development of a web-based program that includes the same content shared with the in-person group allows program access for those unable to attend in-person. A total of 79 military/veteran families have enrolled in the web-based or in-person program to date. Training in the HFS model has also been provided to nine community providers at Easter Seals Michigan and 12 community providers at the VFW National Home for Children. Additionally, five community providers have completed advanced training through a coaching model and have offered HFS at their own community sites. The program and training were originally funded through Welcome Back Veterans and the Ethel and James Flinn Foundation. Future endeavors include multi-site training of VA clinicians and community providers in the model, dissemination of HFS to additional community sites throughout Michigan, and total program participation for 300 military/veteran families.

AFTER HER SERVICE

This most-recent initiative was created to fill a glaring gap. Few programs currently exist to specifically aid women veterans. In 2015, the M-SPAN team initiated a needs assessment to define the concerns and gaps in services for this population. Female veterans identified several areas they wished to see addressed including: recognition of the special challenges faced by female veterans, help with successfully reintegrating to civilian life, assistance finding meaningful employment, and developing positive ways of coping and managing stress. After Her Service, filling a notable gap, has received initial funding from the Bristol-Myers Squibb Foundation.

NATIONAL CONFERENCES

In November 2016, M-SPAN convened more than 200 researchers, military leaders, service providers and funders representing 33 states at a trend-setting National Summit on Military and Veteran Peer Programs. This interdisciplinary conference stimulated discussion and understanding of the latest research on the effectiveness of peer programs, highlighted best practices and technology

used in successful programs, considered innovative strategies for sustainability, and offered an in-depth look at key components of program evaluation. Funding for the event was provided by the Robert R. McCormick Foundation and the Bob Woodruff Foundation. The RAND Corporation Research Brief on peer programs was sponsored by the Bristol-Myers Squibb Foundation.

M-SPAN's PAVE Program hosted a two-and-a-half day National Training Conference in August 2016. Approximately 150 representatives from the program's partner campuses attended. The training was kicked off with a keynote address from General George W. Casey, Jr. (Ret.), Former Chief of Staff, U.S. Army, and remarks from Jared Lyon, President and CEO of Student Veterans of America. Attendees were trained on how to implement and sustain the program on their campuses.

Blended together, these initiatives form a powerful mosaic to aid those who have served us, paid some sort of personal price, and now deserve our help.



○ John Greden, M.D., Major General Patrick Sargent, Jane Spinner, M.B.A., Michelle Kees, Ph.D., and Brigadier General Michael A. Stone at M-SPAN's National Summit on Military and Veteran Peer Programs in November 2016 at the Michigan League

Strong Military Families is designed to support and enhance the resilience of military families by creating opportunities for families to come together to learn, support one another, and grow in navigating the unique everyday challenges they face.

Effective Mental Health Services, Accessible in All Schools

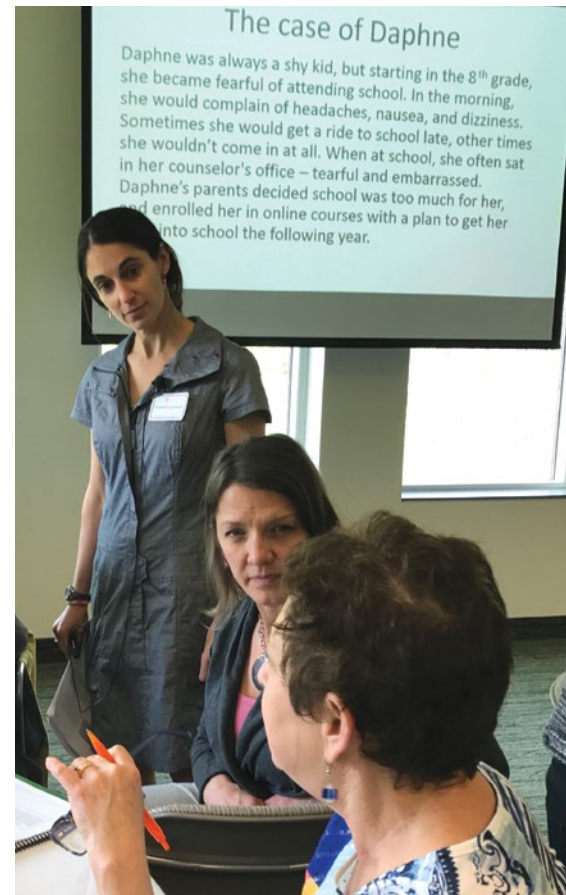
TRAILS statewide expansion effort under way

Fueled by inspirational student success stories and encouraging feedback from early demonstration trials, TRAILS (Transforming Research into Action to Improve the Lives of Students) is working hard to make effective mental health care accessible for all children.

With mood and anxiety disorders affecting 20 – 30 percent of school-age children, TRAILS seeks to train school mental health professionals to utilize evidence-based practices with students to improve the quality of life for those suffering from mental illness. While many mental health disorders are treatable, only a fraction of children in need ever access effective care, and public schools are often the only source of help. By training school professionals to provide mental health support to students within the school setting, TRAILS is improving access and changing student outcomes.

TRAILS provides clinical training to school staff, and then assigns each school a trained coach to work with the school for three months, offering ongoing instruction to school professionals during co-delivery of cognitive behavioral therapy (CBT) and mindfulness skill-building groups for students. These CBT and mindfulness skills groups cultivate fundamental coping and self-care skills that can last students a lifetime and have already demonstrated a positive impact on social, emotional, behavioral and academic outcomes for participants. TRAILS is currently building a statewide network of 150 mental health providers who will serve as coaches in their local communities.

To connect with these mental health providers and ready them for the role of a coach, TRAILS is now conducting free regional trainings



TRAILS Program Director Elizabeth Koschmann, Ph.D., discusses applying CBT and mindfulness techniques to help students develop coping mechanisms

across Michigan. TRAILS trainings have already taken place in Detroit, Grand Rapids and Marquette, and additional trainings are scheduled for the fall. These didactic trainings include informative presentations from clinical experts and dynamic activities to bolster core skills in CBT and mindfulness. Each coach-in-training (CIT) also has access to the robust TRAILS website, www.trailstowellness.org, which includes a library of printable clinical resources and step-by-step session agendas for using the skills with practice cases from their caseloads. To date, TRAILS trainings have attracted 81 mental health providers to become coaches.

A recently awarded \$3.87 million grant from the National Institute of Mental Health will help TRAILS launch a five-year, federally funded, randomized controlled trial to document program efficacy. This trial, scheduled to begin in 2018, will engage more than 200 school professionals spanning all 83 Michigan counties, each working with a trained TRAILS coach. Through rigorous clinical trials such as this one focused on collection of robust data, and through ongoing program development with an expansive network of collaborative partners, TRAILS is making effective mental health services accessible in all schools. Amy Kilbourne, Ph.D., M.P.H., is an associate director of the U-M Depression Center and is the principal investigator for this study.

TRAILS is affiliated with the University of Michigan Depression Center and supported by the Michigan Health Endowment Fund, Michigan Medicaid, Michigan DHHS & CMH offices, Prosper Road Foundation, the Mackey Family, and the University of Michigan Department of Psychiatry.

Michigan Child Collaborative Care Program (MC3)

Almost one of five children in the U.S. has a diagnosable mental health disorder, but many remain undiagnosed, and only 20 – 25 percent receive any treatment. A key reason is that most counties in Michigan, as well as in other rural areas of America, don't have access to a child psychiatrist. Similarly, there is a severe shortage of perinatal psychiatrists, leaving primary care providers to handle high-risk women with complex behavioral health disorders, and with little support. The Michigan Child Collaborative Care Program (MC3) was developed to address this treatment gap.

The MC3 program, led by Sheila Marcus, M.D., Section Chief of Child and Adolescent Psychiatry, offers crucial services to primary care providers as well as patients and families. These services include:

- Same-day phone consultation from U-M child and perinatal psychiatrists to primary care providers for diagnostic clarification and evidence-based pharmacologic and behavioral health treatment recommendations.
- Telepsychiatry (Telehealth) consultations for the more complex children and families and high-risk pregnant and post-partum women so that these patients can be assessed through videoconference by a U-M psychiatrist without having to travel to Ann Arbor.
- Behavioral Health Consultants (advanced degree mental health clinicians) who triage consultations; facilitate referrals across systems of care (schools, protective services, foster care, juvenile justice); and monitor outcomes over time.
- Psycho-education and brief interventions for patients and families provided by Behavioral Health Consultants who are embedded in select primary care practices.
- Group case consultation from U-M psychiatrists by telephone and videoconference so that primary care practices and nurse practitioners can discuss multiple patients.
- Web-based educational programs for primary care providers.

MC3 is now in 45 counties in Michigan and continues to expand. A total of 1,478 primary care providers are enrolled in the program. As of June 2017, 4,995 patients and families have been served. Almost 98 percent of patients served by MC3 are not currently being seen by a psychiatrist, and the vast majority do not have access to a psychiatrist in their county. A major void in health care delivery is being met.

Here's what primary care physicians are saying about the program:

"I learn something new with every MC3 consult. I am more

"It took a while, but about halfway through the group, I started to get into the routine and started to feel a little better. Then it started getting easier and I realized that it was working. I'm getting better and I didn't think I would."

– Student participant in TRAILS

TRAILS TRAINING MODEL



Michigan Child Collaborative Care Program (MC3) *Continued from page 23*

confident with management of mental health services as a result of having the service available. I very much appreciate this service. They (the U-M psychiatrists) discuss the pro and cons of different meds, they discuss follow up, and they follow-up really quickly."

"I felt that the consulting psychiatrist listened thoroughly and addressed all the issues at hand. I also received a typed summary faxed THE SAME DAY, which was terrific."

"It has allowed me to start children on medication that I otherwise would have left up to the referring mental health provider, which has allowed patients to get treatment earlier."

"I love the feedback and teaching that is given, so I can generalize the info for my whole practice and broaden my knowledge."

Through MC3, the University of Michigan Depression Center and Department of Psychiatry have been successful in leveraging scarce psychiatry resources on behalf of Michigan's most vulnerable children. It is also one of the few programs in the country providing these services to high-risk peri- and post-partum women. MC3 is a collaboration with the Michigan Department of Health and Human Services. It was launched with a grant from the Ravitz Foundation.

Workplace Depression and Mental Health Program: Healthy Mind At Work

The University of Michigan Depression Center officially launched the Workplace Depression and Mental Health Program (WMHP) in June 2017, called *Healthy Mind At Work*. Since 2008, Dr. John Greden, executive director of the Depression Center, has had a vision to lead efforts to address depression and related illnesses in workplaces, a setting from which health-care policies would have potential to greatly impact the entire nation. The desire for innovative programs in corporate and workplace venues is rapidly accelerating. Recent studies show that depression and mood disorders are now the number one cause of lost productivity in the workplace — estimated to reach \$1.15 trillion per year globally. The time is ripe for the Depression Center to take the initiative and facilitate this change in delivery.

During 2015 and 2016, the Depression Center connected with the Ross School of Business and sponsored a group of Ross MBA students to conduct research on depression in the workplace. Their research, interviews and visits to various corporate settings generated insights and



provided recommendations for the Depression Center to move forward with this U-M workplace initiative. In 2017, a Ross MBA graduate and experienced business executive Albert Lin joined the Depression Center to build and guide this program.

The U-M's Workplace Program started with an initial gift from the Bruce C. Abrams Foundation. The initiative was launched with a clear mission: to raise the awareness of mental health issues in the workplace and provide cost-effective solutions for organizations to improve employees' mental wellness and effective functioning. The program will build on the Depression Center's expertise in research and education, work closely with other U-M departments and technology vendors, and engage with business partners to tackle depressive and related disorders in the workplace. Similar to the remarkable successes that the Depression Center's outreach programs have had in military, college and school settings, the need is great and the timing is now. Stay tuned for updates on how this program evolves.

Recent studies show that depression and mood disorders are now the number one cause of lost productivity in the workplace — estimated to reach \$1.15 trillion per year globally.

Building Bridges with the National Network of Depression Centers



- NNDC Founding Chair Dr. John Greden (right) conducted a well-received grand rounds session on "Precision Treatments for Depressions and Bipolar Illnesses: The Time Has Come," as part of the Ohio State University's announcement of its new NNDC membership. He is shown, with Ohio State Chair of Psychiatry and NNDC Board Member Dr. John Campo.

The University of Michigan Depression Center (UMDC) was the originator and catalyst for the 16 founding members of the National Network of Depression Centers (NNDC), a nonprofit research consortium dedicated to improving screening methods and large, long-term research projects, and developing improved treatments for depressions, bipolar illnesses and related mood disorders. Dr. Greden was Founding Chair of the Network. The home office is located in Ann Arbor, with Patricia Rinvelt, M.B.A. serving as Executive Director.

The NNDC started with 16 eminent universities, and has grown to 26 members. A major goal is to create a large, growing, long-term registry to promote the development of personalized, precision treatments. The Mood Outcomes Report, as it is known, recently achieved 5,000 registrants, toward its target of 25,000.

The NNDC recently partnered with the American Psychiatric Association to enable synergy in data repositories. This partnership joins another with OneMind for Research and others. The NNDC's annual meeting rotates around member sites and was held in Ann Arbor in 2017. As NNDC programs continue to expand, it provides a national and global platform for all member sites, with the UMDC playing an integral role. Network leaders have consulted with congressional leaders on pending healthcare issues.

The NNDC also has a growing list of international affiliates, including the Canadian Depression Research & Intervention Network and the Institute of Psychiatric Phenomics and Genomics at the Ludwig-Maximilian University of Munich.

EDUCATION SPOTLIGHT: NNDC VISITING PROFESSOR PROGRAM

The NNDC's Inaugural Visiting Professor Program was a resounding success, with four member centers hosting prominent experts who conducted grand rounds, led mentorship sessions, and participated in local community events that raised awareness of treatments for depressions and mood disorders. Based on post-program evaluations, the attendees' comments showed that the program had a positive impact in several areas, including advancing translational research, disseminating treatment advancements, and reducing stigma to ensure a future of high-quality care for those struggling with mood disorders.

GRAND ROUNDS
200+
ATTENDEES

PUBLIC EVENTS
250+
ATTENDEES

NNDC Centers of Excellence

- Baylor College of Medicine
- Brigham & Women's Hospital – Harvard Medical School, Partners HealthCare
- Weill Cornell Medical College
- Duke University
- Emory University
- The Johns Hopkins University
- Massachusetts General Hospital – Harvard Medical School, Partners HealthCare
- Mayo Clinic
- McLean Hospital – Harvard Medical School, Partners HealthCare
- The Ohio State University – Wexner Medical Center
- Medical University of South Carolina
- Stanford University
- University of California San Diego
- University of California San Francisco
- University of Cincinnati & Lindner Center of HOPE
- University of Colorado Denver
- University of Illinois at Chicago
- University of Iowa
- University of Louisville
- University of Massachusetts Medical School
- University of Michigan
- University of Pennsylvania
- The University of Texas Health Science Center at Houston, McGovern Medical School

Associate Members

- Florida State University
- Michigan State University College of Human Medicine & Pine Rest Christian Mental Health Services
- Penn State Milton S. Hershey Medical Center



○ NNDC Executive Director Pat Rinvelt, Founding Chair Dr. John Greden, and Chairman of the Board Dr. J. Raymond DePaulo, Jr.

NNDC COLLABORATIONS CROSS BORDERS AND AISLES

In early 2017, Dr. John Greden, founding chair of the NNDC joined other members of the NNDC executive leadership and representatives from the Ohio State University, one of the NNDC's newest member centers, to reach out to members of Congress and discuss the bipartisan issue of funding cures for depressions and other mood disorders and advocate for increased federal support for depression research.

The Depression Center Community Volunteer Committee

In the spring of 2006, a group of individuals from Ann Arbor and surrounding communities came together to form a committee to support the efforts of the University of Michigan Depression Center. They share a common passion — to help raise awareness and to educate others about depression, bipolar and other mental health disorders within our communities, and in doing so, to reduce the stigma that accompanies these illnesses.



○ Depression Center community volunteers with staff at 2017 annual summer gathering

Since 2006, the Depression Center's Community Volunteer Committee has raised over \$300,000 by hosting a variety of fundraising events to support a wide variety of Depression Center programs that are beneficial to the community at large.

Because education is an important focus for the committee, they also schedule different faculty speakers from the Depression Center and the greater university to present at each of their monthly meetings. Over time, the committee has welcomed speakers who are experts in a wide variety of areas, such as suicide risk and prevention strategies; nutrition, exercise and mood; sleep, perinatal psychiatry and the impact of maternal/family psychiatric illness on early child development, to name a few.

The Community Volunteer Committee meets monthly and welcomes new members. If you are interested in more information, please email: depression@umich.edu.

DEPRESSION CENTER LEADERSHIP TEAM

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Rachel Upjohn Professor of Psychiatry and Clinical Neurosciences

Research Professor, Molecular & Behavioral Neuroscience Institute

Founding Chair, National Network of Depression Centers

STANDING MEMBER

Gregory Dalack, M.D.

Associate Professor of Psychiatry
Chair of Psychiatry

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Director, VA Quality Enhancement Research Initiative (QUERI) Program

Research Career Scientist, VA Ann Arbor Center for Clinical Management Research

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Director of Prechter Bipolar Research Programs

Sagar V. Parikh, M.D., FRCPC

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Professor of Psychiatry, University of Michigan

Medical Director, National Network of Depression Centers (NNDC)

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Associate Chair for Integrated Medical and Psychiatric Services, Department of Psychiatry

Zonal Representative (Area 2, USA), World Psychiatric Association

Past President, American Psychiatric Association

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