

VOX *vitae*

THE VOICE OF LIFE

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Department of Psychiatry, University of Maryland School of Medicine

Greetings from the Chair



Dear Friends and Colleagues:

It is with great pleasure for me to announce a flurry of accomplishments coming from the Department with this issue of *Vox Vitae*. I admire the supportive relationships among my fellow colleagues, which enable a translational approach to successful ventures.

The first achievement to highlight is the \$10.7 million grant that was recently awarded to the Maryland Psychiatric Research Center (MPRC), which established the Silvio O. Conte Neuroscience Research Center, led by Robert Schwarcz, PhD. The Center grant was only one of two awarded across the nation, and marks three decades of work among basic and clinical scientists.

In addition, the recent opening of the Clinical Neurobehavioral Center (CNC) proved to be a challenging but rewarding task. I was extremely

impressed by my colleagues, along with the Maryland Center of Excellence on Problem Gambling and the Center for Translational Research on Adversity, Neurodevelopment and Substance abuse (C-TRANS), for their ability to collaborate

“ I admire the supportive relationships among my fellow colleagues, which enable a translational approach to successful ventures. ”

on a new venture to propel the research of addiction disorders.

With all of this said, I thank each and every one of you for the hard work that has been performed to date, often behind the scenes, and I look forward to what lies ahead.

Until then, I remain,

With Very Best Wishes,

Bankole A. Johnson, DSc, MD, MBChB, MPhil, FRCPsych, DFAPA
The Dr. Irving J. Taylor Professor and Chair, Department of Psychiatry; Director, Brain Science Research Consortium Unit (BSRCU)

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National Institute of Mental Health Awards Maryland Psychiatric Research Center \$10.7 Million



Robert Schwarcz, PhD, Director of the Conte Center and MPRC Neuroscience Program

The Department of Psychiatry University of Maryland School of Medicine has much to celebrate – mainly because of the decision by the National Institute of Mental Health (NIMH) to award the Maryland Psychiatric Research Center (MPRC; an Organized Research Center within the Department) a 5-year, \$10.7 million grant.

named after the late U.S. Representative, who was a staunch advocate for federal funding of neuroscience research. The Center will continue research on schizophrenia, a major mental health disorder that affects more than 2.2 million individuals in the U.S. today.*

“ If we get to the stage where we can normalize kynurenic acid function in the brain with drugs, we should be able to significantly improve the lives of people with schizophrenia. ”

– Dr. Schwarcz

Robert Schwarcz, PhD, Director of the MPRC Neuroscience Program, and Professor of Psychiatry, Pharmacology and Pediatrics, is the Principal Investigator of the grant and will head the Conte Center. He emphasizes that the award, which is based on hypotheses that were generated in his basic science laboratory during more than three decades, relies critically on the close interactions between basic and clinical investigators, who work hand-in-hand to advance the diagnosis and treatment of individuals with schizophrenia. Conte researchers at the MPRC will now jointly extend the studies in animals and, for the first time, test the new hypotheses in humans.

In particular, scientists at the MPRC will use the Conte Center grant to identify new chemical agents that are designed to normalize the brain levels

“ This is the largest grant awarded to the Department over the past five years. ”
– Professor Johnson

With only one of two Conte Center grants awarded across the nation, the MPRC will establish the Silvio O. Conte Neuroscience Research Center,

We're at the vanguard of conducting translational research to investigate schizophrenia and other psychiatric disorders. The ability to collaborate characterizes so much of our work.

– Dr. Buchanan

of kynurenic acid, a natural compound found in abnormal excess in the brains of patients with schizophrenia. By developing medications that can reduce the production of kynurenic acid, Dr. Schwarcz and his colleagues hope to develop a fundamentally new treatment.

“If we get to the stage where we can normalize kynurenic acid function in the brain with drugs, we should be able to significantly improve the lives of people with schizophrenia,” said Dr. Schwarcz.

The MPRC, which opened in 1968, boasts a rich history led by innovative scientists, including William T. Carpenter, MD, who arrived at the Center in 1977. It was he who first directed research toward schizophrenia and fostered an environment that encouraged translational research among scientists.

“Dr. Carpenter really had the vision to develop a Center which integrated basic and clinical science research, and so we're at the vanguard of conducting translational research to investigate schizophrenia and other psychiatric disorders,” said Robert Buchanan, MD, Interim Director of the MPRC. “The ability to collaborate characterizes so much of our work. The Conte Center offers the promise of producing science that will someday lead to novel therapeutic treatments.”

Now, the MPRC flourishes as an internationally recognized research Center of the Department of Psychiatry, and operates jointly with the State of Maryland Mental Hygiene Administration and the Department of Health and Mental Hygiene.

“This is the largest grant awarded to the Department over the past five years,” said Bankole A. Johnson, DSc, MD, MBChB, MPhil, FRCPsych, DFAPA. “It's remarkable how the researchers over at MPRC have devoted their careers to pursuing the treatment of schizophrenia, which is certainly not a mild undertaking.”

**<http://schizophrenia.com/szfacts.htm>*

For more information, please visit the Maryland Psychiatric Research Center (MPRC) at: www.mprc.umaryland.edu

Conte Center scientists (from left to right): Frank Blatt, PharmD; Ana Pocivavsek, PhD; Sarah Beggiato, PhD; Francesca Notarangelo, PhD; Sharon Stilling; Leonardo Tonelli, PhD; Laura Rowland, PhD; Robert Schwarcz, PhD; Deanna Kelly, PharmD, BCPP; Robert McMahon, PhD; Elliot Hong, MD; Robert Buchanan, MD; William Carpenter, MD.



The Clinical Neurobehavioral Center: A Collaborative Endeavor to Advance Treatment for Addictions

The Clinical Neurobehavioral Center (CNC) was formally opened on September 12, 2014, and houses strong Centers of research on the addictions with the Center for Translational Research on Adversity, Neurodevelopment and Substance abuse (C-TRANS), and the Maryland Center of Excellence on Problem Gambling. The Center will focus on alcohol use disorders (AUDs) as a subset of brain disorders, substance use and gambling disorders.

George Koob, PhD, Director of the National Institute on Alcohol Abuse and Alcoholism (NIAAA), was the keynote speaker at the opening ceremony, and expressed his enthusiasm for a Clinical Center that will focus on the research and treatment of a variety of impulse control disorders under one roof.

“The treatment of alcoholism is a big priority for me,” said Dr. Koob, internationally known for his research on alcohol and stress, during his opening speech. “We want to be able to translate to

medications, and this is a major undertaking of the pharmaceutical industry.”

The CNC is the first clinical trial facility to study AUDs in the region, and it will recruit patients from the Northern DC area, as well as from Columbia and its surrounding regions, including Baltimore.

“This site will be yet another collaborative environment for School of Medicine physician-scientists to research, innovate and work in partnership on solving some of the most persistent neurobehavioral problems,” said Dean E. Albert Reece, MD, PhD, MBA, Vice President for Medical Affairs, University of Maryland, and the John Z. and Akiko K. Bowers Distinguished Professor and Dean of the School of Medicine. 🍷

Please stay tuned for more information about the Clinical Neurobehavioral Center, C-TRANS, and the Maryland Center of Excellence on Problem Gambling in the next issue of Vox Vitae.



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Take Note!

Department Accomplishments

Awards



This past year, **William T. Carpenter, MD**, received the Rhoda and Bernard Sarnat International Prize in Mental Health from the Institute of Medicine, honoring outstanding achievement in improving mental health. He also received the Dean's Distinguished Gold Medal from the University of Maryland School of Medicine for his high impact contributions to medicine, science or society.



James Gold, PhD (pictured left), and **Robert Buchanan, MD** (pictured right), were selected as 2014 Thomson

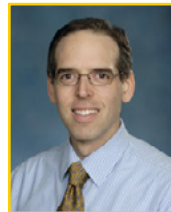
Reuters Highly Cited Researchers. The selection was based on the publication of multiple highly cited papers that were ranked in the top 1% by citations for field and year.



Deanna Kelly, PharmD, BCPP (pictured left), Professor of Psychiatry and Director of the Treatment Research

Program at the Maryland Psychiatric Research Center (MPRC) of the Department of Psychiatry, was recognized and received an award at the 17th Annual College of Psychiatric and Neurologic Pharmacy meeting in April of 2014 in Phoenix, Arizona, for her service as the 2014 Program Chair for the meeting.

Faculty Appointments



Seth Himelhoch, MD, MPH, will become the new Director of the Consultation Liaison Division, effective January 1, 2015.



Nancy Lever, PhD, Division of Child and Adolescent Psychiatry, has been appointed as the Co-Chair of the National Coordinating Committee on School Health and Safety.

Grants

In July 2014, **Robert Buchanan, MD** (previously pictured), Professor and Interim Director of the Maryland Psychiatric Research Center (MPRC), was awarded a five-year R01 grant from the National Institute of Mental Health (NIMH) for "3/3-Social Processes Initiative in Neurobiology of the Schizophrenia(s)." The grant is designed to identify the neural circuitry that predicts impairments in social cognitive processes and concomitant social function in people with schizophrenia or a related disorder.

Seth Himelhoch, MD, MPH (previously pictured), Associate Professor, VA Capitol Health Care Network (VISN 5) Mental Illness Research, Education and Clinical Center (MIRECC), received a four-year \$2 million grant from the Substance Abuse and Mental Health Services Administration (SAMHSA) for his project, "STIRR-IT: Co-located HIV/HCV Prevention & Treatment in a Behavioral Health Setting."



In August 2014, Pfizer awarded a \$1 million unrestricted research grant to **Elliot Hong, MD**, titled, “Genetic Architecture of Schizophrenia.” The grant is designed to develop an academic/

industry collaboration between Maryland Psychiatric Research Center (MPRC) and Pfizer Neuroscience, which will be based on using multi-scale fMRI, DTI, electrophysiology and GWAS data to identify genetic contributions to impaired fronto-temporal neural circuit functioning in schizophrenia.

The award of the contract was based on a previously funded National Institute of Mental Health (NIMH) collaboration between Dr. Hong and Dr. Patricio O’Donnell, when Dr. O’Donnell was a member of the Department of Anatomy and Neurobiology.



In October 2014, the NIH announced the Big Data 2 Knowledge (BD2K) Initiative Grant recipients. The Enhancing NeuroImaging Genetics through Meta-Analysis (ENIGMA) Center

for Worldwide Medicine, Imaging, and Genomics was one of the funded applications. **The Maryland Psychiatric Research Center (MPRC)** is one of the 18 sites worldwide receiving sub-awards from this Center, and **Peter Kochunov, PhD** (pictured), will lead the work group.



The **Center for School Mental Health**, co-directed by **Sharon Hoover Stephan, PhD** (pictured left), and **Nancy Lever, PhD** (previously pictured), both

Associate Professors in the Division of Child and Adolescent Psychiatry, successfully competed for six grants totaling over \$5 million in awards to UMB. These are: MD-SPIN Maryland’s Suicide Prevention and Early Intervention Network, Project Aware - Now is the Time State Educational Agency Grants, MD-HT Maryland Healthy Transitions, CoIIN Collaborative Improvement & Innovation Network on School-Based Health Services, Developing Knowledge about What

Works to Make Schools Safe, and MD-BHAY Maryland Behavioral Health for Adolescents and Young Adults.

Presentations



Robert Schwarcz, PhD, served as Coordinator of “Gliotransmission in Physiology and Pathology” at the Neuroscience School of Advanced Studies (NSAS) in July 2014. He also presented “The Kynurenine

Pathway of Tryptophan Degradation: Links to Major Neurological and Psychiatric Diseases” at The Kynurenine Pathway – in Health and Disease at the Karolinska Institutet Symposium in June 2014.

*Individuals from within the **Department and VA Capitol Health Care Network (VISN 5) Mental Illness Research, Education and Clinical Center (MIRECC)** presented the following:*



• **Amy Drapalski, PhD** (pictured left), Clinical Assistant Professor, and **Alicia Lucksted, PhD** (pictured

right), Associate Professor, plus two members of their research team – “Ending Self-Stigma: An Intervention to Reduce Self-Stigma and Enhance Recovery” at the 2014 Annual National Conference of the Psychiatric Rehabilitation Association in June 2014.



• **Julie Kreyenbuhl, PharmD, PhD**, Associate Professor – “Gender Differences in Prescription of Antipsychotics and Mood Stabilizers with Weight Gain Potential among Veterans with

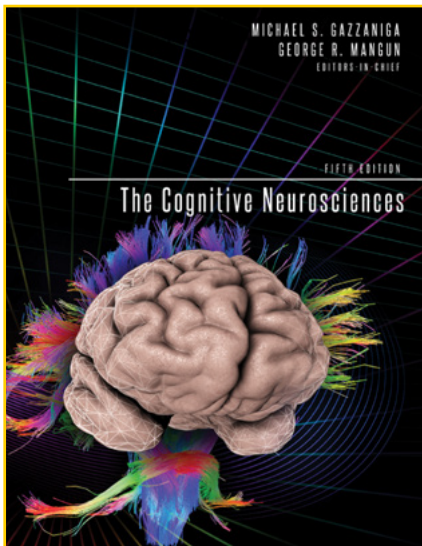
Serious Mental Illness” at the National VA HSR&D Conference on Enhancing Partnerships for Research and Care of Women Veterans in July 2014.

- **Alicia Lucksted, PhD** (previously pictured), Associate Professor – “Recognizing and Reducing Internalized Stigma Regarding Mental Illness” during the Department of Veterans Affairs National Peer Specialist training conference, Peer Support: Bridging the Gap in 2014, Defining Skills for the Future, in June 2014.



- **Eric Slade, PhD**, Associate Professor – “Re-weighting Medical Expenditure Panel Survey Data on Psychiatric Inpatient Expenditures” at the American Society of Health Economists Annual Conference in June 2014.

Publications



Annabelle M. (Mimi) Belcher, PhD, Assistant Professor
In the newest edition of *The Cognitive*

Neurosciences (Fifth Edition), first-author Annabelle (Mimi) Belcher, and co-authors Nora D. Volkow, F. Gerard Moeller and Sergi Ferré, review the neuroscientific evidence to substantiate the notion that addiction is not a disease of choice, but a mental disorder with neurobiological underpinnings. That chapter, entitled “Society and Addiction: Bringing Understanding and Appreciation to a Mental Health Disorder,” discusses the responsibility that researchers should share in disseminating this information to practitioners, health care professionals and society at large.

REFERENCE: Belcher AM, Volkow ND, Moeller FG, Ferré S. Society and Addiction: Bringing Understanding and Appreciation to a Mental Health Disorder. In: Gazzaniga MS, Mangun GR, eds. The Cognitive Neurosciences. 5th ed. Cambridge, MA: The MIT Press; 2014:1035-1042.



James Gold, PhD, Professor (previously pictured), and **James Waltz, PhD**, Assistant Professor (pictured left), were co-authors on the recently published

“Working memory contributions to reinforcement learning impairments in schizophrenia” in *The Journal of Neuroscience*.

In this article, patients with schizophrenia show deficits on reinforcement learning tasks, where the outcomes of actions are used to drive learning. These behavioral deficits are usually understood as reflecting abnormalities in dopamine signaling in the basal ganglia. In this study, the authors used a novel task and computational modeling to show that impairments in working memory are implicated in reinforcement learning deficits in people with schizophrenia.

REFERENCE: Collins AG, Brown JK, Gold JM, Waltz JA, Frank MJ. Working memory contributions to reinforcement learning impairments in schizophrenia. J Neurosci. 2014;34(41):13747-56. doi: 10.1523/JNEUROSCI.0989-14.2014.

Submissions? Questions? Comments? Please send them our way!

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