

Psychiatry & Behavioral Neuroscience

Research Program Faculty: Overview and Research Interests.

Judith Badner, M.D., Ph.D. (Psychiatry & Behavioral Neuroscience).



Dr. Badner is an Associate Professor of Psychiatry & Behavioral Neuroscience. Dr. Badner is a psychiatrist and a statistical geneticist. She has been involved in the analysis of complex genetic diseases and traits, including psychiatric disorders, for many years. Currently, she is involved in analyzing data from whole genome association scans for bipolar disorder; looking at the genetic determinants of expression of genes in brains from healthy controls as well as bipolar disorder, schizophrenia, and depression; copy number variation in autism; and gene-gene interaction analysis in behaviors and responses related to substance abuse. She has also been involved in more theoretical aspects of statistical genetics, such as developing meta-analysis techniques for analyzing linkage genome scans.

John T. Cacioppo, Ph.D. (Secondary Appointment: Psychiatry & Behavioral Neuroscience; Primary Appointment in Psychology).



John Cacioppo, Ph.D. is the Tiffany and Margaret Blake Distinguished Service Professor. Cacioppo and colleagues have been investigating the potential transduction pathways through which social isolation and loneliness contribute to broad-based morbidity and mortality in older adults. Lonely, compared to nonlonely, individuals are more likely to construe their world, including the behavior of others, as threatening or punitive. Consequently, lonely individuals are more likely to be socially anxious, hold more negative expectations for their treatment by others, and adopt a prevention focus rather than a promotion focus in their social interactions. Lonely, compared to nonlonely individuals also show less activation of the ventral striatum when viewing pictures of people in pleasant circumstances, and they show greater activation of the visual cortex and less activation of the tempo-parietal junction bilaterally (indicative of attentional control involved in taking the perspective of another) when viewing pictures of people in unpleasant circumstances. Lonely, relative to nonlonely, individuals are also more likely to appraise stressors as threats rather than challenges, and to cope with stressors in a passive, isolative fashion rather than an active fashion that includes actively seeking the help and support of others. Together, these differences in social cognition result predictably in an increased likelihood of lonely individuals acting in self-protective and, paradoxically, self-defeating ways. These dispositions, in turn, activate social neurobehavioral mechanisms (e.g., tonic

sympathetic activation, circulating catecholamines) whose caustic effects on mental and physical health accrue over time and manifest as regulatory physiological mechanisms begin to decay with age. For instance, individuals who were chronically lonely have less efficient sleep and are characterized by elevated vascular resistance, blood pressure, and mean salivary cortisol level across the course of a normal day. In addition, chronically lonely older adults show an under-expression of genes bearing anti-inflammatory glucocorticoid response elements (GREs) and over-expression of genes bearing response elements for pro-inflammatory NF- κ B/Rel transcription factors in leukocytes, suggesting compromised regulation of pro-inflammatory gene expression by endogenous glucocorticoids. Trainees in Cacioppo's lab learn personality and social psychological assessments; neuroendocrine, cardiovascular, pulmonary, electrocortical, and fMRI methods; and statistical techniques ranging from signal detection analysis, psychometrics, and change score analyses to longitudinal analyses, factor analysis, LISREL, and multi-level modeling.

Eunice Chen, Ph.D. (Primary Appointment: Psychiatry & Behavioral Neuroscience).



Eunice Chen, Ph.D. is an Assistant Professor of Psychiatry & Behavior Neuroscience. Dr Chen's primary research interest is in the development and testing of psychosocial treatments for individuals with difficult-to-treat eating and weight disorders. This includes the development of Dialectical Behavior Therapy for individuals with eating disorders and comorbid disorders (such as Borderline Personality Disorder and Major Depression) and for individuals with Binge-Eating Disorder who do not rapidly respond to standard treatments. Dr Chen's treatment development work also includes the adaptation of Maudsley Family

Therapy for young adults with Anorexia Nervosa. In running the adult component of the Eating and Weight Disorders program, Dr Chen trains Clinical Psychology Interns and Externs in Cognitive-Behavior Therapy and Dialectical Behavior Therapy and assessors in the assessment of Axis I and II disorders for her studies. In the past, Dr Chen conducted a randomized controlled trial for women with Bulimia Nervosa. Her secondary research interest is in the use of psychophysiological assessment methods (e.g., respiratory sinus arrhythmia) and behavioral neuroscience methods to examine possible moderators and mediators of treatment effect on outcome.

Emil F. Coccaro, M.D. (Psychiatry & Behavioral Neuroscience). Dr. Coccaro is the



Ellen C. Manning Professor of Psychiatry & Behavioral Neuroscience and the Chair of the Psychiatry & Behavioral Neuroscience Department at the University of Chicago. Dr. Coccaro has broadly been involved in the study of the biology, genetics, neuroscience, and treatment of impulsive aggression in human subjects. Currently, Dr. Coccaro is most involved in the behavioral genetics and neuroscience study of social and emotional information processing (SEIP). His newest work relates to the development of assessing SEIP and in the neuroscience of SEIP in aggressive and non-aggressive subjects. One project involves the exploration of the

genetic and environmental architecture of SEIP in the context of an fMRI study of twins. Another study involves the nature SEIP in distributed networks in the brain in aggressive and non-aggressive subjects. Another study involves the study of the role of serotonin in the activity of distributed networks of the cortico-limbic system underlying SEIP. In addition, Dr. Coccaro continues to process data from his recently completed NIMH grants and other projects related to: a) family study of aggression, b) twin study of aggression, c) anti-aggressive treatment response study to fluoxetine vs. divalproex vs. placebo, d) fMRI and DTI studies of aggressive and non-aggressive subjects.

Jean Decety, Ph.D. (Secondary Appointment: Psychiatry & Behavioral Neuroscience; Primary Appointment in Psychology) Jean



Decety is a Professor at the University of Chicago with a primary appointment in the Department of Psychology and a secondary appointment in the Department of Psychiatry & Behavioral Neuroscience. Dr. Decety is the Co-Director of the Brain Research Imaging Center (BRIC) at the University of Chicago Medical Center. He is the editor of the new transdisciplinary journal, *Social Neuroscience*. Dr. Decety has published in recent years a large number of empirical neuroimaging studies in the domain of empathy, theory of mind, and imitation in both healthy individuals

and psychiatric populations in journals including *Current Biology*, *Nature Neuroscience*, *Cerebral Cortex*, and the *Journal of Cognitive Neuroscience*. Decety has also published 10 theoretical/review papers on the cognitive neuro-architecture of empathy and social cognition in peer-reviewed journals. In 2008, MIT Press will release a new book titled “The Social Neuroscience of Empathy” edited by Jean Decety and William Ickes. Dr. Decety is also the head of the Social Cognitive Neuroscience Laboratory (<http://scnl.org>) at the University of Chicago. In the SCNL, we investigate the core of dynamic interpersonal experience – how emotion and subjective feelings about others and self are represented in the brain and manifested in social interaction. Our research focuses on interpersonal processes including empathy, sympathy, perspective-taking, shared mental representations, emotion regulation, intersubjectivity, and self-agency. These aspects of human social communication are fundamental to interpersonal interaction and subsequently serve as the foundation for all of human culture. Projects in the SCNL also explore dysfunctions in the biopsychological mechanisms underpinning

social information processing in individuals with personality disorders including antisocial behavior and conduct disorder. All projects combine behavioral techniques, dispositional measures, functional magnetic resonance imaging (fMRI), diffusion tensor imaging (DTI), event-related potentials (ERPs), eye-tracking and physiological measures (EMG, heart rate, arterial pressure, respiratory sinus arrhythmia), in healthy adults and children, as well as in individuals exhibiting social cognitive deficits or disorders.

Harriet de Wit, Ph.D. (Psychiatry & Behavioral Neuroscience). Dr. deWit is a



Professor of Psychiatry & Behavioral Neuroscience. Dr. de Wit's research has focused on three questions: (1) How do people differ in their responses to drugs of abuse? What factors contribute to individual differences in subjective and behavioral responses to drugs, and affect risk for abuse? (2) How is drug use related to acute stress? Does stress alter responses to drugs, and do drugs alter responses to stress? (3) How is drug use related to impulsivity? Do drugs increase impulsive behaviors, and are more impulsive individuals more likely to use drugs? Ongoing research

focuses on all these topics. Current projects examine (a) individual difference in brain activity related to intravenously administered alcohol, (b) associations between acute responses to stimulant drugs and polymorphisms in genes related to neurotransmitter function (c) the incubation of craving for cigarettes in abstinent cigarette smokers, (d) the effects of acute stress on endocannabinoid function, and (e) the effects of an opioid drug on behavioral measures of impulsivity.

Stephanie Dulawa, Ph.D. (Psychiatry & Behavioral Neuroscience). The goal of Dr.



Dulawa's lab is to understand how mood is regulated. Specifically, her lab aims to identify the molecular mechanisms and neural circuits that modulate anxiety and depression using mouse models. She is pursuing this goal by studying the neurobiological mechanisms underlying the antidepressant response. Although antidepressant treatment increases synaptic monoamines within minutes to hours, the therapeutic effects of antidepressants require chronic administration (weeks) to emerge. This long-term adaptive changes to chronic antidepressant treatment mediate the

therapeutic response, although the mechanisms underlying this effect have not been determined. One substantial barrier to elucidating the mechanisms underlying the antidepressant response has been a lack of animal models that are sensitive to the chronic effects of antidepressants. Dr. Dulawa's lab has developed novel animal models in which mice exhibit behavioral responses that emerge during chronic, but not short-term, antidepressant treatment. To dissect the mechanisms underlying the antidepressant effect, she used a combination of molecular, genetic engineering (including tTA/tetO inducible gene expression systems), and pharmacological techniques. In addition, Dr. Dulawa is also investigating the mechanisms by which

serotonin reuptake inhibitors reduce perseverative behaviors in a mouse model of aspects of obsessive compulsive disorder. Finally, Dr. Dulawa's lab is also exploring early environmental factors that regulate anxiety and depression, and the response to antidepressants.

Gia-Hong Gao, Ph.D. (Secondary Appointment: Psychiatry & Behavioral Neuroscience; Primary Appointment in Radiology).



Professor of Radiology and Psychiatry & Behavioral Neuroscience. Dr. Gao's is a medical physicist whose area of expertise is functional magnetic resonance imaging (fMRI). Since 1993, Dr. Gao has concentrated his research on fMRI technological developments and its neuroscience applications. In the front of the fMRI technological developments he has: (1) developed fast imaging techniques (fast spin-echo and keyhole) for the fMRI data acquisition and novel fMRI data analysis strategies such as temporal clustering analysis (TCA) and spatial clustering analysis methods; (2) improved the models in the fMRI measurements of cerebral blood flow and cerebral oxygen metabolism during brain activation; (3) investigated the fMRI possibility in the measurement of the neuronal current directly. In the front of the neuroscience application, using neuroimaging techniques, he has studied the non-motor functions of the cerebellum, language, working memory, and deceptions. Along with Dr. Decety (above), Dr. Gao is one of the two Co-Directors of the Brain Research Imaging Center (BRIC) at the University of Chicago.

Elliot Gershon, M.D. (Primary Appointment: Psychiatry and Behavioral Neuroscience).



Elliot S. Gershon, MD, is a research psychiatrist who has been Professor of Psychiatry & Behavioral Neuroscience and Human Genetics at the University of Chicago since 1998. He has spent his scientific career in biologic, epidemiologic, and genetic studies of major psychiatric disorders, particularly bipolar manic-depressive illness. His laboratory currently focuses on clinical case finding and evaluation in Bipolar disorder, genetics of disease and of personality, genetical genomics of gene expression in brain, and transgenic mouse models (the last two items in collaboration with Asst. Prof. Chunyu Liu). He has received multiple awards for his research, including an international award for research in depression, the German Anna-Monika Foundation prize, in 2005, and the Lifetime Achievement Award of the International Society for Psychiatric Genetics in 2006. Since 2003 he has been listed by the Institute for Scientific Information on its Highly Cited Authors list. He was Chief of the Clinical Neurogenetics Branch of the NIMH Intramural Program from 1984 until moving to the University of Chicago in 1998. Although he is better known for his research findings than for his training activities, he has had at least one postdoctoral fellow each year, and in the course of time trained a considerable number of now-prominent researchers in psychiatric genetics and in clinical psychiatry. From among

his former trainees, the following persons are now full professors (or NIH equivalent) doing well-regarded research in genetics and related fields in psychiatry and psychobiology: Miron Baron (Columbia University), James F. Leckman (Yale University), Lynn R. Goldin (National Cancer Institute), John I. Nurnberger, Jr. (Indiana University), Wade H. Berrettini (University of Pennsylvania), Lynn E. DeLisi (SUNY Stony Brook), Pablo V. Gejman (Northwestern University), Joel Gelernter (Yale University). Additional trainees who are now faculty members include Chunyu Liu (University of Chicago), Judith A. Badner (University of Chicago), and Jinger Hoop (Medical College of Wisconsin). Dr. Gershon had a great deal of additional administrative responsibilities during his career, serving as Officer of Science of the Alcohol, Drug Abuse and Mental Health Administration in 1986-87, and as President of the American Psychopathological Association in 1991-92. He was Chair of the Department of Psychiatry at University of Chicago from 1998 to 2004, when he stepped down to focus on his research and teaching.

Kristen Jacobsen, Ph.D. (Psychiatry & Behavioral Neuroscience). Dr. Jacobson is



an Assistant Professor of Psychiatry & Behavioral Neuroscience. Dr. Jacobson's primary research interests are in the complex interplay between genetic, environmental, social, and biological factors on the development of problem behavior over the life course. Her research projects focus principally on conduct problems, delinquency, aggression, and substance use. Dr. Jacobson is trained as a behavioral geneticist and is Co-Director of Twin Studies at the University of Chicago. Along with Dr. Coccaro, she is overseeing a NIH-funded project looking at the neurobiology of aggression in adult

twins, using a functional magnetic resonance imaging (fMRI) paradigm. Dr. Jacobson is also the PI on an NIH-funded subcontract with Laura Baker at the University of Southern California, and with William Kremen at the University of California, San Diego. These subcontracts provide data analysis assistance to an ongoing longitudinal twin study of conduct problems in childhood and adolescence (Baker) and an ongoing longitudinal study of physical and mental health, cognition, and aging among middle-aged men (Kremen). In addition, Dr. Jacobson was an inaugural recipient of a 2007 NIH Director's New Innovator Award, and is currently beginning a three-phase study of 7,000 minority and low income adolescents in the Chicago area. This study assesses the mediating and moderating effects of contextual, social, biological, and genetic factors on individual differences in problem behavior in an understudied population, as is designed specifically to elucidate the biological mechanisms through which stressful experiences affect adolescent behavior. Finally, Dr. Jacobson is working on a series of pilot data collection projects involving epigenetic work, as a means of considering how environmental and social factors may modify gene expression.

Katherine Keenan, Ph.D. (Psychiatry & Behavioral Neuroscience). Dr. Keenan is an



Associate Professor of Psychiatry and Behavioral Neuroscience at the University of Chicago (and an Adjunct Associate Professor of Psychiatry in the School of Medicine at the University of Pittsburgh where the data collection for some of her projects is based). Dr. Keenan's program of research in developmental psychopathology spans several developmental periods and types of disorders. The integrative thread running through each study is the aim of identifying the earliest appearing individual differences that connote risk for psychopathology, and the environmental factors that are associated with the transition from risk to the expression of a disorder. The work is designed to be relevant to the understanding of etiological mechanisms and to the development of clinical assessment strategies and early intervention, and prevention.

Andrea King, Ph.D. (Psychiatry & Behavioral Neuroscience). Dr. King is an



Associate Professor of Psychiatry & Behavioral Neuroscience. Dr. King's research examines the mechanisms underlying increased vulnerability to substance use disorders and on developing novel interventions to improve outcomes in the treatment of substance use disorders. Her work has centered on treatment of nicotine dependence, including clinical trials of naltrexone as a pharmacological adjunct to standardized smoking cessation treatment and on the development and testing of culturally-tailored interventions for underserved minority smokers. In addition, Dr. King has extensive experience in examining risk factors involved in alcohol abuse and binge drinking and is currently conducting a large-scale combined human laboratory and longitudinal follow-up study of young adult binge social and light drinkers. Dr. King directed the Substance Abuse and Smoking Cessation Clinics at The University of Chicago, and is currently the Director of the Clinical Addictions Research Laboratory.

Benjamin B. Lahey, Ph.D. (Secondary Appointment: Psychiatry & Behavioral Neuroscience; Primary Appointment in Health Studies). Ben



Lahey, Ph.D. is the Irving B. Harris Professor of Health Studies and Psychiatry at the University of Chicago. His research has been supported by the National Institute of Mental Health for more than 20 years. It originally focused on the use of psychometric methods to define and evaluate optimal diagnostic criteria for mental health disorders of childhood. As part of this effort, Dr. Lahey served as a member of the Child Disorders Work Group of the Task Force for DSM-IV and conducted the DSM-IV field trials for the disruptive behavior disorders. More recently, his research has moved from defining the dimensions of mental health to studies of genetic and environmental influences of mental disorders in youth. His NIMH-supported studies include both studies of genetically-informative twin and family samples and molecular

genetic studies. He currently holds a grant that addresses gene-environment interactions in the context of gene-environment correlation in the origins of adolescent delinquency and substance abuse. Dr. Lahey has served as President of the International Society for Research on Child and Adolescent Psychopathology and the Society for Child and Adolescent Clinical Psychology. In 1991 he received the Research Prize of the National Academy of Neuropsychology for his work on attention-deficit/hyperactivity disorder (ADHD), and in 2002, he received the Distinguished Research Contributions Award from the Society for Child and Adolescent Clinical Psychology.

Daniel le Grange, Ph.D. (Primary Appointment: Psychiatry & Behavioral Neuroscience).



Dr. le Grange is a Professor of Psychiatry & Behavioral Neuroscience and is the Director of the Eating Disorders Program at the University of Chicago. His research focuses mainly on treatment outcomes studies for eating disorders. He is a past recipient of a National Institute of Mental Health Career Development Award designed to investigate the efficacy of two psychosocial treatments for adolescents with bulimia nervosa. He is currently the principal investigator on two 5-year NIMH multi site studies; one investigates the efficacy of two psychosocial treatments for adolescents with anorexia nervosa and another comparing two established treatments for adolescents with bulimia nervosa. He is also investigator on a 4-year NIMH multi site study of ecological momentary assessment of anorexia nervosa, co-principal investigator on two 3-year National Health & Medical Research Council (Australia) grants evaluating psychosocial treatments for patients with anorexia nervosa, and the recipient of an International Research Fellowship from the University of Sydney to develop family-based treatment for young adults with anorexia nervosa.

Royce Lee, M.D. (Psychiatry & Behavioral Neuroscience).



Dr. Lee is an Associate Professor of Psychiatry & Behavioral Neuroscience. Dr. Lee's research is focused on the effects of neuropeptides on brain function relevant to emotion and stress-related psychiatric disorders. Neuropeptides are administered intranasally to the olfactory epithelium. Cortical effects are measured using EEG. Behavioral effects are measured using laboratory paradigms that simulate aggression and self-aggression. The neuropeptides currently being studied in human volunteers and patients include corticotropin releasing hormone, vasopressin, oxytocin, and insulin. The clinical population of interest is severe personality disorder. Dr. Lee's is also interested in developing reliable measures of brain function that reflect either neuropeptide related neural mechanisms, or correlates of psychopathological states that could be used for diagnostic or prognostic purposes.

Chung-Yu Liu, Ph.D. (Psychiatry & Behavioral Neuroscience). Dr. Liu is an



Assistant Professor of Psychiatry & Behavioral Neuroscience. Dr. Liu's research focuses on using genetics, genomics and bioinformatics approach to discover molecular mechanism of psychiatric diseases, particularly mood disorders and schizophrenia. Current projects examine a) association of DNA variants of candidate genes or in the whole human genome, including copy number variants, in bipolar disorder; b) biochemical, genomic and behavioral changes in transgenic mice; c) gene expression regulation

mechanism in human brain using genome wide association mapping method. Dr. Liu's lab also has efforts creating novel bioinformatics tools and databases to support the above research projects. Through these studies, the changes from DNA, through RNA to behavioral phenotypes could be better understood in patients. It will offer new opportunities for diagnosis and drug development.

Abraham Palmer, Ph.D. (Secondary Appointment: Psychiatry & Behavioral Neuroscience; Primary Appointment in Human Genetics). Dr.



Palmer is an Assistant Professor with a primary appointment in the Department of Human Genetics. Dr. Palmer's work is involved in identifying genes that work in concert to confer risk, and interact with one another, as well as the environment, to produce the observed phenotype. His research uses mice as a model genetic system to identify specific genes that contribute to heritable disorders. One line of research focuses on identifying the genetic basis for differences in learned fear among mice, and explores the

relationship between learned and innate fear. Another direction seeks to identify genes that influence acute sensitivity to amphetamine in mice and then examines these same genes in healthy human volunteers to see if the same genes influence these phenotypes in both mice and humans. We are also developing novel experimental and statistical tools to conduct something akin to whole genome association studies in complex-multigenerational mouse pedigrees. Finally, we have two significant collaborations that focus on epilepsy and the co-morbidity between epilepsy and depression.

Lisa Sánchez-Johnsen, Ph.D. (Psychiatry & Behavioral Neuroscience; Secondary Appointment in Medicine).



Lisa Sánchez-Johnsen is an Assistant Professor of Psychiatry & Behavioral Neuroscience. She holds her Primary Academic Appointment in the Department of Psychiatry and Behavioral Neuroscience and a Secondary Academic Appointment in the Department of Medicine. She is also the Director of the Multicultural Health Research Program in the Department of Psychiatry and Behavioral Neuroscience and is a faculty affiliate in the NIH-Funded Center for Interdisciplinary Health Disparities Research, and a member of the NCI-funded University of Chicago Cancer Research Center. Dr. Sánchez-Johnsen has a 15-year history of conducting research and clinical work with Latinos, African Americans, and other ethnic minorities, particularly in the areas of culture-based health psychology and mental health research. Her current funding is through an NIH K award (K01CA098753) to develop a diet, exercise, body image, and tobacco intervention with Latinos, as well as an NIH R21 award (1R21CA131433) that examines cultural variables underlying obesity in Puerto Rican and Mexican women. She is also a member of the Robert Wood Johnson Finding Answers: Disparities Research for Change National Program Office at the University of Chicago, and a co-PI on the Depression Disparities Initiative that is part of this program. Dr. Sánchez-Johnsen previously had a Developmental Funds Award from the P30 Cancer Research Center of Hawaii Support Grant to conduct a diet, physical activity, and body image assessment with Latinas, and a grant from the American Psychological Association to examine cultural variables associated with obesity in Latinas. For the past 7 years, she has been a Health Disparities Research Scholar with the NIH-National Center for Minority Health and Health Disparities (L60MD000577). Additional grants focused on health disparities (smoking and in African Americans and Latinos) include an individual NIH-NIGMS F31 NRSA grant and 2 minority supplements to fund her disparities research as a postdoctoral fellow (R21CA88935-S) and graduate student (R01HL 57577-S). She is active in national Latino organizations (e.g., Past Editor/Board Member of the National Latino Psychological Association), national health organizations (founder/past chair of the Ethnic Minority Health Interest Group, Society of Behavioral Medicine), and local organizations. She received a Presidential Latino Leadership award for her research on Latino health from the American Psychological Association, and the National Latino Psychological Association. She currently mentors and supervises interns and residents who are interested in ethnic minority and health disparities research, and is the director for the Multicultural and Ethnic Minority Issues in Mental Health course in the Department of Psychiatry and Behavioral Neuroscience.

Ben Van Voorhees, M.D., M.P.H. (Secondary Appointment: Psychiatry & Behavioral Neuroscience; Primary Appointment in Medicine).



Ben Van Voorhees is currently an Assistant Professor of Medicine and Pediatrics at the University of Chicago. He received his BA in History from Dartmouth College, his Doctor of Medicine from Vanderbilt University, and his Master of Public Health from Johns Hopkins. He completed a Combined Internal Medicine-Pediatrics Residency at Vanderbilt University Hospital and a General Internal Medicine Fellowship at Johns Hopkins. Focused on the development and evaluation of primary care-technology-based depression prevention interventions for adolescents, Dr. Van Voorhees has developed a translational/implementation research program at the University of Chicago. This research program has five core areas: A. intervention development, B. clinical epidemiology (risk prediction models to facilitate introduction of preventive interventions), C. health services and attitudinal research to better understand to determine predictors optimal intervention outcomes, D. community based clinical trials of primary care interventions and E. reduction of health disparities through primary care based interventions. Dr. Van Voorhees has completed successful Phase 1 pilot study of the CATCH-IT (Competent Adulthood Transition with Cognitive, Humanistic, and Interpersonal Training) primary care/internet based adolescent depression prevention intervention in 2004 and Phase 2 multi-site dose/feasibility studies in 2007. Dr. Van Voorhees has received grant support from the Centers for Disease Control (2002), National Association for Research on Schizophrenia and Affective Disorders (NARSAD, 2004), Robert Wood Johnson Foundation (2005) and National Institute of Mental Health (2006, R-34 and K-08 awards). He is the author fifteen peer reviewed publications and has made more than forty invited presentations at scientific meetings. He has served as a grant reviewer for the government of the Netherlands and the Robert Wood Johnson Foundation. He has also served as a consultant to variety of organizations seeking to develop health messages and programs for diverse communities including the University of Hong Kong.

Paul Vezina, Ph.D. (Psychiatry & Behavioral Neuroscience).



Dr. Vezina is a Professor of Psychiatry & Behavioral Neuroscience. Dr. Vezina's research is generally concerned with understanding how the neurotransmitters of the basal ganglia contribute to the generation of appetitive behaviors. His group is particularly interested in the impact of the ascending mesencephalic dopamine systems. These groups of neurons, while relatively small, project to a large number of forebrain sites and are known to profoundly influence motor and affective behaviors. His laboratory is interested in determining how these systems interact with others to produce such effects and how these neurotransmitter interactions may be changed when an organism is exposed repeatedly to pharmacological and environmental stimuli. They, as well as others, have shown that exposing rats repeatedly to psychotropic drugs or environmental stressors leads to the induction and eventual expression of sensitization (reverse tolerance) in mesolimbic dopamine neurotransmission. Currently, their research is aimed, first, at determining how this sensitization is produced and, second, at understanding how such changes may influence the expression of various behaviors in the rat. In the first case, they are seeking to determine which aspects of dopamine neurotransmission become enhanced and to assess the contribution of other neurotransmitter projections and receptor fields (nACh, glutamate and GABA). In the second, they are investigating the relation between the expression of dopaminergic sensitization and an organism's predisposition to reward behaviors. The extent to which various manipulations, known to sensitize dopamine neuron reactivity, promote psychotropic drug self-administration is being assessed in rats.