

Division of Behavioral Medicine

Department of Psychiatry, Columbia University College of Physicians and Surgeons
New York State Psychiatric Institute
Richard Sloan, PhD, Division Chief
Annual Report for July 1, 2007 – June 30, 2008

Overview

The Division of Behavioral Medicine strives to understand the contribution of psychological, psychosocial, and behavioral factors to the onset, progression, and management of physical and mental disease; identify the relevant pathophysiological mechanisms linking psychological states to disease; and develop treatment interventions targeting these mechanisms. Projects range from the purely behavioral to the cellular, with new studies extending to gene expression. Our research has been supported by the National Institutes of Health, the American Heart Association, the American Cancer Society, NARSAD, the March of Dimes, the MacArthur Foundation, and the Nathaniel Wharton Fund.

Division Chief Dr. Richard Sloan and Dr. Peter Shapiro from Consultation/Liaison Psychiatry investigate the role the autonomic nervous system as a candidate mechanism linking psychological characteristics of depression and hostility to the pathophysiology of coronary artery disease, and have done so for many years.

Dr. Catherine Monk's laboratory investigates the possible effects of pregnant women's stress, anxiety, and depression on fetal and infant development, specifically with respect to the future child's biobehavioral reactivity, affect regulation, and risk for psychopathology.

Work by Drs. Felice Tager and Paula McKinley examines the impact of adjuvant chemotherapy on cognitive function in women with breast cancer.

Dr. Ethan Gorenstein, along with Dr. Laszlo Papp of the Division of Clinical Therapeutics, investigates the novel treatment approaches to anxiety disorders in older adults.

Along with colleagues in the Herbert Irving Cancer Center, Dr. Arlene King examines ethnic disparities in cancer.

Dr. Daniel Seidman has designed and tested Internet-based smoking cessation programs.

Dr. Erin Olivo studies the role of integrative medicine in surgery.

Division members Drs. Karina Davidson, Joseph Schwartz, Lynn Clemow, and Matthew Burg, who have their home appointments in the Department of Medicine, collaborate in studies of psychosocial factors in hypertension.

Post-doctoral fellow Dr. Olga Shcheslavskaya is developing a research program in cardiovascular psychophysiology.

Staff

Richard Sloan, PhD, Department Chief

Behavioral Medicine Psychophysiology Laboratory

Matthew Burg, PhD, Assistant Clinical Professor of Behavioral Medicine

Ivy Chen, MST, Biostatistician

Karina Davidson, PhD, Associate Professor of Behavioral Medicine

Lynn Evans, PhD, Post-Doctoral Fellow

William Gerin, PhD, Associate Professor of Clinical Behavioral Medicine

Arlene King, PhD, Post-Doctoral Fellow

Paula S. McKinley, PhD, Research Scientist IV, Assistant Professor of Clinical Behavioral Medicine

Elizabeth S. Mezzacappa, PhD, Assistant Professor of Clinical Psychology

Catherine E. Monk, PhD, Research Scientist IV, Assistant Professor of Clinical Psychology

Olga Shcheslavskaya, PhD, Post-Doctoral Fellow

Cognitive Behavior Therapy Program

Lynn Clemow, PhD, Assistant Clinical Professor of Behavioral Medicine

Ethan E. Gorenstein, PhD, Director

Kenneth Gorfinkle, PhD, Assistant Professor of Clinical Psychology

Erin Olivo, PhD, Instructor in Clinical Psychology

Daniel Seidman, PhD, Assistant Professor of Clinical Psychology

Felice A. Tager, PhD, Assistant Professor of Clinical Psychology

Current Grants and Research

National Heart, Lung, and Blood Institute

Dr. Thomas Pickering, Principal Investigator; Dr. Richard Sloan, Co-Investigator
Mind-Body-Behavioral Medicine Clinical Trials Infrastructure Award **(R24 HL076857)**
This is an infrastructure development award.

Dr. Thomas Pickering, Principal Investigator; Dr. Richard Sloan, Co-Investigator
Masked Hypertension: Predictors and Consequences **(P01 HL047540)**
This project focuses on the difference between ambulatory and clinic blood pressures and those persons who exhibit normal clinic blood pressure but hypertensive blood pressure during ambulatory monitoring in the natural environment.

Dr. Richard Sloan, Principal Investigator; Dr. Paula McKinley, Co-Investigator
Behavioral Ecology of Hostility & Cardiac ANS Control **(R01 HL072057)**
This study assesses the impact of hostility and interpersonal conflict on autonomic regulation of the heart.

National Institute on Aging

Dr. C. Ryff, Principal Investigator; Drs. Richard Sloan and Paula McKinley, Co-Investigators
Integrative Pathways to Health and Illness **(P01 AG20166)**
This is a multicenter of midlife development in the US (MIDUS). This multi-arm, multi-site cohort follow-up study assesses autonomic control of the heart, which is a predictor of cardiac events, during a resting state and reactivity to laboratory-based stressors in a community sample of adults.

National Institute of Child Health and Human Development

Dr. Richard Sloan, Principal Investigator; Catherine Monk, Co-investigator
Autonomic Control & Birth Outcomes in Minority Women **(R21 HD048612)**
This exploratory grant examines the roles of the ANS, psychosocial stress, and racial differences in preterm delivery and reduced gestational age birth weight, processing and analyzing data already collected from another study.

National Institute on Drug Abuse

Dr. C.W. Hoven, Principal Investigator; Dr. Catherine Monk, Co-Investigator
Maternal Incarceration and Course of Child Psychopathology in the South Bronx **(1R01DA023733-01A2)**
The main objective of this investigation is to understand the impact, over time, of maternal incarceration on children's mental health.

National Institute of Mental Health

Dr. Richard Sloan, Principal Investigator, Cytokine-induced depression & the serotonin transporter **(R21 MH067093)**
This study uses the high-risk model of depression following interferon treatment for hepatitis C to study the serotonin transporter.

Drs. Ethan Gorenstein and Laszlo Papp, Co-Investigators
Development of Multimodal Treatment for Late Life Generalized Anxiety Disorder **(1R34MH077156-01A2)**

Dr. Ethan Gorenstein is collaborating with Dr. Laszlo Papp (of the Biological Studies Unit) in piloting a study on pharmacological augmentation of cognitive-behavior therapy for the treatment of anxiety in the elderly.

Dr. Laszlo Papp, Principal Investigator; Dr. Felice A. Tager, Co-Investigator
Development of Multimodal Treatment for Late Life Generalized Anxiety Disorder (**R34 MH077156-01A2**)

Dr. Z.N. Stowe, Principal Investigator, Dr. Catherine Monk, Co-Investigator) Perinatal Stress and Gene Influences: Pathways to Infant Vulnerability P50 (**MH 077928-01A1**)

The primary focus of this project is to measure stress reactivity in infants of mothers' with major depression, a form of ELS, in a controlled laboratory setting.

National Institute of Neurological Disorders and Strokes

Dr. Frank Gilliam, Principal Investigator
Cognitive Therapy vs. Sertraline in the Treatment of Depression in Refractory Epilepsy Patients (**5R01NS040808-06**)

Dr. Ethan Gorenstein and Dr. Felice Tager are collaborating with Dr. Frank Gilliam (Neurology) on this study to assess relative efficacy of CBT vs. Sertraline in treating patients with depression associated with refractory seizure disorders.

The principal aim of this proposal is to collect pilot data on a multi-modal intervention for late-life GAD, involving augmentation of CBT with pharmacotherapy, incorporating a sequential procedure that allows for flexibility and patient choice; after four weeks of initial CBT, tailored to the specific needs of the elderly, patients will have the option to add pharmacotherapy or to continue with CBT alone for an additional 8 weeks.

National Institute of Diabetes and Digestive and Kidney Diseases

Dr. K. Hirst, Principal Investigator; Dr. Daniel Seidman, Co-Investigator Treatment Options for Type 2 Diabetes in Adolescents and Youth. (**5U01DK061230-06**)

Private Grants

Drs. Richard Sloan and Ethan E. Gorenstein, Co-investigators
Mobile device-assisted treatment of anger
(**Intel**)

Drs. Richard Sloan and Ethan Gorenstein are collaborating with researchers and engineers at the Intel Corporation to develop and test a cellular phone adapted to assist in the treatment of dysfunctional anger. Ultimately, the device will be integrated with an ambulatory ECG monitor to match cognitive-behavioral interventions to anger-driven physiological arousal.

Dr. Felice A. Tager, Principal Investigator; Dr. Paula McKinley, Co-Investigator
Cognitive effects of chemotherapy and estrogen in women with breast cancer.
(**American Cancer Society RSGPB-05-010-01-CPPB**)

The objective of this project is to investigate the cognitive and psychological effects of both chemotherapy treatment as well as estrogen in women with breast cancer.

Education and Training

Members of the clinical faculty of the Behavioral Medicine program provide regular face-to-face supervision of Psychiatry Residents (PGY-III and PGY-IV), Psychology Interns, and Psychology Externs in cognitive-behavior therapy. In addition, clinical faculty lecture regularly in seminars for Psychiatry Residents (Dr. Mike Devlin, course administrator) and Psychology interns (Dr. Susan Sussman, Dr. Lauryn Schmerl, course administrators).

Clinical Services

The Division of Behavioral Medicine maintains an active clinical service that provides state-of-the-art, evidence-based, cognitive-behavior therapies for Medical Center patients suffering from a variety of psychological and medical conditions. Our clinical and research activities are closely related and mutually informative.

Clinical services include cognitive behavior therapy for treatment of specific psychological disorders, such as: depression, eating disorders, behavioral disorders in children, and anxiety disorders, such as:

- generalized anxiety,
- phobias (including social anxiety),
- panic disorder,
- obsessive-compulsive disorder, and
- posttraumatic stress disorder.

The Division also offers cognitive behavior therapy for psychological factors in medical conditions, such as:

- heart disease,
- irritable bowel syndrome,
- cancer treatment,
- epilepsy,
- obesity, and
- smoking.

Awards & Honors

Dr. Richard Sloan named Nathaniel Wharton Professor of Behavioral Psychosomatic Medicine.

Dr. Catherine Monk named Herbert Irving Assistant Professor of Clinical Psychology.

Dr. Olga Shcheslavskaya appointed the Herbert H. and Ruth S. Reiner Fellowship.

Ivy Chen awarded 2008 Presidential Teaching Award for Graduate Students.

Highlights

Drs. Margery Frosch, Felice A. Tager, Paula McKinley. Impact of a Pre-Cancer or Current Mood Disorder on the Cognitive Functioning of Postmenopausal Women Who Receive Adjuvant Chemotherapy Treatment for Early-Stage Breast Cancer Presented at the annual meeting of the Society of Behavioral Medicine, San Diego, California, March 2008

Drs. Richard Sloan, Peter A Shapiro, Ethan E. Gorenstein, Felice A. Tager, JT Bigger, Jr, E Bagiella, PS McKinley, MM Myers. Successful Hostility Reduction Treatment Does Not Alter Cardiac Autonomic Control. Presented at the annual meeting of the American Psychosomatic Society, Baltimore MD, March 2008

Dr. Richard Sloan. Positive Psychology and Positive Nonsense. Presented at the annual meeting of the Society of Behavioral Medicine, San Diego, California, March 2008

Dr. Catherine Monk. Women's Psychiatric Status — but not Cortisol— Differentiates Fetal Heart Rate During Maternal Stress. Presented at the Symposium of the International Society for Infancy Studies, Vancouver, BC, March, 2008

Drs. Felice A. Tager, Paula McKinley, Freya Schnabel, Mahmoud El-Tamer, Ken Cheung, Yixin Fang, Claire Golden, Margery Frosch, Ulya Habif, Margaret Mulligan, and Dawn Hershman. Differences between self-report and objective measures of cognitive dysfunction in post-menopausal women treated for early stage breast cancer. Presented and the biannual Cancer Survivorship Research Conference, Atlanta Georgia, June 2008

Publications

Evans L, Myers M, Monk C. Pregnant women's cortisol is elevated with anxiety and depression but only when comorbid. *Archives of Women's Mental Health*, 2008;11(3),239–48.

Kaplan LA, Evan L, Monk C. Effects of mothers' prenatal psychiatric status and postnatal caregiving on infant biobehavioral regulation: Can prenatal programming be modified? *Early Human Development*, 2008,84(4),249-56.

Monk C, Leight K, Fang Y. The relationship between women's attachment style and perinatal mood disturbance: Implications for screening & treatment. *Archives of Women's Mental Health*, 2008;11(2),117–29.

Sloan RP. When doctors play God. *The Journal of Life Sciences*. 2007 (December);86-88.

Sloan RP, Shapiro PA, DeMeersman RE, McKinley PS, Tracey KJ, Slavov I, Fang Y, Flood PD. Aerobic Exercise Attenuates Inducible TNF Production in Humans. *J Appl Physiol.* 2007;103:1007-1011.

Sloan RP, Huang M, McCreath H, Sidney S, Liu K, Williams OD, Seeman TS. Cardiac Autonomic Control and the Effects of Age, Race, and Sex: The CARDIA Study. *Autonomic Neuroscience.* 2008;139:78-85.