**Members**

**Scientific Steering Committee**

**Linda Alexander, PhD**
Associate Professor of Health Behavior
University of Kentucky College of Public Health

**Steven W. Cole, PhD**
Professor of Medicine and Psychiatry and Biobehavioral Sciences
David Geffen School of Medicine
University of California, Los Angeles

**Paige A. Green, PhD, MPH**
Chief, Basic Biobehavioral and Psychological Sciences Branch
National Cancer Institute

**Susan K. Lutgendorf, PhD**
Professor, Departments of Psychology, Obstetrics and Gynecology, and Urology
University of Iowa

**Anil K. Sood, MD**
Professor, Vice Chair
Translational Research in the Departments of Gynecologic Oncology and Reproductive Medicine
M.D. Anderson Cancer Center

**Network Priorities**

- **Stimulate novel scientific concepts and paradigms**
- **Foster innovative collaborations between diverse disciplines**
- **Disseminate relevant discoveries through major scientific conferences and meetings**
- **Accelerate the translation of discoveries to patient benefit**
- **Synthesize the state of the science, analyze secondary data, and publish**
- **Encourage established scientists to apply their expertise to this emerging area of research**
- **Cultivate the education, training, and professional advancement of early career scientists**

Learn more and view upcoming RFP opportunities at: [http://cancercontrol.cancer.gov/docs/bbpsi/ncintwk-biopthys.html](http://cancercontrol.cancer.gov/docs/bbpsi/ncintwk-biopthys.html)

Effects of Cognitive Behavioral Stress Management Intervention on Clinical Disease Endpoints in Women with Breast Cancer

Michael H. Antoni, PhD, University of Miami

This project consists of an extensive follow-up of a randomized, controlled trial, which aims to test the effects of group-based cognitive behavioral stress management intervention versus psychological control on clinical and psychosocial end points in women who were previously treated for non-metastatic breast cancer. It examines whether specific biobehavioral and psychological adaptation processes modified by the intervention in the first year of medical treatment predict differences in clinical endpoints (e.g., survival and recurrence) up to 15 years later.

Perioperative Use of Beta-blocker and COX2 Inhibitor

Shamgar Ben-Eliyahu, PhD, Tel Aviv University

This project uses multicenter randomization to assess the short-term effects of countering stress perioperative catecholamine and proinflammatory levels on immune, endocrine, and pro-metastatic serum and histological indices. Results of this project will be used to develop a large-scale clinical trial.

Behavioral Pathways in Stem Cell Transplantation

Don Lamkin, PhD, University of California, Los Angeles

This project examines a potential downstream mechanism by which beta-adrenergic signaling accelerates progression of acute lymphoblastic leukemia (ALL). Specifically, an orthotopic mouse model of human leukemia will be used to understand the role of the COX4–CAG1L chemokine system in stress-induced ALL progression.

Metabolic Fingerprint of Stress Influences in Cancer

Anil K. Sood, MD, MD Anderson Cancer Center

This project examines unique metabolic signatures in epithelial ovarian cancer tissues from human subjects with different depression and social support profiles. Global biochemical profiles were studied in tissue samples (n=85) from patients who are categorized according to scores on the Center for Epidemiologic Studies Depression Scale and the UCLA Loneliness Scale. The interactive wiki page (http://www.mrn.cancer.gov/cbiopthwys/ stress) identifies distinct metabolic patterns that may be unique to this population, and the ACI-PLM mutation predisposing to gastroesophageal reflux.

Beta-Adrenergic Regulation of Acute Lymphoblastic Leukemia

Kelley S. Madden, PhD, University of Rochester

This project will establish how exposure to a dual stressor is linked to metastasis in MMTV-PyMT mice, a spontaneous breast cancer model that allows for the regulation of chronic psychological stress (social isolation) and acute restraint stress, which may mimic the complex stressors experienced by cancer patients. This project examines distinct and novel biological mechanisms underlying stress exposure (1) circulatory responses, (2) defined metastatic mechanism, and (2) alterations in the tumor extracellular matrix.

Using Propranolol to Decrease Gene Expression of Stress Mediated Beta Adrenergic Pathways in Hematopoietic Stem Cell Transplant Recipients

Nathan A. Berger, MD, Case Western Reserve University

This project examines gene expression patterns of CD14+ cells as a potential pathway by which stress-related psychosocial factors may influence immune recovery and clinical outcomes following hematopoietic stem cell transplantation (HSCT). The study focuses on multiple myeloma patients recovering from autologous HSCT, given evidence in this population for the role of CD14+ derived macrophages in immune recovery, as well as in angiogenesis, apoptosis, and production of disease-promoting cytokines in the population.

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Dual Psychosocial Stressor Exposure and Spontaneous Breast Tumor Metastasis in MMTV-PyMT Mice? Does Dual Stressor Exposure Increase Metastasis by Regulating Circulating Exosomes and Tumor Extracellular Matrix?

Sara R. Cooney, PhD, University of Southern California

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