

In Balance

THE UNIVERSITY OF TEXAS
MDAnderson
Cancer Center
Making Cancer History®

September 2017

The Center for Energy Balance in Cancer Prevention and Survivorship, of the Duncan Family Institute, facilitates and conducts state-of-the-science research to understand the relationship between activity, nutrition, obesity and cancer, and uses this knowledge to optimize interventions to decrease cancer risk and improve cancer outcomes. The Center sponsors collaborative research, transdisciplinary educational opportunities and seminars to create, produce and disseminate innovative and practice-changing research results.

Upcoming Conferences

August 14-18, Berlin, Germany
[International Psycho Oncology Congress \(IPOS\)](#)

September 13-15, Cleveland, OH
[International Cancer Education Conference](#)

September 25-28, Atlanta, GA
[10th American Association for Cancer Research \(AACR\) Conference](#)

October 25-27, Boston, MA
[Connected Health Conference](#)

November 1-3, Washington, DC
[Obesity Week](#)

Upcoming Abstract Submission Deadlines

February 11-14, 2018, Banff, Canada
[Active Living Research Conference 2018](#)
Abstract Due: August 24, 2017

January 27-30, 2018, Austin, TX
[AACR: Obesity and Cancer](#)
Abstract Due: November 10, 2017

Directors:

Karen Basen-Engquist, Ph.D., M.P.H.
kbasenen@mdanderson.org
713-745-3123



Center for Energy Balance in Cancer Prevention & Survivorship



Energy Balance Research Seminar Thursday, September 21, 2017

Title: Energy Sensing and Metabolism in Cancer
Facilitated by: Boyi Gan, Ph.D.
Location: CPB8, Room 7
Time: 12:00–1:00 PM

Research Spotlight: Getting to Know Boyi Gan, Ph.D.

Boyi Gan, an Associate Professor in the Department of Experimental Radiation Oncology at MD Anderson, once dreamed of becoming a singer. But when he got to college, he became interested in life science, having experienced the loss of family and friends to diseases that redirected him to study fundamental biological questions. “I wanted to conduct basic science research and find a way to positively impact patients,” he confides.

Dr. Gan received a BS in Microbiology and an MS in Genetics from Fudan University in Shanghai, China. In 2006, he earned his PhD in Comparative Biomedical Sciences at Cornell University, and continued his postdoctoral career at Harvard Medical School’s Dana-Farber Cancer Institute. In 2011, he joined MD Anderson as a tenure-track Assistant Professor.

“As a scientist, I have been fascinated by alterations in nutrition and how we metabolize sugar,” he explains. “Obesity is the second greatest risk factor for cancer development in the U.S., and approximately 90,000 cancer deaths could be prevented if individuals maintained a healthy body mass index. In turn, our studies try to understand how cancer cells sense nutrient availability and utilize nutrients to support their expansion – like trying to figure out how construction workers use building blocks or materials to construct new buildings. We believe if we understand this question better, we may be able to design novel drugs to target the fundamental metabolic vulnerabilities in cancer.”

Dr. Gan and his research team focus on the roles of energy metabolism and nutrient sensing in cancer and stem cells. Their studies show an intimate link between tumor suppressor pathways that control energy sensing/metabolism and those that regulate stem cell homeostasis, pointing to the critical importance of coupling energy availability and tissue homeostatic demands. “The molecular unit of energy transfer – ATP – must be monitored to ensure that energy intake and expenditure are carefully balanced. A key regulator in our cells – the AMPK protein – senses the energy levels in cells and detects whether or not there is a problem. Its dysregulation leads to mutated cells which create diseases like diabetes and cancer. By studying the pathway controlled by this protein, we may be able to find strategies to treat certain obese patients who get cancer.”

“A deeper understanding of the biological processes linking energy sensing/metabolism to cancer and stem cells will provide novel insight for cancer therapy and regenerative medicine,” Dr. Gan proclaims. “We are hoping to conduct more research which can ultimately be transferred to clinicians who undertake clinical trials with patients. I am excited that we are talking more about how to work together and understand each other better.”

Dr. Gan has served as the sole investigator of more than 10 grants and his work has been published in more than 40 major publications. He has been the recipient of the Ellison Medical Foundation’s New Scholar Award and the Anna Fuller Foundation’s Anna Fuller Award. He has been selected a Sidney Kimmel Scholar and an Andrew Sabin Family Fellow. He is married to a former college classmate and has a 13-year-old daughter. Mostly, he is excited to be working on “innovative and impactful research to end cancer.”

Joya Chandra, Ph.D.
ichandra@mdanderson.org
713-563-5405



[Studies in Progress](#)

[Spotlighted Researchers](#)

[Energy Balance Website](#)

[Become a Member](#)

Bionutrition Research Core News:

The Bionutrition Research Core (BRC) has created [Nutrition](#) and [Physical Activity](#) resource lists that are available to clinicians and researchers through the Patient Education Center. These lists provide information about nutritious food resources and physical activity opportunities to help both patients and greater Houston community members achieve AICR and ACS guidelines for diet and exercise for cancer prevention, treatment, and survivorship. If you would like to use these lists as part of a study, or have suggestions for additional resources to include, contact BRC program manager Christine Ranieri at brc@mdanderson.org.

2018 Cancer Survivorship Research Conference

Friday, March 2, 2018 from 8:00–5:00 at The University of Texas MD Anderson Cancer Center. Confirmed keynote speaker: Julia Rowland, PhD – National Cancer Institute, Office of Cancer Survivorship. Call for abstracts coming soon!

Understanding the Role of Muscle and Body Composition in Studies of Cancer Risk and Prognosis in Cancer Survivors

The National Cancer Institute's Epidemiology and Genomics Research Program (EGRP) is hosting the workshop, September 25-26, 2017, at National Institutes of Health, Rockville, MD. The purpose of this workshop is to bring together scientists to discuss current research examining how body composition affects cancer outcomes and identify the research needed to inform recommendations for cancer survivors.

[Register Now.](#)

Current Funding Opportunities

National Institutes of Health [Standard dates apply]

Testing Interventions for Health-Enhancing Physical Activity: [PAR-14-315 \(R01\)](#)

Developing Interventions for Health-Enhancing Physical Activity: [PAR-14-321 \(R21/R33\)](#)

Collaborative Innovation Award, Clinical and Translational Science Award (CTSA) Program (U01): [PAR-15-172](#)

Advancing Translational and Clinical Probiotic/Prebiotic and Human Microbiome Research: [PA-15-127\(R01\)](#)

Education and Health: New Frontiers (R21): [PAR-16-078](#); (R01): [PAR-16-080](#); (R03): [PAR-16-079](#)

Examination of Survivorship Care Planning Efficacy and Impact (R21): [PA-16-011](#); (R01): [PA-16-012](#)

Exploratory/Developmental Clinical Research Grants in Obesity: [PA-15-163 \(R21\)](#)

Education and Health: New Frontiers (R21): [PAR-16-078](#); (R01): [PAR-16-080](#)

Systems Science and Health in the Behavioral and Social Sciences (R01): [PAR-15-048](#)

Translational Research to Improve Diabetes and Obesity Outcomes (R01): [PA-13-352](#)

Leveraging Cognitive Neuroscience to Improve Assessment of Cancer Treatment-Related Cognitive Impairment (R01): [PAR-16-212](#); (R21) [PAR-16-213](#)

Predicting Behavioral Responses to Population-Level Cancer Control Strategies (R21): [PAR-16-257](#)

Innovative Approaches to Studying Cancer Communication in the New Media Environment (R01): [PAR-16-249](#); (R21): [PAR-16-248](#)

Cancer-Related Behavioral Research through Integrating Existing Data (R01): [PAR-16-256](#); (R21): [PAR-16-255](#)

Stimulating Innovations in Behavioral Intervention Research for Cancer Prevention and Control (R21): [PAR-16-278](#)

National Cancer Institute Program Project Applications (P01): [PAR-15-023](#)

Physical Activity and Weight Control Interventions Among Cancer Survivors: Effects on Biomarkers of Prognosis and Survival (R21): [PAR-16-123](#);

(R01): [PAR-16-122](#)

American Cancer Society

The Extramural Grants department encourages applications for research projects that focus on the multifaceted relationship between nutrition, physical activity and cancer:

[Extramural Grants](#)

Cancer Prevention & Research Institute of Texas

Competitive Continuation/Expansion-Evidence-Based Cancer Prevention Services:

[RFA P-17.1-CCE](#)

Dissemination of CPRIT-Funded Cancer Control Interventions: [RFA P-17.1-DI](#)

Evidence-Based Cancer Prevention Services: [RFA P-17.1-EBP](#)

Evidence-Based Cancer Prevention Services - See, Test & Treat® Program:

[RFA P-17.1-EBP-STT](#)

Cancer Prevention Promotion and Navigation to Clinical Services: [RFA P-17.1-PN](#)

