Duncan Family Institute for Cancer Prevention and Risk Assessment

Annual Report - Year 2

THE UNIVERSITY OF TEXAS
MD Anderson Cancer Center
Making Cancer History®

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"Advancing the discovery and translation of new knowledge about cancer risk and prevention in the laboratory, the clinic and the community"

OVERVIEW

The Duncan Family Institute for Cancer Prevention and Risk Assessment, created to bring together leading investigators and clinicians committed to advancing the science and practice of cancer prevention, has completed another year of operations and is pleased to report that its plans developed during its early 2009 start-up period have been fully implemented.

Background

Emerging from an MD Anderson cancer prevention program already renowned for forging innovation and acknowledged as a national and international leader, the Duncan Family Institute for Cancer Prevention and Risk Assessment is investing in promising new directions while expanding and integrating all aspects of its prevention program from basic research to clinical studies to public health research. The Institute's research is focused towards three interrelated goals:

- Discover the roles biologic, genetic, environmental, behavioral and social factors play in cancer development
- Investigate medical and lifestyle interventions to stop cancer development or slow its progression, mindful of their potential applications to later-stage cancers as well
- Accelerate development and transfer of new tools and evidence-based interventions to the clinic and the community

Figure 1 The Duncan Family Institute is based in MD Anderson's Dan L. Duncan Building, but as with all of MD Anderson's Institutes, engages faculty from across the institution.

The Duncan Family Institute builds on the success of the Division of Cancer Prevention and Population Sciences and its multidisciplinary programs in research, clinical services and education. The Division is home to four departments and four centers:

- Behavioral Science
- Clinical Cancer Prevention
- Epidemiology
- Health Disparities Research
- Behavioral Research and Treatment Center
- Cancer Prevention Center
- Center for Research on Minority Health
- Center for Translational and Public Health Genomics (est. 12/2010)

A brief summary of the Duncan Family Institute's progress during the reporting period is provided here, followed by a more detailed description of the research supported by the Institute's program, resources and fellowships.

Research Programs – Studies to Understand and Reduce Cancer Risk

The Institute is investing in research to discover how biologic, genetic, environmental, behavioral and social factors impact cancer development, investigate interventions to reduce cancer risk, and translate therapies to help patients in our clinics and people in the community.

Through its **Seed Funding Research Program**, the Institute has competitively awarded six grants to investigators whose research is aimed at understanding the development of colon, esophageal, and prostate cancer at its earliest stages, conducting pre-clinical studies to test a new drug target for halting the progression of cancer, enhancing lung cancer risk models to include new types of genetic information implicated in lung cancer development and describe the interaction of genetic and environmental factors in risk for lung cancer, and developing tools to move these statistical models of risk out of the laboratory and into the clinic.

The Premalignant Genome Atlas Program, led by Xifeng Wu, M.D., Ph.D. and Ernest Hawk, M.D., M.P.H., is the Institute's first **Strategic Research Initiative**. In its first year, the program has been highly productive, establishing two parallel approaches – a fast track cross-sectional comparison of molecular changes between normal cells to premalignant cells to cancer cells to identify targets for prevention as well as molecular risk for progression to cancer and a prospective cohort design to follow-up patients who have premalignant lesions to determine if and when they develop cancer. It will take time for the cohort to mature and obtain long-term follow up information, but the investment to build this resource has the potential to provide a wealth of data regarding cancer progression by fully characterizing the changes that accompany cancer development. Both study designs will take an integrative approach to identify markers to predict which patients will progress from normal to premalignancy and from premalignancy to cancer by utilizing data from several sources including demographics, epidemiological factors, clinical variables, germline and somatic DNA variations, genome-wide molecular changes, and phenotypic variation.

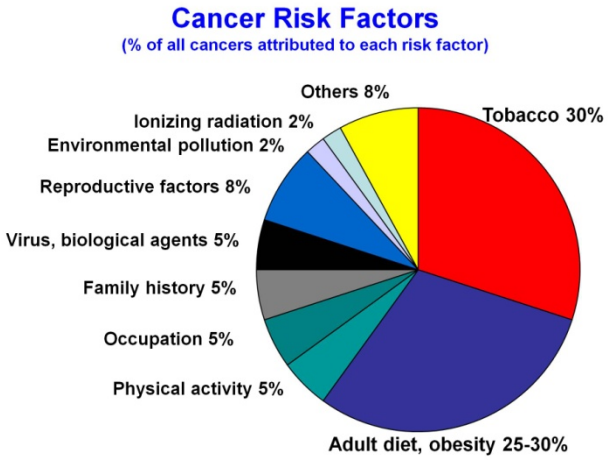

Figure 2 Studies show that over 60% of cancers are attributable to tobacco, diet and physical activity risk factors. Scientists of the Duncan Family Institute are studying these factors to better understand their role in cancer development.

The Institute established a **Transdisciplinary Research Program** intended to provide seed funding to teams of investigators working across disciplinary boundaries to bring focus, through multiple inter-related projects, to broader cancer prevention research questions. The Institute's Scientific Executive Committee agreed to initiate programs in two areas – energy balance and tobacco cessation - as these were identified through our recent, faculty-led strategic planning process as high priorities because of the prevalence and impact of tobacco use, unhealthy diets, and obesity in Texas and across the country. This focused programmatic approach aligns with our faculty recruitment plans and is expected to attract investigators who seek to have greater impact through development of broader strategic research programs.

Research Resources – Infrastructure for Cancer Prevention and Risk Assessment Research

Approximately 40% of the Duncan Family Institute's investment portfolio is targeted towards research infrastructure, a critical but severely underfunded area essential for scientists to compete successfully for external funding from NIH, NCI and other peer-review funding agencies. During this reporting period, the Institute funded the fourth of its research resources, the **Center for Community, Implementation and Dissemination Research.** This new resource supports research targeted to identifying, developing and refining methods, strategies and models to disseminate and implement research-tested and evidence-based heath behavior change, screening, early detection, diagnostic, treatment and quality of life improvement services into public health and clinical practice settings.

Figure 3 The Duncan Family Institute brochure, providing an overview of Institute research and resources, was provided to Global Academic Program visiting scientists and to researchers affiliated with the International Consortium of Bladder Cancer during its recent symposium held at MD Anderson.

We began to see early results of investments in establishing the new **e-Health Technology** resource, with a growing pipeline of projects such as "Project Action" to design, deliver, and evaluate a novel smoking cessation program targeted to low-income uninsured and underinsured individuals, and "iMove," a study to elucidate the social and physical determinants of physical activity in African Americans and Latinos.

The **Personalized Risk Prediction Program** (PRPP) developed two new biospecimen collections, one working with MD Anderson's African American Cancer Project, better known as Project CHURCH (Creating Higher Understanding of Cancer Research and Community Health) and the other with MD Anderson's cutting edge Tobacco Treatment Program. The biospecimens and data developed through this research resource are being used by investigators to study a range of research questions, including questions targeted to improve our understanding of why some people develop cancer and others do not. As an example, PRPP is providing support to a project led by Chris Amos, Ph.D., and funded by a grant

from the Cancer Prevention Research Institute of Texas (CPRIT) to conduct a comprehensive analysis of the impact that genetic variations in nicotinic acid receptors has on smoking behavior, physiology, the brain's reward system and lung cancer risk.

The **Mexican American Cohort Study**, established in 2001 and supported through a number of sources, including the Duncan Family Institute, continued to recruit new participants while maintaining contact with current participants, activities that serve to strengthen the value of this resource over time. The availability of the Cohort allows investigators to conduct studies in this population, something that would be difficult if not impossible without this resource. An example of research that relied on the Cohort are study results published by Kellogg Health Scholar Patricia Miranda, Ph.D., M.P.H. which showed that Mexican origin women may be at higher risk for early onset, premenopausal breast cancer with as many of 50% of cases occurring before age 50, suggesting the need for policies that target screening, education and treatment to reduce disparities in stage at diagnosis and mortality. This was particularly important because recent federal guidelines had suggested raising the age for screening mammography to 50 years of age. For women participating in the Mexican American cohort study, 50% of these women's cancers might have been missed. Other studies regarding smoking susceptibility, health communications messaging, and determinants of smoking cessation in Latinos were supported by the Cohort.

Education, Prioritization and Excellence – Investing in the Current Generations, Developing the Next Generation, and Building for the Future

We have awarded two Duncan Family Institute Mentored Junior Faculty Fellowships to promising young investigators. These competitively awarded fellowships are designed to bridge the gap in funding between postdoctoral training and independent researcher status, which provides the mentoring and financial support for instructor-level faculty to focus on developing their research questions, generating preliminary data and enhancing their publication record to compete successfully for peer review funded extramural grants - an early and critical milestone on the path to research independence.

Figure 4 Dr. Versace and research staff preparing a subject for an assessment and then discuss the results.

Our first Duncan Family Institute fellow is Francesco Versace, Ph.D., Instructor – Behavioral Science. His research on the neurobiology of addiction will provide new insights into the role emotional processes have in nicotine addiction and smoking relapse through use of theoretical models, experimental designs and measurement techniques from the field of affective neuroscience.

Larkin Strong, Ph.D., Instructor – Health Disparities Research, is our second Duncan Family Institute Fellow. Dr. Strong will study factors that influence adolescent physical activity behaviors to identify targets for intervention. She will focus her study on youth of Mexican origin, leveraging the Mexican American Cohort resource. Advancing our understanding of how best to promote physical activity, especially in our minority and underserved communities, is vital to reversing the country's trend toward obesity, which is directly associated with the increased risk of a number of cancers and broader health concerns of importance to individuals, families, and our society.

Figure 5 Duncan Family Institute sponsored lectures are publicized throughout MD Anderson, drawing faculty from diverse fields to learn how people are thinking about cancer prevention and risk reduction

The Institute's investment in the current generation included strengthening the intellectual environment through collaboration with the Cancer Prevention Research Training Program and a UT System Robert Woods Johnson funded health policy fellow, Leonard Zwelling, M.D., M.B.A., to co-sponsor several special lectures. Distinguished speakers included Harvey Fineberg, M.D., Ph.D., President, Institute of Medicine, speaking on "Why Prevention is a Hard Sell," Steve Burd, Chairman, President and Chief Executive Officer, Safeway, sharing his perspective on "Solving the Nation's Healthcare Problem: As Simple as 7th Grade Algebra, " and Joanne Silberner, Health Policy Correspondent, National Public Radio discussing "The Media and Medicine: How the Media Cover Health Care and Health Care Reform, and What a Difference It Makes."

The Duncan Family Institute had a full and productive year instantiating its programs. The Scientific Executive Committee, whose members include the VP for Cancer Prevention, the chairs of the departments of Behavioral Science, Clinical Cancer Prevention, Epidemiology, and Health Disparities Research, the directors for the Behavioral Research and Treatment Center, the Cancer Prevention Center, and the Center for Research on Minority Health, and the Vice President for Health Policy, set research priorities and guided investments in areas of greatest promise. Staff members affiliated with the Division of Cancer Prevention and Population Sciences were engaged in establishing, managing, facilitating and promoting the Institute's initiatives, measuring and reporting on scientific progress, and disseminating information on Institute research resources and funding opportunities. We note here the move of the Institute's reporting and financial year to match MD Anderson's fiscal year, providing efficiencies in budgeting and financial and operational reporting and management. Consequently, this report for the transition year is for a seventeen month period, from April 1, 2009 through August 31, 2010.

Figure 6 Videos highlighting the work of Duncan Family Institute scientists can be found on MD Anderson's YouTube website.

Future Directions

The Division of Cancer Prevention and Population Sciences, the home for the Duncan Family Institute, engaged in a research strategic planning process in 2010 to consider future trends and their implication for cancer prevention research directions, and to inform decisions regarding current and future investments to launch new research programs, recruit expertise and develop infrastructure.

Emerging from planning discussions was a clear priority for developing a program in **energy balance**, which is a term used to describe the relationship between energy intake (calories eaten) through food consumption and energy expended (calories used) through physical activity. A significant energy imbalance leads to obesity, a risk factor for the development of a number of cancers. The American Cancer Society reports that approximately 30% of cancer deaths in the U.S. can be attributed to poor diet and physical inactivity (ACS, 2009). The Institute plans to make a substantial investment in research in energy balance – to include increasing our knowledge of how the factors that influence energy balance, principally nutrition and physical activity, are implicated in disease progression from healthy to pre-cancer to cancer and how these factors interact with genetic and environmental influences in cancer development. In addition to developing our understanding of energy balance and its relationship to cancer risk, we will also invest in studies of diet, exercise, psychosocial and medical interventions to determine how best to reduce an individual's cancer risk and thus improve our ability to prevent cancer.

Figure 7 The Division of Cancer Prevention and Population Scientists includes 84 faculty members and 598 research and administrative staff, making it one of the largest units dedicated to cancer prevention at any U.S. cancer center.

Tobacco research continues to be one of MD Anderson's strengths and is an area for continued investment. We still do not know all of the factors that explain why some people who use tobacco do not get cancer and others do; nor do we fully understand why some people can easily stop using tobacco products and others have great difficulty in doing so. Epidemiologists are looking at genetic and environmental influences, behavioral scientists are studying the neurobiological basis for nicotine addiction and clinical specialists are evaluating combinations of psychosocial and pharmacological interventions to find more effective ways to help those who want to quit smoking to do so. Scientists in the department of Health Disparities Research are taking treatments that work in the clinic to community-based settings, such as Harris County Hospital District and Kelsey-Seybold to study how best to tailor these interventions to the realities of various clinical settings and thus help to improve the health of Houstonians and others more broadly.

MD Anderson's **Cancer Prevention Center** is a unique clinic setting with over 15,000 patient visits per year. Individuals concerned about their risk for cancer can visit the clinic for a "Prevention Check-up" and learn how family history of cancer and behavior and lifestyle factors influence their cancer risk. Patients receive evidence-based cancer screening recommendations personalized to their cancer risk profile. For those patients determined to be at higher risk than the general population, expanded services are available, including risk-based screenings and genetic testing and counseling. In addition to the importance of moving discoveries from the laboratory to the clinic, and disseminating interventions that work in medical center clinics to community health settings, it is important to take what we learn in the clinic back to the laboratory to continue the cycle. For this reason, we plan to invest to expand the research infrastructure in the Cancer Prevention Center, enhancing our ability to conduct clinical research in this setting and to gather the baseline research data that is used to follow participants over time. As we expand the clinical services offered in the Cancer Prevention Center, we will leverage the planned Duncan Family Institute investment in the Center's research infrastructure to support expanded research studies, reinforce the pathways for our research to inform our clinical services and vice versa. This concept was affirmed in a review in January 2010 with the MD Anderson External Advisory Board, with reviewers noting "Another major strength of the program is the Cancer Prevention Clinic. This clinic is unique in that it is a free-standing clinic at a major cancer center dedicated to providing clinical cancer prevention services, education, and conducting cancer prevention research. It is recommended that the Program leaders and the Institution expand the services and research being conducted in this clinic…."

Figure 8 Terry Bevers, M.D., and Medical Director of the Cancer Prevention Center discusses results with a patient.

The Duncan Family Institute has made considerable progress over the past year to establish its foundation and begin to see initial results of its research investments. While it is still early in the Institute's life, the investments guided by the Scientific Executive Committee, leaders in Behavioral Science, Clinical Cancer Prevention, Epidemiology and Health Disparities Research, are beginning to show promise and are poised to lead to new knowledge about the factors that contribute to cancer risk and how best to manage and reduce that risk.

Figure 9 Apache Employees Making Cancer History®

We are especially grateful to our new and sustaining donors for their gifts to advance cancer prevention research and are appreciative of the opportunity to give back to the community whose generosity makes it possible for the Institute to do its work. As one example, Powel Brown, M.D., Ph.D., along with MD Anderson's president, John Mendelsohn, M.D., and the Public Education Office, shared information on cancer prevention with Apache Corporation employees at a May, 2010 event focused on employee wellness. The highlight of the event - a personal testimony from one of Apache's scientists, August Lau, Ph.D., for whom cancer is indeed history - reminded us all of why we do the work we do. It is gratifying and motivating to be able to honor the spirit of giving that makes our progress possible. That's why you will find many of our cancer prevention researchers sharing back what they know and learn about cancer prevention - in our schools, businesses, places of worship, communities and beyond.

DUNCAN FAMILY INSTITUTE SEED FUNDING RESEARCH PROGRAM

The Institute provides seed funding grants to help individual investigators develop the preliminary data necessary to advance their research ideas to compete successfully for external peer-reviewed funding. The Duncan Family Institute Seed Funding Research Program was launched in October 2009 and received seventeen proposals in response to two separate calls for applications. The Institute awarded six seed grants based on scientific merit, assessed through an NIH-style peer review process, and which included scientists from Texas Medical Center institutions on the peer-review panel. We have recently received proposals in response to a third call for applications and expect to issue a fourth call in early 2011, maintaining our goal of making four awards per year, two in the winter and two in the summer.

The scientists receiving seed grant awards are working on understanding factors that contribute to progression in colon cancer, elucidating markers of risk in prostate cancer, exploring gene-gene and gene-environment interactions to predict lung cancer risk, and developing population simulation models to predict and compare potential benefits, harms and costs of cancer prevention strategies. Two of the projects are preclinical in nature - one to understand the progression of Barrett's Esophagus to esophageal cancer, and the other to determine if inhibition of mTOR signaling will suppress polyp formation in a mouse model of the Peutz-Jeghers Syndrome, with implications for other cancers.

Below is a summary of each of the projects awarded funding during this reporting period.

Role of PPAR-delta Overexpression in Colonic Tumorgenesis

Imad Shureiqi, M.D., M.S., Associate Professor, Department of Clinical Cancer Prevention

In this discovery project, the primary aim is to enhance our understanding of the role of a nuclear receptor, PPAR-delta, in promoting colon cancer. Colorectal cancer is the second most common cause of cancer death in the United States. Despite the progress that has been made, with death rates from colorectal cancers remaining around 50%, better preventive interventions for this disease are needed. We know that increased production of the protein peroxisome proliferator-activated receptor delta (PPAR-d) is associated with colon cancer development but we do not know if the increased production of this protein is critical to the promotion of colon cancer development. Discovering PPAR-delta's role in colon cancer development may lead to identification of this receptor as a drug target for prevention in people at high risk for the disease.

Predicting the Risk of Developing Lung Cancer: A Multigenic Statistical Approach to MicroRNA

Yuanqing Ye, Ph.D., Assistant Professor, Department of Epidemiology

Lung cancer is the leading cause of cancer-related death in the U.S., with almost 90% of lung cancers attributed to cigarette smoking. There is substantial evidence that lung cancer's development is driven by key interactions between carcinogens in tobacco and inherent genetic traits. In this study, Dr. Ye will identify novel genetic variants in miRNA related genes, a type of RNA that plays an important regulatory role in many biological processes and diseases, which are associated with the development of lung cancer. He and his colleagues will explore gene-gene interactions and gene-environment interactions, use analytical and statistical techniques to develop and validate risk models, and then apply them to test whether they can identify individuals at highest risk for lung cancer. Obviously, these individuals may then be ideal prospects for targeted preventive interventions. Therefore, this study may shed significant light into important causes of lung cancer and lead to new techniques to identify those at highest risk for this disease.

Cost-effectiveness Studies of Novel Cancer Prevention Strategies

Bo Peng, Ph.D., Instructor, Department of Epidemiology

Many genetic risk factors have been identified for complex human diseases such as lung cancer but it is unclear how to make effective use of such information to improve existing cancer prevention strategies. This study aims to simulate populations with realistic environmental and genetic risk factors of cancers, and then study the cost-effectiveness of novel cancer prevention strategies that make use of individual genetic information. By predicting and comparing the benefits, harms and costs of various cancer prevention strategies, the results of this project could contribute to development of tools to help clinicians make recommendations regarding the benefits of genetic testing for individuals who are at risk for certain types of cancers, and, ultimately, aid clinicians in providing individualized cancer prevention and treatment options according to a patient's individual genetic profile.

Pilot Biomarker Study of Trace Metals and Prostate Cancer Risk

Ashraful M. Hoque, M.D., Ph.D., Associate Professor, Department of Clinical Cancer Prevention

The purpose of this research study is to investigate the role of essential and toxic trace metals and their association with prostate cancer among African American and white men. Researchers in Dr. Hoque's laboratory will measure levels of essential and toxic metals in blood among both prostate cancer patients and healthy men to determine if there is an association of low levels of essential, or high levels of toxic, metals with prostate cancer. In addition, Dr. Hoque's group will examine whether certain dietary factors, such as fruit and vegetable consumption and dietary supplements, reduce the toxic effects of heavy metals and ultimately decrease prostate cancer risk. Data generated from this study could have significant public health implications through the identification of a population with deficient essential trace metals that could be at high risk for prostate cancer and, therefore, could benefit from targeted primary and secondary prevention interventions.

Preclinical Chemoprevention of Esophageal Adenocarcinoma

Xiaochun Xu, M.D., Ph.D., Associate Professor, Department of Clinical Cancer Prevention

The incidence of esophageal cancer, a deadly disease with a poor prognosis, has been increasing in the U.S. The actual origin of esophageal cancer remains unclear, but we do know esophageal cancer is more likely to occur in individuals who have frequent gastroesophageal reflux carrying acid, bile and proteases, resulting in the formation of Barrett's esophagus. The latter is considered to be a premalignant condition that may lead to the advancement of esophageal cancer. Tobacco smoke can also enhance the effects of bile acid, which may in and of itself be a risk factor for esophageal cancer. These risk factors contribute to development of esophageal cancer by causing multiple genetic changes. In this study, in animal models, we will demonstrate that a combination of chemopreventive agents can block these genetic alternations, thus preventing the growth of esophageal cancer cells.

Novel Use of the Niclosamide: Targeting mTOR Signaling in Peutz-Jeghers Syndrome

Chongjuan Wei, Ph.D., Assistant Professor, Department of Epidemiology

Peutz–Jeghers syndrome (PJS) is a genetic disorder characterized by benign polyps called hamartomas which occur mainly in the stomach, small intestine, and colon. Patients with PJS are at higher risk for developing various types of cancer. To date, therapy for PJS has been limited to surgical removal of clinically significant polyps. Over-activation of mTOR signaling, a pathway which promotes cell growth and proliferation, has been associated with PJS suggesting that an mTOR inhibitory drug may be useful for PJS treatment. In this proposed project, we will use niclosamide, a novel mTOR inhibitor, to determine whether interruption of mTOR signaling suppresses polyp formation in the PJS mouse model. Considering that the mTOR pathway is aberrantly activated in most common cancers in addition to PJS, the resulting findings could impact not only cancer prevention and treatment in patients with the Peutz-Jeghers Syndrome, but also in others with cancers harboring dysregulated mTOR signaling.

DUNCAN FAMILY INSTITUTE STRATEGIC RESEARCH INITIATIVES

With the goal of bringing a focus of expertise and resources to promising cancer prevention research areas, the Duncan Family Institute Executive Committee established the Strategic Research Initiative program. Funds are designated for high priority areas. During this reporting year, we supported the Premalignant Genome Atlas program and identified two new areas for further development - Energy Balance and Tobacco Research.

Premalignant Genome Atlas

Co-directors: *Xifeng Wu, M.D., Ph.D., Professor, Department of Epidemiology*
Ernest Hawk, M.D., M.P.H., Vice President for Cancer Prevention and Division Head, Cancer Prevention and Population Sciences

"Stopping cancer before it starts…."

Approximately 80% of all human cancers arise in the cells that line the surfaces and cavities of the body's organs (epithelial cancers). The progression from healthy cells to cancer is a multi-step process, from normal cells, to premalignant lesion, and to malignant tumor, often involving accumulation of genetic and chemical alterations in tissues over many years. This process makes the early detection and prevention of cancer possible. However, progression does not occur at the same rate, if at all, in each individual. The mission of the Premalignant Genome Atlas Program (PGA) is to assess the spectrum of factors contributing to the progression from healthy individuals to those with precancerous lesions to cancer patients and determine the molecular changes along this continuum. This information can be used to:

- build models to predict risk of cancer development or progression,
- identify targets for prevention therapies, and
- find markers of preventive response.

Because cancer is often detected and treated at an advanced stage using chemo- and/or radiotherapy with varying results and side effects that impact cancer survivors' quality of life, this strategic research initiative is targeted to pre- and early-stage cancer development. Therefore the results are directly relevant to cancer prevention and early-stage therapy and may translate into improved recommendations in public health as well.

In this first year of the program, study leaders designed two parallel approaches. The first is a fast track, cross-sectional comparison of molecular changes between normal cells to premalignant cells to cancer cells, to identify targets for prevention as well as molecular markers of progression to cancer. This approach will allow the program to take advantage of the currently available resources to quickly begin profiling the molecular alterations that occur during neoplastic progression.

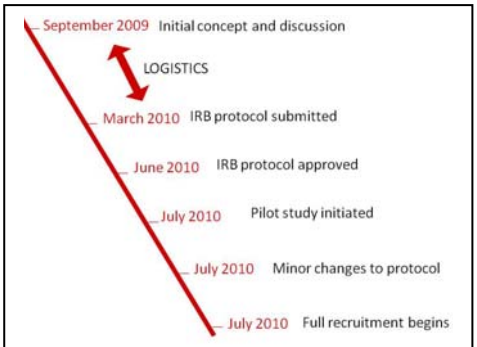

Figure 10 Colon Polyp Study Milestones

The second approach is a prospective cohort design to follow patients who have premalignant lesions to determine if and when they develop cancer. It will take time for the cohort to mature and obtain long-term follow up information, but the investment to build this resource has the potential to provide a wealth of data regarding cancer progression by fully characterizing the changes that accompany cancer development. Both study designs will take an integrative approach to identify markers that predict which patients will progress from normal to premalignancy, and from premalignancy to cancer, by utilizing data from several sources including demographics, epidemiological factors, clinical variables, germline and somatic DNA variations, genome-wide molecular changes, and phenotypic variation.

For the second approach, during the past year the program leaders focused on building the program infrastructure in addition to conducting several studies. Highlights are as follows:
Successfully established the infrastructure of the colon polyp study and recruited over 300 patients at start-up

Dr. **Wu** and colleagues conceptualized and designed the study, sought clinical collaborators, developed an IRB protocol, obtained IRB approval, designed a study brochure and questionnaire, performed pilot interviews, initiated recruitment, refined the questionnaire, and started full recruitment of colon polyps in July of this year (Figure 10).

The infrastructure of the colon polyp study includes not only a mechanism for biospecimen collection, but other components that are essential for support of future in-depth investigations of disease progression. These components include extensive questionnaire data (including demographics, smoking behavior, alcohol use, family history, occupational exposures, dietary patterns, and physical activity), clinical and follow-up data, laboratory technology and database, efficient tracking system for biospecimen, data and patient follow-up, and a strong data analysis team. (Figure 11)

Early efforts to recruit patients with colorectal cancer as a comparison group to patients with polyps were very successful. Through collaboration with clinical leaders in our Gastrointestinal Cancers Clinic, over 300 individuals were recruited to the study in just a few months. These patients generously contributed their time to complete comprehensive epidemiological questionnaire data and dietary questionnaire data, and provide blood and urine samples. This resource will be invaluable in the comparison of patients with premalignant and malignant colorectal lesions.

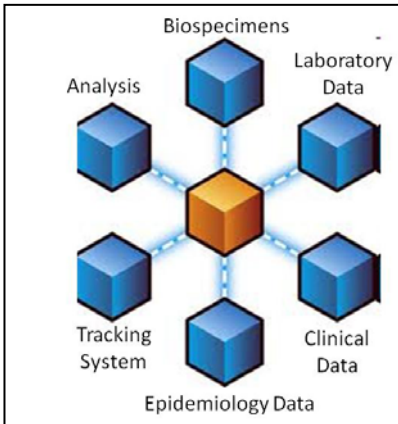

Figure 11 Colon Polyp Study Infrastructure

Barrett's esophagus (BE) and esophageal adenocarcinoma (EAC) study

EAC is the cancer with the fastest rising incidence in the past three decades in the U.S. yet the reason for this dramatic increase is not known. Most EAC develops from BE. BE is estimated to be present in 1-2% of general population. Obesity and gastroesophageal reflux disease (GERD) are the major risk factors for Barrett's esophagus. The malignant progression of Barrett's esophagus follows a generally accepted series of pathologic stages, from metaplasia, to low-grade dysplasia (LGD), to high-grade dysplasia (HGD), and finally, to adenocarcinoma. The absolute risk of developing EAC in patients with Barrett's esophagus is only about 0.5% per patient-year. However, the risk of developing EAC in patients with HGD may be higher than 10% per patient-year. This HGD progression risk has been hard to assess because the grading of dysplasia is subjective and there is relatively high inter-observer variability in its diagnosis. Consequently, independent objective indicators, such as biomarkers are needed to improve the assessment of EAC risk among BE patients.

In collaboration with Dr. Jaffer Ajani, Department of Gastrointestinal Oncology, the study team used high-density single nucleotide polymorphism (SNP) arrays to profile chromosomal aberrations at each of the four sequential progression stages – Barrett's metaplasia (BM), low-grade dysplasia (LGD), high-grade dysplasia (HGD), and EAC. A total of 101 (20 BM, 19 LGD, 20 HGD, and 42 EAC) disease tissue specimens were included in this study. Investigators found a gradual increase in the chromosome aberration index with the increasing degree of malignancy, and were also able to identify candidate tumor suppressor genes or oncogenes that may be involved in EAC tumorigenesis, which will be further studied to evaluate their utility as gene targets for chemoprevention. These data have been published in Cancer Prevention Research[1]. PGA program investigators are expanding their collaboration with Dr. Ajani and are collecting tissues from patients with Barrett's esophagus and esophageal cancer along with adjacent normal tissue to examine: a) whole genome DNA methylation patterns, b) genome-wide microRNA expression profiles, and c) genome-wide gene expression.

Other collaborative projects supported in part through the Duncan Family Institute PGA program include a newly developed ***Multiple Endocrine Neoplasia (MEN) study*** (in collaboration with N. Perrier, M.D.) and expansion of an ***oral premalignant tissue (OPL) study*** (in collaboration with S. Lippman, M.D.).

[1] Gu, J., et al., *Genome-Wide Catalogue of Chromosomal Aberrations in Barrett's Esophagus and Esophageal Adenocarcinoma: A High-Density Single Nucleotide Polymorphism Array Analysis.* Cancer Prevention Research, 2010. **3**(9): p. 1176-1186.

Methods development projects include a two-step **Q-FISH assay to examine overall and chromosome-specific telomere lengths** (Figure 12). This assay will allow investigators to study telomere length in more detail and determine association with cancer risk, progression, and also outcomes of treatment. In a pilot case-control study with 31 esophageal cancer cases and 31 matched controls, researchers found that esophageal cancer patients had significantly shorter overall telomere lengths compared with controls (Figure 13). After further analysis, researchers found that, when compared with individuals with the longest telomere length, those with short telomeres had on average a 3 to 4-fold increased risk of cancer. Because of these promising results, investigators will be expanding use of this assay in PGA studies.

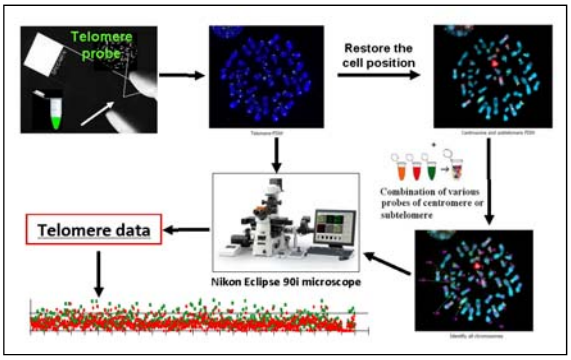

Figure 12 Methodology for genome-wide telomere length FISH assay.

Modest investments were made to integrate advanced technologies in Dr. Wu's genomics lab to further support the PGA program. Investigators have tested Illumina's whole genome DNA methylation arrays in Barrett's esophagus and esophageal adenocarcinoma tissues; upgraded the Applied Biosystems 7900HT Sequence Detection System to support genome-wide microRNA expression arrays using Applied Biosystems Taqman microRNA Assay, and began the process of upgrading the Illumina BeadStation system to the iScan system, an advanced, dedicated array scanner that supports rapid, sensitive, and accurate imaging of Illumina's array-based genetic analysis products.

Future PGA program plans include continuing recruitment of colon polyp and colorectal cancer patients, ongoing collaborations with clinical researchers within MD Anderson and beyond in Barrett's esophagus and oral premalignant lesions. Building on the progress in these diseases, program investigators will seek collaborations with clinicians in other organ sites, such as breast, cervix, and ovary. Additional directions include performing pilot molecular assays on tissues of colon polyps and MEN. Investigators will seek to leverage investments from the Duncan Family Institute by competing for extramural funds during the upcoming year.

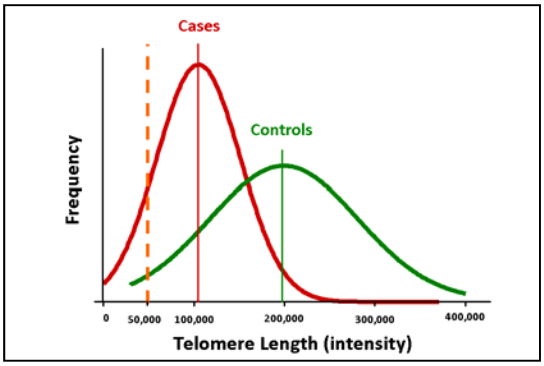

Figure 13 Distribution of telomere length for the six selected chromosome arms in esophageal cancer cases and controls.

Energy Balance

The goals for this strategic research area include advancing the understanding of the individual and interactive effects of physical activity and nutrition on cancer development and progression. As an example of the research directions in this area, investigators are conceptualizing preclinical and clinical intervention studies on the effect of patterns of physical activity (intensity, frequency and duration) in relation to weight gain and cancer risk, and to study the combined effects of interventions to promote exercise and healthy diet in the laboratory, the clinic and the community.

Tobacco Research

Building on MD Anderson's strength as a research leader in this area, this developing transdisciplinary research program is targeted to developing synergistic studies to understand the myriad of issues associate with tobacco as a risk factor for cancer – a "cells to society" approach. Scientists representing a wide range of disciplines are developing plans for studies to understand the basic science and genetic and molecular epidemiology of tobacco use; employ cutting edge imaging techniques to study the neurobiology of addiction; and address inequities in the burden of tobacco use by studying the influence of race/ethnicity, socioeconomic status, gender, neighborhood environment, and social context. Clinician scientists are developing combined behavioral and pharmacotherapies; and public health scientists are targeting individual perceptions of risk, and the development of effective prevention and cessation interventions using traditional channels and mobile technologies.

DUNCAN FAMILY INSTITUTE RESEARCH RESOURCES

Critical to research progress is investigator access to cutting edge scientific technologies, biospecimens, data and expertise to enhance scientific interaction and productivity. These are often not funded through traditional grant mechanisms and other sources of funding dedicated to research projects and programs. The Duncan Family Institute, after careful consideration, invested in establishing or further developing four research resources: the Personalized Risk Prediction Program, the e-Health Technologies Core, the Mexican American Cohort Study, and the Center for Community, Implementation and Dissemination Research. These resources and representative research accomplishments supported by each of these infrastructures are described here.

Personalized Risk Prediction Program

Co-directors: *Chris Amos, Ph.D., Professor, Department of Epidemiology*
Marsha Frazier, Ph.D., Professor, Department of Epidemiology

"Cancer Prevention – Personalized and Predictive"

Personalized molecular medicine techniques are becoming invaluable for prevention, screening, and early diagnosis of cancer. In order to develop *tailored* interventions, we must extend our knowledge of why some people develop cancers and others do not. Through this program, further development of the biospecimens and demographic, clinical and risk factor data by cancer site will help to support investigators whose research aims are to build risk models to identify, quantitate and stratify individuals based on their unique and personal risk for cancer. Scientists working with PRPP resources are investigating ways to characterize cancer risk, leveraging the significant advances being made to discover new methods for genomic analysis, advances that not only push the scientific envelope but make the technologies more accessible and affordable than in the past.

The long-term goal of the Duncan Family Institute Personalized Risk Prediction Program is to develop tools and resources that can be used by investigators in research to characterize an individual's risk for developing cancer, promote earlier cancer diagnosis, target interventions to appropriate high-risk populations and to advance effective personalized preventive approaches, thereby improving patient outcomes over the entire spectrum of cancer development, progression and survivorship.

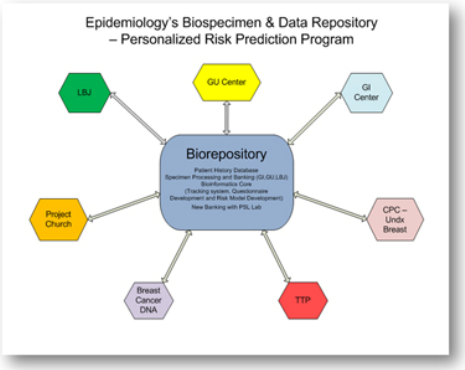

Figure 14 PRPP Biospecimen and Data Banks and central resource support

Such approaches are accomplished more cost-effectively and rapidly by mounting an organized program rather than by piecemeal efforts at data collection and stand-alone biospecimen repositories. The overarching principle for establishing this resource was the recognition that biospecimen and data collection efforts need to be integrated if we are to fulfill the ultimate promise of personalized molecular medicine, while minimizing patient burden during the sample and data collection processes.

With this in mind, the overall goals of the *Personalized Risk Prediction Program (PRPP)* are to:

1. Integrate a resource comprising two components: systematically collected core data (the Patient History Database) and germline biospecimens for future research and collaborations. In addition, the collection of cancer site-specific data will permit the refinement of personalized risk assessment.

2. Support research to generate precise risk evaluations for well individuals, "worried well", and high-risk individuals (e.g., those with precancerous conditions such as dysplasia or individuals with inherited predispositions), as well as newly registered cancer patients and cancer survivors as they may be at greater than average risk for second cancer development.

3. Develop a platform from which tailored interventions can be developed that stratify subjects according to risk for preventive intervention, including preventive chemotherapy, behavioral treatment (e.g., counseling and pharmacologic therapy for smoking), surgery, genetic counseling and risk-based screening programs.

During the reporting period, leaders and scientific staff within the PRPP have consolidated infrastructure and processes to more effectively join in supporting three previously existing biospecimen and data collection sites: Gastrointestinal Cancers Clinic, Genitorurinary Clinic, Lyndon B. Johnson General Hospital (LBJ) and the Cancer Prevention Center (CPC). In addition, we have been able to further develop our Patient History Database, a repository of patient data regarding medical history, current conditions, and certain cancer risk factors. As of the end of this reporting period, the PRPP repository contains over 15,000 biospecimen samples and over 175,000 abstracted patient records in an institutionally-supported Oracle Database, approaching a scale that provides statistical power to population-based studies such that investigators can begin to use these specimens and data in novel cancer risk prediction studies.

One of the more exciting projects of the PRPP is its collaboration with Dr. Lorna **McNeill** and the faculty of the department of Health Disparities Research to collect samples and extract DNA for **Project CHURCH**, a research study to learn if and how certain factors, such as diet and physical activity, cigarette smoking, cancer screening, health care, neighborhood environment, and mental health may affect cancer rates among African Americans as compared to other racial and ethnic groups. With the help of the PRPP resource, there are now over 1,000 banked saliva samples from this population. African Americans are a particularly important group to study since their rates of cancer mortality are significantly higher than other groups', yet their participation in clinical research has been limited.

Other projects include banking DNA samples for two of Dr. David **Wetter**'s research projects: **Reducing Tobacco Related Health Disparities Study (LOW SES)** and **Por Nuestra Salud**. Earlier this year, the PRPP began DNA banking for Dr. Paul **Cinciripini**'s **Tobacco Treatment Program**, prospectively for new patients seen in the program's clinic and retrospectively, among the patients who have already completed a smoking cessation program. These types of projects are of particular interest from a cancer prevention perspective, because they will allow investigators to examine genetic factors associated with smoking cessation, nicotine dependence, and other behavioral risk factors related to the etiology and treatment of nicotine dependence and other co-morbid conditions using behavioral or pharmacological interventions.

The Duncan Family Institute support to the PRPP has allowed those with biospecimen banking and data management expertise, primarily faculty and research staff in the department of Epidemiology, to extend this expertise to clinical collaborators. For example, in December 2009, the PRPP Steering Committee approved a plan to join with Dr. Francisco Esteva, department of Breast Medical Oncology, to expand his existing serum bank and process DNA, adding to the value of this already valuable resource. Further, risk prediction research often requires the availability of samples from healthy individuals (controls). Leveraging the expertise of its staff, PRPP began to collect controls for breast cancer research. Strategically, the PRPP Steering Committee recognized the opportunity to expand collection efforts across the cancer continuum for breast cancer research, adding biospecimen collection activity in the Cancer Prevention Center's undiagnosed breast clinic (for patients at elevated risk through either a suspicious finding, premalignant condition or family history) and in the patients who are breast cancer survivors who are seen in the Cancer Prevention Center.

Figure 15 Chris Amos, Ph.D., Professor in the Department of Epidemiology and lead investigator on a CPRIT grant to study the effects from nicotine receptor variations on lung cancer risk.

An example of the type of projects that can be advanced as a result of having robust collections of data and biospecimens is Dr. Chris **Amos**' Cancer Prevention Research Institute of Texas (CPRIT) grant "**Effects from Nicotine Receptor Variations on Lung Cancer Risk and Smoking**" (**CIPRIT RP100443**, $3M). Nicotine dependence results from a complex interaction of behavioral and genetic factors. This study provides a comprehensive analysis of the impact that genetic variation of nicotinic receptors have on smoking behavior, physiology, the brain's reward system and lung cancer risk. Understanding genetic effects on smoking dependence and lung cancer risk may lead to a better understanding of the specific mechanism by which tobacco smoke causes lung cancer. The PRPP resource will provide interviewer expertise to re-contact healthy control subjects to seek to enroll them in a neuroimaging study conducted with Baylor College of Medicine. MD Anderson is fortunate to have a rich set of resources to support its research

studies, made even more valuable through its setting in the Texas Medical Center and its faculty members' engagement with colleagues in other research institutions. This Baylor collaboration example is just one of many collaborations that are enabled, in part, through support from the Duncan Family Institute.

Over the course of the next year, the PRPP leadership will focus on promoting utilization of the resource to investigators whose research interests could be advanced through access to PRPP biospecimens and data (Stage 2, see figure 16). PRPP goals also include continuing to strengthen the resource infrastructure and build the collections looking for further opportunities to leverage a common set of policies and procedures to further develop and to maintain these unique research resources in a cost-effective manner.

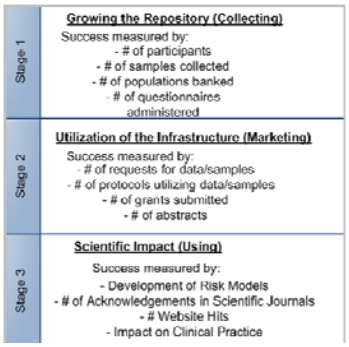

Figure 16 PRPP Metrics of Progress will evolve as the resource matures.

e-Health Technology

Co-directors: Alex Prokhorov, M.D., Ph.D., Professor, Department of Behavioral Science
Ludmila Cofta-Woerpel, Ph.D., Assistant Professor, Department of Behavioral Science

"Smart phones getting smarter…. Innovative tools for cancer prevention"

Accelerating the development of the most effective lifestyle change interventions by harnessing the latest communications technologies—from smart phones to iPads — will speed and streamline the exchange of information between researchers and participants in clinical research studies focusing on health behavior change. The goal of these investigations is to create new evidence-based assessment and intervention tools that can be customized for individuals and delivered electronically to motivate adherence to recommended lifestyle changes and treatments, issue reminders to schedule cancer prevention screenings, support interaction with community healthcare providers and more.

Figure 17 Tablet devices are expected to be an important research tool.

The e-Health Technology core resource supports the development and implementation of multi-media and computer-aided intervention and assessment tools to be used in cancer research studies that address health information, health behavior change, symptoms, and quality of life. e-Health assessment and intervention platforms can be used to capture in real-time data from study participants rather than depend on their recall, and can support tailored and dynamic individual intervention study designs, personalizing prevention in the research "laboratory" of the community with the potential to accelerate delivery of proven prevention strategies to the clinic and community. Led by Alex Prokhorov, M.D., Ph.D. , Professor, Department of Behavioral Science and Ludmila Cofta-Woerpel, Ph.D., Assistant Professor, Department of Behavioral Science, this new resource has established itself as the "go to" source for researchers who seek convenient access to cutting edge solutions and innovative tools that incorporate the use of PDAs, Smart phones, cell phones, iPads, and other mobile devices.

Research studies supported by e-Health Technology are listed in the table below. While the e-Health contribution is only a component of the overall studies, the availability of services through e-Health Technology contributed to a number of studies, including the eight listed in Table 1, which represents over $9M in funded research. Examples of some of the studies supported by e-Health Technology are as follows:

Figure 18 Drs. Vidrine and Prokhorov are collaborating on a study to deliver a smoking cessation program to low-income uninsured individuals.

Enhancing cancer outreach for low-income adults with innovative smoking cessation (PI: Damon **Vidrine**, Dr.Ph., Assistant Professor, Department of Behavioral Science, Alexander **Prokhorov**, M.D., Ph.D., Professor, Department of Behavioral Science.) The primary goal of this study is to design, deliver, and evaluate a novel smoking cessation program targeted to low-income uninsured and underinsured individuals. "Delivering" in the context of this proposal means taking the program directly to neighborhoods where the target audience dwells. Thus,

this smoking cessation intervention research project will partner with the existing Prostate Outreach Project, which has served thousands of uninsured/underinsured individuals in the Houston area over the last five years. By utilizing a mobile device and an established network of community sites, we will significantly increase the range of cancer prevention services for individuals with limited transportation abilities and limited or no medical insurance who rarely or never use traditional health care facilities. e-Health Technology will develop SMS/MMS messaging system for a smoking cessation program targeted to low-income uninsured and underinsured individuals. The scope of work for this project includes database design and implementation, interactive admin web user interface design and implementation, secure data collection and transfer, automatic SMS/MMS (text and picture messaging, respectively) pipeline and scheduling service design and implementation, software installation, training and support. (**National Cancer Institute, R01 CA141628**)

iMove – Social, contextual and environmental predictors of physical activity in sedentary minority adults
(PI: Lorna **McNeill**, Ph.D., Assistant Professor, Department of Health Disparities Research) The purpose of this study is to elucidate the social and physical determinants of physical activity (PA) in blacks and Latinos in order to ultimately reduce PA disparities by developing cancer prevention interventions that address their resources (both social and environmental), life priorities, and chief concerns, and to enhance our knowledge of how and when people move from initiating to maintaining a change in PA. Researchers will use survey, qualitative, and state-of-the-science ecological momentary assessment (EMA) methods to longitudinally examine the influence of selected psychosocial, social contextual, and objective and perceived physical environmental factors on self-initiated lifestyle moderate-intensity PA in 300 black and Latino sedentary adults over a 1 year period. e-Health Technology will develop the EMA software for this project. The scope of work for this project includes database design and implementation, interactive user interface design and implementation, secure data collection and transfer, software installation, training and support. e-Health will provide the software, hardware and management services to Dr. McNeill for her study. (**National Institute of Nursing Research, R01 NR011453**)

Figure 19 Lorna McNeill, Ph.D., focuses her research towards studying how best to intervene to prevent cancer in populations where the burden of cancer is disproportionately high.

A major accomplishment of e-Health Technology was development of a software application on mobile devices for off-site use. This solution is an upgraded version of the current Ecological Momentary Assessment (EMA) application (see CNN article, Figure 20) to improve performance of existing functionality, add new features and add Android platform support. e-Health is constructing form-based user interfaces for mobile devices and a manager interface for use on desktop computers, and providing software installation, training and support. The EMA platform, available for customizing to study requirements, is providing MD Anderson scientists a competitive advantage when competing for funding, enabling innovative cancer prevention ideas to be tested in clinical and community settings.

Table 1 Representative Research Studies Supported by e-Health Technology

Project Title (Award Type)	Principal Investigator	Department	Sponsor	Start Date	End Date	Total Grant Award
PNS (Por Nuestra Salud) Determinants of Smoking Among Latinos (MDARE3): P60 MD000503	D. Wetter	Health Disparities Research	National Center on Minority Health and Health Disparities	09/11/07	04/30/12	$1,011,840
Project CHURCH (Kiosk) "African American Cancer Prevention Project"	L. McNeill	Health Disparities Research	MDA - University Cancer Foundation	11/1/08	10/31/11	$725,000
Scheduled Reduced Smoking (Webcassi)	P. Cinciripini	Behavioral Science	State of Texas Tobacco Settlement Funds	7/16/07	Active	$116,000
Project ACTION (mobile device) 1R01CA141628-01	D. Vidrine / A. Prokhorov	Behavioral Science	NIH/NCI (R01)	4/12/10	1/31/15	$3,267,525
iMove EMA Physical Activity: R01NR011453 "Social contextual and environmental predictors of PA in sedentary minority adults"	L. McNeill	Health Disparities Research	NIH – National Institute of Nursing Research	7/22/09	6/30/14	$2,182,747
CAM – iPad (CCOP Grant)	M. Fisch	General Oncology	Dr. Fisch Incentive Funds	N/A	N/A	N/A
PRISM: 5R01CA125413	J. Vidrine / D. Wetter	Health Disparities Research	CDC /NIH	04/01/07	02/28/10	$570,000
CARE: 5 R01 DA14818	J. Vidrine / D. Wetter	Health Disparities Research	CDC /NIH	09/30/01	08/31/06	$1,250,000
TOTAL						**$9,144,012**

e-Health Technology constituted its advisory board early in its development, and this has proven to be an effective structure for expanding the leadership expertise to a broad range of disciplines and to engage institutional leadership through participation of the AVP for Publication Education, Jo Ann Ward. Key responsibilities of the e-Health Advisory Board include providing guidance to leadership on: project selection and review process using defined , project prioritization criteria, expansion of services to departments outside of DCPPS, and selection of development projects that enhance program capabilities.

Building on e-Health Technology's success in its first year of operation, leadership will seek to expand collaborations and capabilities, grow the equipment and application inventory, and identify extramural funding for researchers who seek to use e-Health Technologies in their studies and for the resource itself to fund its growth. Plans are in progress to implement a quality assurance survey mechanism for customer feedback. There will be a focused effort to strengthen the intellectual environment and educate investigators on how they might use e-Health Technology to enhance their research studies through periodic e-health lectures.

Smart phones feed medical researchers info

By: Trisha Henry, CNN Health, the chart
August 12, 2010

Smart phones are getting smarter– they are being used in medical studies. Researchers at the University of Texas MD Anderson Cancer Center used smart phones to get real-time data from participants who were trying to quit smoking.

This new way of collecting data is called ecological momentary assessment, or EMA. For the smoking study, when participants experienced a craving they turned on their phones and it prompted them to answer a series of questions about their mood, thoughts, location, stress level, whom they were with and what they were doing.

"We started to use these to really try to understand when people are experiencing cravings," says Dr. David Wetter, the lead author of the ongoing study. "We can also do what are called random assessments, a computer starts beeping at you at random parts of your day, and it compares moments you are experiencing cravings, to understand what differs between the two situations."

Researchers can compare the random and user-initiated situations and know more about an individual's addiction and cravings so that they can offer better treatment. This allows researchers to "really look at the kinds of interpersonal factors, and contextual factors that really drive smoking," says Wetter.

"This multiple daily assessment really lets us look at patterns in their lives that maybe very important," says Wetter. For example, if a patient has initiated contact due to a craving, the smart phone allows the possibility for a counselor or a friend to call and help the person deal with it to avoid a relapse.

Wetter says the increased availability of smart phone devices allows researchers to examine minority populations that may have been overlooked before. This particular smoking study focuses on Latinos. "There are many more Latino smokers that smoke two to three times per week, we really don't understand what drives that at all and it really challenges what drives nicotine addiction," says Wetter.

The technology also improves the speed and accuracy of research information. Wetter says it provides benefits for patients too. "The huge advantage of smart phones is that they can provide real-time support, advice, and information directly to participants, to smokers, to folks working on their diet, that they simply would not be able to get 10 years ago."

Figure 20 A recent article published by CNN Health describes the use of smart phones to support EMA

Mexican American Cohort Study

Co-directors: Melissa Bondy, Ph.D., Professor, Department of Epidemiology
Michelle Forman, Ph.D., Professor, Department of Epidemiology

"Mano-a-Mano or Hand-in-Hand for the Health of Houston's Mexican American Community"

Figure 21 Members of the Hernandez family gather on the front porch of their East Houston home

Since the summer of 2001, The University of Texas MD Anderson Cancer Center has been conducting a long-term health study of individuals of Mexican origin living in Harris County, Texas. This population is undergoing dramatic social change due to recent immigration and inter-generational acculturation with the construct of the family and community setting. By developing and sustaining this cohort of study participants, researchers are able to study the behavioral and genetic risk factors for cancer and intervention strategies to mitigate that risk for cancer-related morbidity and mortality among Mexican Americans. Teams of researchers enroll participants in the study, collect information about their date and place of birth, current home environment, familial and social support systems, economic and other resources, health status and family history of disease. As new research ideas emerge, study participants are invited to provide additional information, such as diet and smoking habits. Long-term population studies can extend forward for 40 years or more, providing important information on how factors including tobacco use, weight change, physical activity, chemicals, and many other factors influence health. With Duncan Family Institute funds, scientists are able to continue study participant recruitment and to do so at an accelerated pace, further expanding this resource and ensuring its ongoing viability as a "population laboratory" for research studies in Mexican Americans.

Recent studies by Anna **Wilkinson**, Ph.D., provide an excellent example of the contributions of these study participants, who are collectively referred to as a "cohort" to advancing our understanding of the influences that increase Mexican American youth's susceptibility and likelihood of becoming smokers. In the first study, Dr. Wilkinson found that Mexican American adolescents exposed to cigarette smoking in movies are more likely to pick up the habit themselves, which may be part of the acculturation process associated with smoking initiation. In this three-year study of over 1,100 adolescents, those who watched movies with fewer smoking scenes were less likely to experiment with cigarettes compared to adolescents who watched movies with many smoking scenes. The message for the movie industry: "Movie smoking should be rated R."[2] Future plans include a follow-on study to determine if changes in the level of exposure to smoking imagery over the three years increases their odds of smoking in the future. (**Biobehavioral-Smoking Profiles of Mexican Origin Youth, NCI K07 CA126988**)

Figure 22 Anna Wilkinson, Ph.D., lead investigator for studies using the Mexican American Cohort "population laboratory." Now at the UT School of Public Health in Austin, Dr. Wilkinson plans to continue collaborative studies with colleagues at MD Anderson to follow-up on the research findings reported here.

In a second study, Dr. Wilkinson found that susceptibility to smoking is a measurable characteristic that predicts transition to smoking. Only 15 percent of those committed to never smoking at the start of a longitudinal study experimented with cigarettes over three years of follow-up. Over the same time, 45 percent of those who were deemed susceptible at first went on to experiment. The results suggest that prevention efforts tailored to an adolescent's susceptibility status may be effective among Mexican American youth. [3] Future plans include using the genotypic data available from biospecimens provided by study participants. Researchers will include select genetic variants associated with risk taking behavior to examine the additional impact of including genetic data on the ability to predict susceptibility to smoking and look for gene-environment interactions that may also contribute to differences in susceptibility. (**Biobehavioral-Smoking Profiles of Mexican Origin Youth, NCI K07 CA126988**)

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[2] Wilkinson, A.V., et al., *Exposure to Smoking Imagery in the Movies and Experimenting with Cigarettes among Mexican Heritage Youth.* Cancer Epidemiology Biomarkers & Prevention, 2009. **18**(12): p. 3435-3443.

[3] Spelman, A.R., et al., *Cognitive Susceptibility to Smoking: Two Paths to Experimenting among Mexican Origin Youth.* Cancer Epidemiology Biomarkers & Prevention, 2009. **18**(12): p. 3459-3467.

Cancer screening plays an important role in detecting cancer at its earliest stages when interventions to stop cancer from further development are most effective. In the **RAMA** (Risk Assessment for Mexican Americans) study, a collaboration between MD Anderson and the NIH National Human Genome Research Institute's Social and Behavioral Research Branch, researchers are learning how Mexican American family members interpret and share health information and develop strategies to engage in health-promoting behaviors. The study team tested methods to encourage Mexican Americans to talk about their risk for certain diseases, with a focus on diabetes, heart disease, and breast and colon cancer, diseases with the largest public health impact in this community. The results of the project provide insight into how best to design risk communication approaches targeted to Mexican American households. As an example, Dr. **Wilkinson** and colleagues hypothesized that direct social influence may play an important role in motivating individuals to engage in cancer screenings. Their recent study of a network-based intervention involving older individuals to provide encouragement to younger network members found this approach may be beneficial in increasing motivation to screen among Mexican origin families. Future plans include studying the actual behavior changes (rather than motivations) as the researchers gather additional longitudinal data. They also plan to investigate further the use of family history information in health promotion efforts.[4] (**Mexican American Beliefs Concerning the Underlying Causes and Controllability of Complex Diseases, NHGRI Z01HG200335**)

Figure 24 Patricia Miranda, Ph.D., M.P.H, Kellogg Health Scholar in the Center for Research on Minority Health of the Department of Health Disparities Research and author of a study with policy implications for breast cancer **screening for Hispanic women.**

In a recent study published online in the journal Cancer, Kellogg Health Scholar Patricia **Miranda**, Ph.D., M.P.H., and colleagues found that half of breast cancer cases in the study population (a subset of participants in the Mexican American Cohort study) were women diagnosed at less than 50 years of age. Current US Preventive Services Task Force screening guidelines recommend mammography screening begin at age 50 in the general population. These findings add to the evidence suggesting that Mexican-origin women may be at higher risk for early onset, premenopausal breast cancer, and suggest the need for policies that target screening, education and treatment to reduce disparities in stage at diagnosis and mortality.[5]

Figure 23 Por Nuestra Salud principal investigator David Wetter, Ph.D. is studying the influence of neighborhoods and acute personal and contextual influences on the process of smoking cessation using state of the art Ecological Momentary Assessment tools.

The **Por Nuestra Salud** study, David **Wetter**, Ph.D., seeks to understand the determinants of smoking cessation among Latinos. Tobacco is the leading cause of preventable death and disease among adults in the U.S. and one-third of all cancers are directly attributable to tobacco use. Minority and underserved populations experience profound tobacco-related disparities because of inequities in access to treatment and the health consequences of tobacco, marketing by tobacco companies, to name just two factors. For example, Hispanics are less likely than non-Hispanic whites to receive help from their health care provider during a quit attempt or to have access to pharmacotherapy. Moreover, tobacco is a major public health problem among Hispanics as 3 of the 4 leading causes of death among Hispanics are related to smoking (i.e., cancer, heart disease and stroke). Reducing tobacco use can have significant positive consequences for disease prevention among Hispanics in the U.S. In this longitudinal cohort study, Dr. Wetter and his research team are investigating the influence of neighborhood, individual, and acute intrapersonal and contextual determinants of smoking cessation among 200 adult, Spanish-speaking, Hispanic smokers recruited from the Mexican American Cohort Study. Using state of the science Ecological Momentary Assessment (EMA) procedures (developed in partnership with another Duncan Family Institute resource, e-Health Technology), study participants are assessed for 4 contiguous weeks (1 week precessation through 3 weeks postcessation). Participants will receive smoking cessation treatment consisting of nicotine patch therapy, self-help materials, and brief in-person and telephone counseling based on our empirically-validated intervention for Spanish-speaking Hispanic smokers. Data from this study will allow investigators to learn more about the mechanisms underlying smoking cessation among Spanish-speaking or Hispanic smokers, including the influence of neighborhoods, and the effectiveness of EMA as a method to investigate the acute intrapersonal and contextual influences on the process of quitting. (**Determinants of Smoking Cessation among Latinos, NIH NCMHD P60-MD000503-005)**

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[4] Ashida, S., A.V. Wilkinson, and L.M. Koehly, *Motivation for Health Screening: Evaluation of Social Influence Among Mexican-American Adults.* American Journal of Preventive Medicine, 2010. **38**(4): p. 396-402.

[5] Miranda PY, Wilkinson AV, Etzel CJ, et al. *Policy implications of early onset breast cancer among Mexican-origin women*. Cancer 2010;**117**(2): 390-7

A new direction for the Mexican American Cohort is the addition of nutritional data to the resource. Through the **MANA** (Mexican American Nutritional Assessment) led by Michelle **Forman**, Ph.D., 24-hour food recalls are being collected from 160 adolescents and 279 newly-enrolled adult cohort participants. Investigators will be able to characterize the diet of this population for development of new tools to assess nutritional factors that may influence health status of individuals in this population.

The results of these examples of population science research studies made possible through the investment in creating and sustaining the Mexican American Cohort resource provide important insights on their own and as part of a larger program of studies conducted over time. The Duncan Family Institute funds to the M-A Cohort will insure the resource's continued development so that it is available for future studies that enable us to explore more deeply the issues described above and add new questions to the portfolio of studies aimed at understanding and reducing cancer risk in Mexican Americans.

Center for Community, Implementation, and Dissemination Research

Co-directors: *David Wetter, Ph.D., Professor and Chair, Department of Health Disparities Research*
Lorna McNeill, Ph.D., Assistant Professor, Department of Health Disparities Research

"Supporting development of over $14M in new funding for research in the real-world"

The Center for Community, Implementation, and Dissemination Research (CCIDR) serves as a divisional and institutional resource focused on changing public health and clinical practice through the development, evaluation, implementation, and dissemination of new interventions, diagnostic tests, and prediction models in community and population-based settings. Investigators supported through CCIDR's resources focus on three key aspects of translating cutting edge science and treatments into effective interventions that change real-world public health and clinical practice:

- Community-based research
- Implementation research
- Dissemination research

Figure 25 Instead of the laboratory bench, Lorna NcNeill, Ph.D., **left** is conducting research in the pews of Windsor Village United Methodist Church. A key to the success of the project has been the involvement of church members, such as Stephanie Lee, **right.**

CCIDR-supported research is targeted towards identifying, developing, and refining methods, strategies, and models to disseminate and implement research-tested and evidence-based health behavior change, screening and early detection, diagnostic, treatment, and quality of life improvement services into public health and clinical practice settings.

CCIDR comprises a research infrastructure as well as a service component for both researchers and communities. Successful community-based, implementation, and dissemination research requires that projects and activities benefit both the community and the researchers. CCIDR serves both the research community and the community at large with an explicit goal of integrating research and service into existing community infrastructure and social norms.

Cancer researchers continue to seek answers to questions of why there is a differential burden of cancer in one population vs. another. They want to know, for example, why African Americans have higher rates of cancer and die more often from their disease. One group of MD Anderson researchers is seeking the answers, but in a church instead of a clinic or a laboratory. "Minorities often are under-represented in research studies, so we need more information about specific populations," says Lorna **McNeill**, Ph.D., assistant professor of Health Disparities Research. "We need to be innovative and identify more effective ways of including minorities in cancer research. That often means tapping into non-traditional settings."

According to McNeill, working through churches has proven to be a successful avenue for reaching the African American community. “African American churches often have a strong interest in people’s physical well-being, as well as their spiritual well-being, so activities focused on health are generally well-received,” McNeill says. “Churches also are multigenerational, which offers a broad spectrum of ages and helps us keep in contact with them. If a study participant leaves the church, you could locate that person through family who still are members.”

Given her experience in church-based studies, McNeill was excited to lead MD Anderson’s African American Cancer Prevention Project — better known as **Project CHURCH**, which stands for **Creating a Higher Understanding of Cancer Research and Community Health**. The three-year project is exploring the role of behavioral, social and environmental factors on minority health and cancer-related disparities among blacks. CCIDR is one of several sources of funding for this important research initiative.

Towards its goal of supporting research to translate MDACC scientific discoveries into real-world interventions, the CCIDR collaborates closely with MDACC departments, programs, and research entities, in particular the departments within the Division of Cancer Prevention and Population Sciences (Behavioral Science, Clinical Cancer Prevention, Epidemiology, and Health Disparities Research) and the Duncan Family Institute programs. The CCIDR also collaborates with other institutional entities and activities that provide service to communities, such as facilitating the implementation of the institution’s cancer control plan.

CCIDR provides support to both researchers and the community in which research is conducted. Services available to researchers include grant preparation support, recruitment planning and implementation, training regarding barriers to clinical study recruitment, effective recruitment strategies, and cultural health beliefs/behaviors, dissemination of research findings, clinical trial recruitment resources and data sharing – both external and internal. Service to community partners include assistance with cancer program planning and implementation, assistance with grant writing for cancer programming, information on cancer and clinical trials, development of community-research partnerships and patient navigation.

Figure 26 Research in the community often takes place in study participants’ homes.

Much of CCIDR’s activity in its first 8 months of operation focused on providing support to ongoing and proposed studies. We are pleased to report the award of a $1.5M grant from the Cancer Prevention and Research Institute of Texas (CPRIT) to David **Wetter**, Ph.D., Professor and Chair, Health Disparities Research, for a study “**Pathways Linking Social Determinants of Smoking Cessation**.” This research project is designed to delineate the pathways linking social determinants to smoking cessation that includes connecting the built and social environment (e.g., residential, travel, and non-residential environments) with the acute individual and contextual influences on quitting, using innovative technologies and analytic procedures among 300 smokers who are attempting to quit (evenly split between African Americans, Latinos, and Whites). Participants will be followed from 2 weeks prior to their quit date through 26 weeks after their quit date, and will be assessed for 4 contiguous weeks (1 week pre-cessation through 3 weeks post-cessation) using state-of-the-science ecological momentary assessment (EMA) and global positioning system (GPS) procedures. The support provided by CCIDR to contribute to the design, coordination and preparation of this proposal was a major factor contributing to funding success. The e-Health Technology resource is developing the EMA platform that is integral to the study design and will have a role in tailoring the platform for this project. Through the Duncan Family Institute’s strategically defined resources, scientists such as Dr. Wetter, have the ability to propose innovative studies that are highly competitive for extramural funding, allowing novel approaches to reducing cancer risk to be tested in the real world.

Another major research program that engaged CCIDR’s expertise in proposal development is “**Latinos Contra El Cancer**.” This NIH funded $4.8M five-year program, led by investigators in MD Anderson’s Departments of Epidemiology (Melissa **Bondy**, Ph.D.) and Health Disparities Research (David **Wetter**, Ph.D., and Lovell **Jones**, Ph.D.) in collaboration with the UT School of Public Health (Maria **Fernandez**, Ph.D.) combines innovative research, extensive community outreach, and a multi-faceted training program, all conducted within a community-based participatory research (CBPR) context, to

reduce cancer-related health disparities in Latinos, and to build a cadre of competitive health disparities researchers trained in CBPR in three regions of Texas (Houston, El Paso, the Lower Rio Grande Valley). The Mexican American Cohort was integral to the ability of the investigators to include the City of Houston as one of the three study sites, providing an urban setting as a complement to the border settings of El Paso and the Lower Rio Grande Valley. And, this study provides yet another example of how the resources from the Duncan Family Institute are leveraged beyond MD Anderson, to support collaboration with another Texas Medical Center institution – aimed at improving the health of Texans.

Other examples of funded studies supported by CCIDR are listed in the Table 2. These studies address cancer risk factors such as physical activity in minority adults, smoking cessation in Spanish-speaking smokers, and dissemination of smoking quitline information to the underserved. As of the publication date of this report, of the $22.2M in research proposals submitted and which relied on CCIDR's expertise and resources, $14.4M or 65% have been funded. Another 11% were not funded and 24% are still pending peer review or agency funding decisions. These results are better than average and are made possible, in part, because of the work of CCIDR scientists and staff to build a set of resources that enable the researchers to achieve a competitive advantage when proposing their research ideas to extramural funding agencies.

Table 2 CCIDR-supported research proposals generated $14M in new research funding for studies to reduce the burden of cancer in under-served populations.

Project Title	Principal Investigator	Award Type / Sponsor	Total Costs	CCIDR Role
Social Contextual & Environmental Predictors of PA in Sedentary Minority Adults	McNeill	R01/NIH	$ 3,091,721	All Study Activities
Ecological Momentary Assessment of Smoking Cessation in Spanish-Speaking Smokers	Mazas	K07/NCI	$ 617,115	Administrative
Reducing Tobacco Related Health Disparities	Wetter	R01/NCI	$ 3,171,926	Study Activities, Recruitment, Administrative
Community Based Participatory Research to Reduce Multiple Risk Behaviors	Wetter	Houston Endowment Inc.	$ 914,000	Study Activities; Recruitment
Peer-support Motivational Interviewing PA Intervention for African American women	McNeill	R21/NCI	$ 405,756	Study Activities
Pathways Linking Social Determinants & Smoking Cessation	Wetter	CPRIT	$ 1,500,000	Administrative and All Study Activities
Reducing Cancer Disparities Among Latinos in Texas	Bondy, Wetter, Jones, Fernandez	U54/NCI	$ 4,762,810	Administrative and All Study Activities
Total			**$14,463,328**	

DUNCAN FAMILY INSTITUTE MENTORED JUNIOR FACULTY FELLOWSHIP

The Duncan Family Institute Mentored Junior Faculty Fellowship in Cancer Prevention Research supports the critical transition of individuals from training positions to junior faculty, launching them towards research independence. This fellowship fills a gap between support available to postdoctoral fellows and other early career scientists transitioning to a faculty position at the assistant professor level. Ideally, providing continuous support through this period will prevent gaps and place junior scientists on a path towards independent research careers.

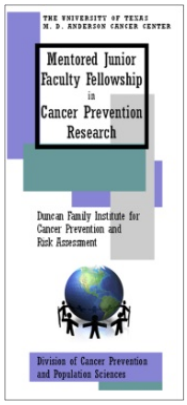

Figure 27 Information about the fellowship program is provided to attendees at local and national meetings to augment efforts to recruit new junior scientists to MD Anderson's cancer prevention research program.

During this past year, the Duncan Family Institute selected its first two Mentored Junior Faculty Fellows. We expect to appoint a new fellow annually. These appointments are for two years, subject to acceptable progress towards agreed to milestones, transitioning towards career independence through extramural support.

Francesco Versace, Ph.D., Instructor, Department of Behavioral Science

"**Putting Smoking Addiction in the Affective Context: Event-related Potentials to Emotional and Neutral Stimuli during a Smoking Cessation Intervention**"

Tobacco use is associated with approximately 80 percent of all lung cancer deaths and increases the risk of many other types of cancer, including cancers of the throat, mouth, pancreas, kidney, bladder, and cervix (NCI, 2008). Although the harmful effects of tobacco on human health have been known since the 1964 Surgeon General Report (Smoking and Health, 1964), approximately 20% of USA population continue to smoke (CDC, 2007). In fact, most smokers identify tobacco use as harmful and express a desire to reduce or stop using it. For example, annually nearly 35 million smokers express a desire to quit in national surveys. Unfortunately, more than 85 % of those who actually try to quit on their own will relapse, often within the first week following the cessation attempt (NIDA, 2009). The reasons underlying the maintenance of addiction are diverse, but most theoretical models attribute the difficulties in quitting to the smoker's altered emotional processes. Where theories differ is in the different emphasis that they attribute to specific emotional components to explain drug addiction and relapse.

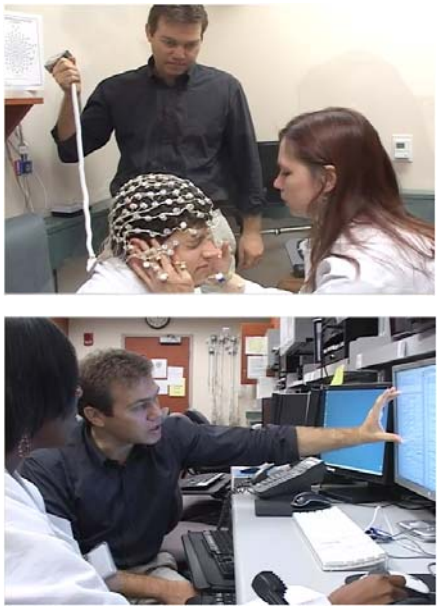

Figure 28 Francesco Versace, Ph.D. and research staff preparing a subject for an assessment and, in the bottom panel, discussing results.

The overarching theme of Dr. Versace's research and the project described here is to investigate the role that emotional processes have in smoking addiction and relapse by taking advantage of the theoretical models, the experimental designs, and the measurement techniques developed within the field of affective neuroscience. Specifically, Dr. Versace and colleagues will evaluate attentional and emotional processes in the presence of cigarette-related and other intrinsically motivating cues using event-related brain potentials (ERP). These ERP assessments will be carried out before and after a smoking cessation and will allow the evaluation of pharmacological smoking cessation aids (varenicline, bupropion and placebo) and their altering effects on emotional processes.

Larkin Strong, Ph.D., Instructor, Department of Epidemiology

"An Ecological Approach to Cancer Prevention: Reducing Disparities in Physical Activity through Research and Action"

Figure 29 Larkin Strong, Ph.D., the Institute's second Mentored Junior Faculty Fellow

Physical inactivity represents one of the few modifiable risk factors for cancer. Regular physical activity is associated with a reduced risk of breast and colon cancers and has also been linked to reductions in prostate, lung, and endometrial cancer risk. Inactivity is also an important determinant of overweight and obesity, which are believed to contribute to 15-20% of all cancer deaths in the U.S. Given that physical activity behaviors established in youth may continue into adulthood, enhancing physical activity in youth has the potential to greatly reduce the cancer burden in the U.S through direct and indirect pathways. Furthermore, since physical activity tends to decline dramatically during adolescence, this period represents a critical age during which to identify the factors that contribute to or inhibit participation in physical activity. In Houston, obesity in youth is a real cause for concern, especially in the Mexican American population where there is a disproportionate prevalence of elevated rates of obesity in adolescents when compared to the general population (Figure 30).

The focus of Dr. Strong's research project is to delineate how factors at different levels influence adolescent physical activity (PA) behaviors in a group of 1,154 Mexican American adolescents in Houston, TX, drawn from the Duncan Family Institute's Mexican American Cohort. In this research project, Dr. Strong and colleagues seek to understand the independent contributions and interactions of multiple factors on physical activity: adolescent characteristics & behaviors, parental characteristics and PA behaviors, neighborhood socioeconomic context and density of neighborhood PA resources; and identify potential targets for interventions to enhance physical activity in this population. The use of an ecological approach provides an opportunity to examine multiple levels of influence with an emphasis on how potential influences of adolescent PA may interact. By drawing on unique data regarding parent and adolescent linguistic and behavioral acculturation, findings about the impact of involvement of parents and family in exercise interventions and differential effectiveness of interventions based on acculturation may be more directly translated to policy and funding support for community physical activity programs and may identify segments of the population who may be more affected by local environmental features, helping policy makers and funders target public health investments to where they will do the most good.

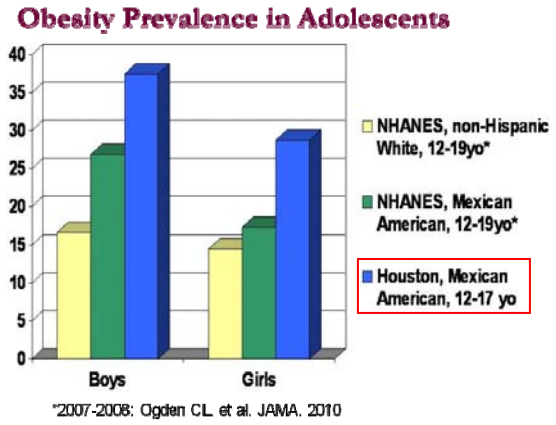

Figure 30 Mexican American Youth have a disproportionate prevalence of obesity with Houston area Mexican American youth showing even higher rates than the average for this population.

BIOSTATEMENTS

Duncan Family Institute Scientific Executive Committee Members:

Ernest Hawk, M.D., M.P.H., Vice President for Cancer Prevention
Chris Amos, Ph.D., Professor, Department of Epidemiology
Therese B. Bevers, M.D., Professor, Department of Clinical Cancer Prevention
Powel H. Brown, M.D., Ph.D. Professor and Chair, Department of Clinical Cancer Prevention
Paul M. Cinciripini, Ph.D., Professor, Department of Behavioral Science
Lewis E. Foxhall, M.D., Vice President for Health Policy
Ellen R. Gritz, Ph.D., Professor and Chair, Department of Behavioral Science
Lovell Jones, Ph.D., Professor, Department of Health Disparities Research
David Wetter, Ph.D., Professor and Chair, Department of Health Disparities Research
Xifeng Wu, M.D., Ph.D., Professor, Department of Epidemiology
Jennifer Tektiridis, M.S., Executive Director, Research Planning and Development - DCPPS

Duncan Family Institute Strategic Research Initiative Program Leaders

Premalignant Genome Atlas Program:
Co-directors: Xifeng Wu, M.D., Ph.D., Professor, Department of Epidemiology
Ernest Hawk, M.D.,M.P.H., Vice President for Cancer Prevention

Duncan Family Institute Research Resource Leaders

Personalized Risk Prediction Program
Co-directors: Chris Amos, Ph.D., Professor, Department of Epidemiology
Marsha Frazier, Ph.D., Professor, Department of Epidemiology

e-Health Technology
Co-directors: Alex Prokhorov, M.D., Ph.D., Professor, Department of Behavioral Science
Ludmila Cofta-Woerpel, Ph.D., Assistant Professor, Department of Behavioral Science

Mexican American Cohort Study
Co-directors: Melissa Bondy, Ph.D., Professor, Department of Epidemiology
Michelle Forman, Ph.D., Professor, Department of Epidemiology

Center for Community, Implementation, and Dissemination Research
Co-directors: David Wetter, Ph.D., Professor and Chair, Department of Health Disparities Research
Lorna McNeill, Ph.D., Assistant Professor, Department of Health Disparities Research

Seed Funding Research Program Principal Investigators

Ashraful M. Hoque, M.D., Ph.D., Associate Professor, Department of Clinical Cancer Prevention
Bo Peng, Ph.D., Instructor, Department of Epidemiology
Imad Shureiqi, M.D., M.S., Associate Professor, Department of Clinical Cancer Prevention
Chongjuan Wei, Ph.D., Assistant Professor, Department of Epidemiology
Xiaochun Xu, M.D., Ph.D., Associate Professor, Department of Clinical Cancer Prevention
Yuanqing Ye, Ph.D., Assistant Professor, Department of Epidemiology

Mentored Junior Faculty Fellows

Larkin Strong, Ph.D., Instructor, Department of Epidemiology
Francesco Versace, Ph.D., Instructor, Department of Behavioral Science

Ernest T. Hawk, M.D., M.P.H., is vice president and division head for Cancer Prevention and Population Sciences at The University of Texas MD Anderson Cancer Center and holds the Boone Pickens Distinguished Chair for Early Prevention of Cancer.

Prior to his appointment at MD Anderson in December 2007, Dr. Hawk held several positions at the National Cancer Institute (NCI) in Bethesda, MD, since 1996. He most recently served as director of the Office of Centers, Training and Resources. His other NCI posts included chief and medical officer in the Gastrointestinal and Other Cancers Research Group, medical officer in the Chemoprevention Branch and chair of the Translational Research Working Group.

Dr. Hawk has been involved in preclinical and clinical chemoprevention research focused on nonsteroidal anti-inflammatory drugs and COX-2 inhibitors, and has earned numerous awards, including the prestigious NCI Research Award for Distinguished Achievement in Cancer Prevention. Dr. Hawk currently serves as deputy editor for Cancer Prevention Research.

A native of Detroit, Michigan, Dr. Hawk earned his bachelor's and medical degrees at Wayne State University and his master of public health degree at Johns Hopkins University. He completed an internal medicine internship and residency at Emory University, a medical oncology clinical fellowship at the University of California, San Francisco and a cancer prevention fellowship at NCI.

Selected publications:

1. Steinbach G, Lynch PM, Phillips R, Wallace M, **Hawk E**, Gordon G, Sherman J, et al: The effect of celecoxib, a cyclooxygenase-2 inhibitor, in familial adenomatous polyposis. N Engl J Med 342:1946-1952, 2000
2. Sinicrope F, Lynch P, Half EO, Morris J, Morrow J, Ayers FD, Stephens C, Patterson S, **Hawk E**, Levin B: Cell proliferation and apoptotic indices predict adenoma regression in a placebo-controlled trial of celecoxib in Familial Adenomatous Polyposis (FAP) patients. Cancer Epidemiol Biomarkers Prev 13:1-8, 2004
3. **Hawk E**, Levin B: Colorectal cancer prevention – current status and future directions. J Clin Oncol 23:378-391, 2005
4. Solomon SD, McMurray JJV, Pfeffer MA, Wittes J, Fowler R, Finn P, Anderson WF, Zauber A, **Hawk E**, Bertagnolli M, for the Adenoma Prevention with Celecoxib (APC) Study Investigators: Cardiovascular risk associated with celecoxib in a clinical trial for colorectal adenoma prevention. N Engl J Med 352:1071-1080, 2005
5. Bertagnolli MM, Eagle CJ, Zauber AG, Redston M, Solomon SD, Kim K-M, Tang J, Rosenstein RB, Wittes J, Corle D, Hess TM, Woloj GM, Boisserie F, Anderson WF, Viner JL, Bagheri D, Burn J, Chung DC, Dewar T, Foley TR, Hoffman N, Macrae F, Pruitt RE, Saltzman JR, Salzberg B, Sylwestrowicz T, Gordon GB, **Hawk ET** for the APC Study Investigators: Celecoxib for the prevention of sporadic colorectal adenomas. N Engl J Med 355:873-884, 2006
6. Solomon SD, Pfeffer MA, McMurray JJV, Fowler R, Finn P, Levin B, Eagle C, **Hawk E**, Lechuga M, Zauber AG, Bertagnolli MM, Arber N, Wittes J for the APC and PreSAP Trial Investigators: Effect of celecoxib on cardiovascular events and blood pressure in two trials for the prevention of colorectal adenomas. Circulation 114:1028-1035, 2006
7. Meyskens, Jr. FL, McLaren CE, Pelot D, Fujikawa-Brooks S, Carpenter PM, **Hawk E**, Kelloff G, Lawson MJ, Kidao J, McCracken J, Aibers CG, Ahnen DJ, Turgeon DK, Goldschmid S, Lance P, Hagedorn CH, Gillen DL, Gerner EW: Difluoromethylornithine plus Sulindac for the prevention of sporadic colorectal adenomas: A randomized placebo-controlled, double-blind trial. Cancer Prev Res 1:32-38, 2008
8. Bertagnolli MM, Eagle CJ, Zauber AG, Redston M, Breazna A, Kim K, Tang J, Rosenstein RB, Umar A, Bagheri D, Collins NT, Burn J, Chung DC, Dewar T, Foley TR, Hoffman N, Macrae F, Pruitt RE, Saltzman JR, Salzberg B, Sylwestrowicz T, **Hawk ET**: Adenoma Prevention with Celecoxib Study Investigators. Five-year efficacy and safety analysis of the Adenoma Prevention with Celecoxib Trial. Cancer Prev Res 2:310-321, 2009
9. Lynch PM, Ayers GD, **Hawk E**, Richmond E, Eagle C, Woloj M, Church J, Hasson H, Patterson S, Half E, Burke CA: The safety and efficacy of celecoxib in children with familial adenomatous polyposis. Am J Gastroenterol 105:1437-1443, 2010

Christopher I. Amos, Ph.D., is the deputy ad-interim chair of the Department of Epidemiology and leads the Computational and Genetic Epidemiology Section. He also directs the Human Pedigree Analysis Resource, a core facility of the Cancer Center Support Grant which supports research for individuals with increased familial risk for developing cancer.

Dr. Amos' research has ranged from investigating familial factors for prostate, head and neck, lung and colon cancers to the study of Peutz-Jeghers syndrome, a rare syndrome predisposing to polyps and multiple cancers. He is currently leading a study to identify genetic risk factors for lung cancer using a genome-wide association approach. By this method, his team identified a novel locus influencing lung cancer susceptibility in a region of chromosome 15q containing acetyl-cholinergic acid receptors.

Dr. Amos has directed the statistical genetics core for the North American Rheumatoid Arthritis Consortium and the Genetic Epidemiology of Lung Cancer Consortium. He also directs the informatics core of Dr. Louise Strong's NIH-funded program project grant (P01) entitled "Mutational model for childhood cancer" and of a grant from Genome Ontario. Dr. Amos serves as the Secretary/Treasurer for the International Genetic Epidemiology Society and has served as its President.

Dr. Amos earned an MS and Ph.D. in Biometry from LSU Medical Center in New Orleans, LA. He has appointments in the Departments of Bioinformatics and Computational Biology at MD Anderson, the Department of Epidemiology at the UT School of Public Health, the Graduate School of Biomedical Science at UT Health Science Center and Rice University.

Selected Publications:

1. **Amos CI**. Successful design and conduct of genome-wide association studies. Hum Mol Genet 16 Spec No. 2:R220-5., 2007. PMID: 17597095
2. Gorlov IP, Gorlova OY, **Amos CI**. Relative effects of mutability and selection on single nucleotide polymorphisms in transcribed regions of the human genome. BMC Genomics 9:292, 2008. e-Pub 2008. PMCID: PMC2442617.
3. **Amos CI**, Wu X, Broderick P, Gorlov IP, Gu J, Eisen T, Dong Q, Zhang Q, Gu X, Vijayakrishnan J, Sullivan K, Matakidou A, Wang Y, Mills G, Doheny K, Tsai YY, Chen WV, Shete S, Spitz MR, Houlston RS. Genome-wide association scan of tag SNPs identifies a susceptibility locus for lung cancer at 15q25.1. Nat Genet 40(5):616-22, 5/2008. e-Pub 4/2/2008. PMID: 18385676.
4. Liu P, Vikis HG, Wang D, Lu Y, Wang Y, Schwartz AG, Pinney SM, Yang P, de Andrade M, Petersen GM, Wiest JS, Fain PR, Gazdar A, Gaba C, Rothschild H, Mandal D, Coons T, Lee J, Kupert E, Seminara D, Minna J, Bailey-Wilson JE, Wu X, Spitz MR, Eisen T, Houlston RS, **Amos CI**, Anderson MW, You M. Familial aggregation of common sequence variants on 15q24-25.1 in lung cancer. J Natl Cancer Inst 100(18):1326-30, 9/2008. e-Pub 9/2008. PMCID: PMC2538550.
5. Spitz MR, Etzel CJ, Dong Q, **Amos CI**, Wei Q, Wu X, Hong WK. An expanded risk prediction model for lung cancer. Cancer Prev Res (Phila Pa) 1(4):250-4, 9/2008.
6. Spitz MR, **Amos CI**, Dong Q, Lin J, Wu X. The CHRNA5-A3 region on chromosome 15q24-25.1 is a risk factor both for nicotine dependence and for lung cancer. J Natl Cancer Inst 100(21). e-Pub 10/2008. PMID: 18957677.
7. Wei C, **Amos CI**, Zhang N, Wang X, Rashid A, Walker CL, Behringer RR, Frazier ML. Suppression of peutz-jeghers polyposis by targeting Mammalian target of rapamycin signaling. Clin Cancer Res 14(4):1167-71, 2008.

Therese B. Bevers, M.D., is professor of Clinical Cancer Prevention and the medical director of the Cancer Prevention Center and prevention outreach programs at MD Anderson Cancer Center.

In her role as medical director, Dr. Bevers has overseen the growth and program development of the Cancer Prevention Center—the first comprehensive clinical cancer prevention service program in the country—since its opening in 1996.

Her clinical and research interests are in the area of breast cancer prevention, screening and diagnosis. She was the MD Anderson principal investigator (PI) on the groundbreaking Breast Cancer Prevention Trial which demonstrated that tamoxifen reduced the risk of developing breast cancer by one half and the STAR trial which showed that raloxifene had similar benefits but fewer risks. She is currently the institutional PI of a cancer prevention study of polyphenon E, an active substance of green tea, in women at increased risk for breast cancer. Dr. Bevers chairs the National Comprehensive Cancer Network's guideline panels on Breast Cancer Screening and Diagnosis and Breast Cancer Risk Reduction.

A native Texan, Dr. Bevers completed her medical school and residency in Family Practice at The University of Texas Health Science Center at San Antonio. She is the recipient of many awards including the Julie and Ben Rogers Award for Excellence in Prevention in 2006.

Selected Publications:

1. Cristofanilli M, Yamamura Y, Kau SW, **Bevers T**, Strom S, Patangan M, Hsu L, Krishnamurthy S, Theriault RL, Hortobagyi GN. Thyroid hormone and breast carcinoma. Primary hypothyroidism is associated with a reduced incidence of primary breast carcinoma. Cancer 103(6):1122-8, 3/2005.
2. Fisher B, Costantino JP, Wickerham DL, Cecchini RS, Cronin WM, Robidoux A, **Bevers TB**, Kavanah MT, Atkins JN, Margolese RG, Runowicz CD, James JM, Ford LG, Wolmark N. Tamoxifen for the prevention of breast cancer: current status of the National Surgical Adjuvant Breast and Bowel Project P-1 study. J Natl Cancer Inst 97:1652-62, 11/2005.
3. Shen Y, Dong W, Esteva FJ, Kau SW, Theriault RL, **Bevers TB**. Are there racial differences in breast cancer treatments and clinical outcomes for women treated at M.D. Anderson Cancer Center? Breast Cancer Res Treat 102:347-56, 9/2006.
4. Vogel VG, Costantino JP, Wickerham DL, Cronin WM, Cecchini RS, Atkins JN, **Bevers TB**, Fehrenbacher L, Pajon ER, Wade JL, Robidoux A, Margolese RG, James J, Lippman SM, Runowicz CD, Ganz PA, Reis SE, McCaskill-Stevens W, Ford LG, Jordan VC, Wolmark N, Wolmark N. Effects of tamoxifen vs raloxifene on the risk of developing invasive breast cancer and other disease outcomes: The NSABP Study of Tamoxifen and Raloxifene (STAR) P-2 Trial. JAMA 295(23):2727-41, 2006.
5. Dong W, Berry DA, **Bevers TB**, Kau SW, Hsu L, Theriault RL, Shen Y. Prognostic role of detection method and its relationship with tumor biomarkers in breast cancer: The University of Texas M.D. Anderson Cancer Center experience. Cancer Epidemiol Biomarkers Prev 17(5):1096-103, 5/2008.
6. Legault C, Maki PM, Resnick SM, Coker L, Hogan P, **Bevers TB,** Shumaker SA. Effects of Tamoxifen and Raloxifene on Memory and Other Cognitive Abilities: Cognition in the Study of Tamoxifen and Raloxifene. J Clin Oncol 27(31):5144-52, 2009. PMCID: PMC2773473.
7. Cyrus-David M, King J, **Bevers T**, Robinson E. Validity assessment of the Breast Cancer Risk Reduction Health Belief scale. Cancer 115(21):4907-16, 2009
8. Vogel VG, Costantino JP, Wickerham DL, Cronin WM, Cecchini RS, Atkins JN, Bevers TB, Fehrenbacher L, Pajon ER, Wade JL, Robidoux A, Margolese RG, James J, Runowicz CD, Ganz PA, Reis SE, McCaskill-Stevens W, Ford LG, Jordan VC, Wolmark N. Update of the NSABP Study of Tamoxifen and Raloxifene (STAR). Cancer Prev Res (Phila Pa) 3(6):696-706, 6/2010.
9. Mazouni C, Sneige N, Rouzier R, Balleyguier C, **Bevers T**, André F, Vielh P, Delaloge S. A nomogram to predict for malignant diagnosis of BI-RADS Category 4 breast lesions. J Surg Oncol 102(3):220-4, 9/2010.
10. Espeland MA, Shumaker SA, Limacher M, Rapp SR, Bevers TB, Barad DH, Coker LH, Gaussoin SA, Stefanick ML, Lane DS, Maki PM, Resnick SM for the WHIMS and CoSTAR Study Groups. Relative Effects of Tamoxifen, Raloxifene, and Conjugated Equine Estrogens on Cognition. Journal of Women's Health 19(3):371-9, 2010.

Melissa L. Bondy, Ph.D., is a professor of in the Department of Epidemiology at MD Anderson and director of the Childhood Cancer Epidemiology and Prevention Center, a collaborative program between MD Anderson, Baylor College of Medicine and Texas Children's Hospital.

Dr. Bondy leads a multi-faceted, expansive research program. The Brain Tumor Program is comprised of several studies, including a 14-center international consortium genetic linkage study, led by Dr. Bondy, to find a familial predisposition to glioma, the most common brain tumor affecting adults Additionally, she is involved in a case-control study to understand epidemiological and genetic factors related to sporadic glioma, a study of the genetic predictors of neurocognitive deficits following treatment for glioma, and a study of the epidemiology of meningioma. Her breast cancer research program interests include studies of the genetic, clinical and epidemiologic predictors of early stage breast cancer, a bi-national breast cancer study in Mexican and Mexican American women, and research in inflammatory breast cancer.

Dr. Bondy's disparities research interests are reflected in her 10-plus year development of the Mexican American Cohort and multiple sub-studies. She is a leader in collaborative studies which involve the Pediatric Survivorship program with Baylor College of Medicine and Texas Children's Cancer Center, the National Children's Study (Community Core Director), and the PACGENE Consortium study of familial pancreas cancer (Gloria Petersen, PI, Mayo Clinic).

Dr. Bondy is the co-director (with John DiGiovanni, Ph.D.) of the Center for Environmental Diseases and serves on the Scientific Advisory Board of Susan G. Komen for the Cure. She co-chairs the Brain Tumor Epidemiology Consortium, and serves on numerous NIH advisory committees. She is also on the External Scientific Advisory Boards of the University of Minnesota Cancer Center, NYU Cancer Center, Thomas Jefferson Cancer Center, Roswell Park Cancer Center Prevention Program, St. Jude's Cancer Prevention Program, the Brain Tumor Center at UCSF and the Brain SPORE Advisory Committee at Mayo Clinic. Dr. Bondy is a past recipient of the Julie and Ben Rogers Award for Excellence in Prevention. She earned her master's of science and doctorate degrees, both in epidemiology, from the University of Texas School of Public Health.

Selected Publications:

1. Hernandez-Valero MA, **Bondy ML**, Spitz MR, Zahm SH. Evaluation of Mexican-American migrant farmworker work practices and organochlorine pesticide metabolites. Am J Ind Med 40:554-60, 2001.
2. Strecker MN, Williams AJ, **Bondy M**, Johnston DA, Northrup H. Knowledge and attitudes of Hispanic women and their health care providers about breast cancer risk factors and screening. Community Genet 5:222-31, 2002.
3. Saunders, KC, Strom SS, Garzon A, Spitz MR. **Bondy ML**. Willingness to provide biologic samples: results from a health urban population of Mexican and Mexican-American in Texas. Annals of Epidemiology 15:586, 2003
4. **Bondy ML**, Wilkinson AV, Spitz MR, Strom SS, Prokhorov AV, Barcenas CH, Cao Y, Saunders KC. Effects of nativity, age at migration, and acculturation on smoking among adult Houston residents of Mexican descent. Am J Public Health 95:1043-9, 2005.
5. Wilkinson AV, Spitz MR, Strom SS, Prokhorov AV, Barcenas CH, Cao Y, Saunders KC, **Bondy ML**. The Impact of Nativity, Age at Migration, and Acculturation on Smoking Among Adult Houston Residents of Mexican Descent. Am J Public Health 6:1043-1049, 2005.
6. Hernández-Valero MA, Wilkinson AV, Forman MR, Etzel CJ, Cao Y, Bárcenas CH, Strom SS, Spitz MR, **Bondy ML**. Maternal BMI and country of birth as indicators of childhood obesity in children of Mexican origin. Obesity (Silver Spring) 15(10):2512-9, 10/2007.
7. Barcenas CH, Wilkinson AV, Strom SS, Cao Y, Saunders KC, Mahabir S, Hernández-Valero MA, Forman MR, Spitz MR, **Bondy ML**. Birthplace, years of residence in the United States, and obesity among Mexican-American adults. Obesity (Silver Spring) 15(4):1043-52, 2007.
8. Wilkinson AV, Waters AJ, Vasudevan V, **Bondy ML**, Prokhorov AV, Spitz MR. Correlates of cognitive susceptibility to smoking among Mexican origin youth residing in Houston, Texas: a cross-sectional analysis. BMC Public Health 8(1):337, 9/26/2008.

Powel H. Brown, M.D., Ph.D., is a Professor of Medicine and breast medical oncologist and Chairman in the Department of Clinical Cancer Prevention at The University of Texas MD Anderson Cancer Center.

Prior to his appointment at MD Anderson in September, 2009, Dr. Brown was the Associate Director for cancer prevention at the Dan L. Duncan Cancer Center at Baylor College of Medicine. He has been caring for women with breast cancer for over 25 years and has focused his research on identifying critical signaling pathways in breast cancers that might be targeted for the prevention and treatment of breast cancer.

Dr. Brown has demonstrated that drugs related to vitamin A prevent ER-negative breast cancer in animal models and has conducted a human clinical trial testing the synthetic Vitamin A analog bexarotene for its ability to prevent cancer in women at high risk of breast cancer. He has also demonstrated that signal transduction inhibitors suppress the progression of non-invasive breast cancer in animal models and has developed a clinical trial to determine the ability of a receptor tyrosine kinase inhibitor to inhibit the growth and progression of DCIS breast cancer. He is now focused on using genomics and proteomics to identify safe and effective targeted drugs for the breast cancer prevention and treatment, particularly for the aggressive and difficult to treat "triple-negative" breast cancer.

A native of Van Nuys, California, Dr. Brown earned his bachelor's degree at the University of North Carolina and his medical degree and Ph.D. from New York University. He completed an internal medicine internship and residency at Duke University, a medical oncology clinical fellowship at the National Cancer Institute (NCI) and a Research Fellowship, at the Navy Medical Oncology Branch, National Cancer Institute.

Selected publications:

1. Wu K, Zhang Y, Xu XC, Hill J, Celestino J, Kim HT, Mohsin SK, Hilsenbeck SG, Lamph WW, Bissonette R, **Brown PH**. The retinoid X receptor-selective retinoid, LGD1069, prevents the development of estrogen receptor-negative mammary tumors in transgenic mice. Cancer Res 62(22):6376-80, 2002.
2. Lu C, Speers C, Zhang Y, Xu X, Hill J, Steinbis E, Celestino J, Shen Q, Kim H, Hilsenbeck S, Mohsin SK, Wakeling A, Osborne CK, **Brown PH**. Effect of epidermal growth factor receptor inhibitor on development of estrogen receptor-negative mammary tumors. J Natl Cancer Inst 95(24):1825-33, 2003.
3. DeNardo DG, Kim HT, Hilsenbeck S, Cuba V, Tsimelzon A, **Brown PH**. Global gene expression analysis of estrogen receptor transcription factor cross talk in breast cancer: identification of estrogen-induced/activator protein-1-dependent genes. Mol Endocrinol 19(2):362-78, 2005.
4. **Brown PH**, Subbaramaiah K, Salmon AP, Baker R, Newman RA, Yang P, Zhou XK, Bissonnette RP, Dannenberg AJ, Howe LR. Combination chemoprevention of HER2/neu-induced breast cancer using a cyclooxygenase-2 inhibitor and a retinoid X receptor-selective retinoid. Cancer Prev Res (Phila Pa) 1(3):208-14, 2008.
5. Shen Q, Uray IP, Li Y, Zhang Y, Hill J, Xu XC, Young MR, Gunther EJ, Hilsenbeck SG, Colburn NH, Chodosh LA, **Brown PH**. Targeting the activator protein 1 transcription factor for the prevention of estrogen receptor-negative mammary tumors. Cancer Prev Res (Phila Pa) 1(1):45-55, 2008.
6. Medina D, Kittrell F, Hill J, Zhang Y, Hilsenbeck SG, Bissonette R, **Brown PH**. Prevention of tumorigenesis in p53-null mammary epithelium by rexinoid bexarotene, tyrosine kinase inhibitor gefitinib, and celecoxib. Cancer Prev Res (Phila Pa) 2(2):168-74, 2009.
7. Chen L, Krisko TI, Speers CW, Reif D, **Brown PH**. Inhibition of the p38 kinase suppresses the proliferation of p53 mutated and ER-negative human breast cancer cells. Cancer Research 1:69(23):8853-61, 2009.
8. Creighton CJ, Fu X, Hennessy BT, Casa AJ, Zhang Y, Gonzalez-Angulo AM, Lluch A, Gray JW, **Brown PH**, Hilsenbeck SG, Osborne CK, Mills GB, Lee AV, Schiff R. Proteomic and transcriptomic profiling reveals a link between the PI3K pathway and lower estrogen receptor (ER) levels and activity in ER+ breast cancer. Breast Cancer Res 12(3):R40. 2010.

Paul M. Cinciripini, Ph.D., is Professor and Deputy Chair of the Department of Behavioral Science, and Director of the Tobacco Treatment Program, at the University of Texas MD Anderson Cancer Center. He has over 25 years experience conducting basic and clinical research in the area of smoking cessation and nicotine psychopharmacology.

Dr. Cinciripini's major research studies include developing novel behavioral and pharmacological treatments for nicotine dependence, studies of nicotine titration and compensation, psychophysiological effects of nicotine during stress, individual differences in the effects of nicotine on EEG and cardiovascular activity, genetic factors treatment outcome, pharmacogenetic effects of antidepressants during smoking cessation, and recent studies using startle probe and EEG/ERPmethodology to examine the relations between genetics, emotional reactivity, nicotine exposure and nicotine withdrawal. He has also studied the effects of depression, coping behavior and self-efficacy as well as genetic factors related to nicotine dependence and in response to both behavioral and pharmacological interventions.

In addition to his sponsored research Dr. Cinciripini also serves as the Director of a large clinical service —the Tobacco Treatment Program, which offers in-person behavioral counseling and tobacco-cessation pharmacological treatment to all MD Anderson patients and employees.

Dr. Cinciripini has been the recipient of several NIH, extramural and industry sponsored research grants and is the author of over 100 articles and book chapters. Dr. Cinciripini is also the PI on 3 NIH subcontracts evaluating differences between smokers and nonsmokers in specific brain area associated with reward sensitivity, neural modulation of craving, and attentional bias. Over the last 10 years, Dr. Cinciripini has served as the PI, for 18 clinical trials, both NIH and industry sponsored, and he has participated in an additional 13 clinical trials for smoking cessation as a co-investigator. In addition, he has served as PI on numerous studies of the behavioral and neuropsychopharmacology of nicotine.

Selected Publications:

1. Robinson JD, Lam CY, Minnix JA, Wetter DW, Tomlinson GE, Minna JD, Chen TT, **Cinciripini PM**. The DRD2 TaqI-B polymorphism and its relationship to smoking abstinence and withdrawal symptoms. Pharmacogenomics J 7(4):266-274, 2007.
2. Blalock JA, Robinson JD, Wetter DW, Schreindorfer LS, **Cinciripini PM**. Nicotine withdrawal in smokers with current depressive disorders undergoing intensive smoking cessation treatment. Psychol Addict Behav 22(1):122-128, 2008.
3. Carter BL, Lam CY, Robinson JD, Paris MM, Waters AJ, Wetter DW, **Cinciripini PM**. Real-time craving and mood assessments before and after smoking. Nicotine Tob Res 10(7):1165-1169, 2008.
4. Lam CY, Robinson JD, Carter BL, Wetter DW, Minnix JA, **Cinciripini PM**. Nicotine differentially inhibits the acoustic startle reflex in African American and Caucasian American smokers. Addict Behav 33(12):1521-8, 2008. PMCID: PMC2612003.
5. Carter BL, Lam CY, Robinson JD, Paris MM, Waters AJ, Wetter DW, **Cinciripini PM**. Generalized craving, self-report of arousal, and cue reactivity after brief abstinence. Nicotine Tob Res 11(7):823-6, 2009. PMCID: PMC2699928.
6. Waters AJ, Carter BL, Robinson JD, Wetter DW, Lam CY, Kerst W, **Cinciripini PM**. Attentional Bias is Associated with Incentive-Related Physiological and Subjective Measures. Exp Clin Psychopharmacol 17(4):247-57, 2009.
7. Zevallos JP, Mallen MJ, Lam CY, Karam-Hage M, Blalock J, Wetter DW, Garden AS, Sturgis EM, **Cinciripini PM**. Complications of Radiotherapy in Laryngopharyngeal Cancer: Effects of a Prospective Smoking Cessation Program. Cancer 115(19):4336-4344, 2009.
8. Clague J, **Cinciripini PM**, Blalock J, Wu X, Hudmon KS. The D2 dopamine receptor gene and nicotine dependence among bladder cancer patients and controls. Behav Genet 40(1):49-58, 2010.
9. **Cinciripini PM**, Blalock JA, Minnix JA, Robinson JD, Brown VL, Lam C, Wetter DW, Schreindorfer L, McCullough JP, Dolan-Mullen P, Stotts AL, Karam-Hage M. Effects of an intensive depression-focused intervention for smoking cessation in pregnancy. J Consult Clin Psychol 78(1):44-54, 2010. PMCID: PMC2881321.
10. Carter BL, Paris MM, Lam CY, Robinson JD, Traylor AC, Waters AJ, Wetter DW, **Cinciripini PM**. Real-Time Craving Differences Between Black and White Smokers. Am J Addict 19(2):136-40, 2010.

Ludmila Cofta-Woerpel, Ph.D., is assistant professor in the Department of Behavioral Science and co-director of the e-Health Technology Program of the Duncan Family Institute for Cancer Prevention and Risk Assessment at the Division of Cancer Prevention and Population Sciences, The University of Texas MD Anderson Cancer Center.

Prior to her appointment at MD Anderson in 2000, Dr. Cofta-Woerpel held post-doctoral fellowship and junior faculty positions at the Center for Health Studies, Group Health Cooperative in Seattle, WA, Behavioral Medicine Research Center, Duke University Medical Center in Durham, NC, and the Institute of Psychology, Polish Academy of Sciences, Warsaw, Poland. In 2005-2010, Dr. Cofta-Woerpel co-directed a nation-wide research program of the National Cancer Institute's Cancer Information Service. She earned her master degree in psychology from the University of Warsaw and her Ph.D. in experimental psychology from the Polish Academy of Sciences in Warsaw.

Dr. Cofta-Woerpel has been involved in nicotine and tobacco, and health communication research. Her nicotine and tobacco research focuses on the study of smoking cessation and relapse prevention using electronic devices to assess smoking-related phenomena in real time and in real-life settings. In the area of health communication, she is interested in helping to bridge the gap between research and public health service by developing collaborative cancer communication studies conducted in real-life service environments, particularly among the underserved.

Selected publications:

1. **Cofta-Woerpel L**, Wright KL, & Wetter DW. Smoking Cessation 1: Pharmacological Treatments. *Behavioral Medicine*, 32(2):47-56., 2006.
2. Vidrine JI, **Cofta-Woerpel L**, Daza P, Wright KL, & Wetter DW. Smoking Cessation 2: Behavioral Treatments. *Behavioral Medicine*, 32(3):99-109, 2006.
3. **Cofta-Woerpel L**, Wright KL, & Wetter DW. Smoking Cessation 3: Multicomponent Interventions. *Behavioral Medicine*, 32(4):135-49, 2007.
4. Squiers L, Bush N, Vanderpool R, **Cofta-Woerpel L**, & Fabrizio C. Bridging the critical chasm between service and research. Journal of Cancer Education, 22(2):91-98, 2007.
5. Rowan PJ, **Cofta-Woerpel L**, Mazas C, Vidrine JI, Reitzel LR, Cinciripini PM, & Wetter DW. Evaluating reactivity to ecological momentary assessment during smoking cessation. *Experimental and Clinical Psychopharmacology*, 15:382-389, 2007.
6. Shaw BR, DuBenske L, Yeob Han J, **Cofta-Woerpel L**, Bush N, Gustafson DH, & McTavish F. Antecedent characteristics of online cancer information seeking among rural breast cancer patients: An application of the Cognitive-Social Health Information Processing (C-SHIP) Model. *Journal of Health Communication*.13:389-408, 2008.
7. **Cofta-Woerpel L**, Randhawa V, McFadden HG, Fought A, Bullard E, & Spring B. ACCISS study rationale and design: Activating Collaborative Cancer Information Service Support for cervical cancer screening. *BMC Public Health, 9,* 444-454, 2009.
8. Simon MA, Cofta-Woerpel L, Randhawa V, John P, Makoul G, Spring B. Using the word 'cancer' in communication about an abnormal pap test: Finding common ground with Patient-Provider Communication. *Patient Education and Counseling*, *81,* 106-112

Michele R. Forman, B.A., M.S.P.H., M.A., Ph.D., is a Professor in the Department of Epidemiology, Cancer Prevention and Population Sciences at the University of Texas MD Anderson Cancer Center and an adjunct Professor at the University of Texas School of Public Health and the Department of Pediatrics - Baylor College of Medicine.

Prior to her appointment at MD Anderson in January 2006, Dr. Forman was an Intramural Scientist at the National Cancer Institute in Bethesda, Maryland from 1989 to 2005. Her most recent post at NCI was Senior Nutrition Epidemiologist, Intramural Program, Center for Cancer Research. Other positions have included Associate Professor at Johns Hopkins University in Baltimore, Maryland.

Dr. Forman began her research career in maternal and child health, moved into chronic disease research in the1980's and now focuses on early life exposures and risk of chronic disease. She has also developed clinical nutrition studies in the areas of hormones, micronutrients, and other biomarkers of dietary response. Most of her research career has been spent studying health disparities. She is recognized as the "guru" to the CDC-Behavioral Risk Factor Surveillance system and her maps of obesity across the U.S. are familiar to everyone. Dr. Forman has 30 years of research experience, conducting nutritional epidemiology studies in international settings as well as nationally. She has been on the editorial boards of several nutrition journals and has over 130 peer-reviewed publications. She chairs the IBCERCC (Interagency Breast Cancer & Environmental Research Coordinating Committee) and has recently presented her work on energy balance and puberty to the Institute of Medicine.

A native of New York, Dr. Forman was trained in epidemiology, nutrition and anthropology at the University of North Carolina at Chapel Hill; earning a M.S.P.H. degree in 1974, a M.A. degree in 1975, and a Ph.D. in epidemiology in 1977.

Selected Publications:

1. Colbert LH, Graubard BI, Michels KB, Willett WC, **Forman MR**. Physical activity during pregnancy and age at menarche of the daughter. Cancer Epidemiol Biomarkers Prev 17(10):2656-2662, 10/2008. PMCID: PMC2752965.
2. Stuebe AM, **Forman MR**, Michels KB. Maternal-recalled gestational weight gain, pre-pregnancy body mass index and obesity in the daughter. Int J Obes (Lond) 33(7):743-52, 7/2009. e-Pub 6/2009. PMCID: PMC2710391.
3. Thelus Jean R, Bondy ML, Wilkinson AV, **Forman MR**. Pubertal development in Mexican-American girls: The family's perspective. Qual Health Res 19(9):1210-22, 9/2009.
4. Ogland B, Vatten LJ, Romundstad PR, Nilsen ST, **Forman MR**. Pubertal anthropometry in sons and daughters of women with preeclamptic or normotensive pregnancies. Arch Dis Child 94(11):855-9, 11/2009. e-Pub 7/2009.
5. Swartz MD, **Forman MR**, Mahabir S, Etzel CJ. Pooling dietary data using questionnaires with open-ended and predefined responses: Implications for comparing mean intake or estimating odds ratios. Am J Epidemiol 171(6):682-90, 3/2010. e-Pub 2/2010.
6. Ogland B, Romundstad PR, Vefring H, **Forman MR**, Nilsen ST, Vatten LJ. Preeclampsia and Adiponectin in Cord Blood. Horm Res Paediatr. e-Pub 4/2010.
7. Olivo-Marston S, Graubard BI, Visvanathan K, **Forman MR**. Gender-specific differences in birthweight and the odds of puberty: NHANES III, 1988-94. Paediatr Perinat Epidemiol 24(3):222-31, 5/2010.
8. Shinde S, **Forman MR**, Kuerer HM, Yan K, Peintinger F, Hunt KK, Hortobagyi GN, Puszatai L, Symmans WF. Higher parity and shorter breastfeeding duration: Association with triple negative phenotype of breast cancer. Cancer 2010 Jul 21. PMID: 20665494.
9. George GC, Hoelscher D, **Forman MR**. Dietary vitamin supplement use is associated with healthful diets and greater physical activity in a representative sample of 11th grade adolescents in Texas. J Am Dietet Assoc. In Press.
10. Ogeland B, Nilsen ST, **Forman MR** and Vatten LJ. Pubertal development in daughters of women with pre-eclampsia: relevance for future breast cancer risk. Arch Dis Childhood. 2010 Oct 7. In Press. PMID: 20930013.

Lewis E. Foxhall, M.D., is MD Anderson's vice president for health policy and associate professor in the Department of Clinical Cancer Prevention. His work focuses on community-based cancer prevention and early detection, access and quality of care for low-income populations. He received his medical degree from Baylor College of Medicine and his clinical background is in family medicine.

Dr. Foxhall is responsible for coordination of MD Anderson's charity care program through leadership of the Uncompensated Care Advisory Committee as well as administrative coordination of the MD Anderson/Harris County Hospital District oncology program. He is the immediate past chair of the Harris County Healthcare Alliance, an umbrella organization for safety-net medical provider organizations in Houston and Harris County.

Dr. Foxhall currently leads efforts to advance comprehensive cancer control at MD Anderson. He previously led a statewide effort to update the Texas Cancer Plan and served as chair of the Texas Comprehensive Cancer Control Coalition. He is director of the Texas Cancer Information website project and chairs the Texas Medical Association's Physician Oncology Education Program, both funded by CPRIT. He serves on the Texas Department of State Health Services Advisory Council and previously chaired the Texas Health Care Information Council.

Dr. Foxhall supports policy development and outreach programs in collaboration with government agencies, voluntary health organizations and organized medical groups. He serves as liaison to community physicians and is medical director of the Office of Physician Relations. Currently, he is president of the Harris County Medical Society, an officer of the American Cancer Society High Plains Division Board of Directors and a board member of the National American Cancer Society Cancer Action Network.

Selected Publications:

1. Neiman L, **Foxhall L**, Groff J, Cheng L. Applying Practical Preventive Skills in a Preclinical Preceptorship. Academic Medicine 76(5):478-483, 2001.
2. Hawley ST, **Foxhall L**, Vernon SW, Levin B, Young JE. Colorectal cancer screening by primary care physicians in Texas: a rural-urban comparison. J Cancer Education 16(4):199-204, 2001.
3. **Foxhall L**, Cook E. The Selenium and Vitamin E. Prostate Cancer Prevention Trial. Texas Medicine:24, 2001.
4. Tilley BJ, **Foxhall L**, Chen L, Goddrich TJ, Nieman LZ. Barriers to student preventive practices during preclinical preceptorship. Texas Medicine 8(6):13-14, 2002.
5. **Foxhall L**, Von Eschenbach AC. Counseling Patients About Prostate Cancer Screening. American Family Physician 65(9), 2002.
6. Sifuentes F, Chang L, Niemann LZ, **Foxhall L**. Evaluating a Diabetes Foot Care Program in a Preceptorship for Medical Students. The Diabetes Educator 28(6):930-937, 2002.
7. Nieman L, **Foxhall L**E, Velasquez MM, Groff JY. Preparing Preclinical Medical Students for Brief Smoking Cessation Interventions. Association for Medical Education in Europe, Relevance in Medical Education Conference. Bern, Switzerland, 9/2003.
8. Brunton S, Anderson R, **Foxhall L**, Liker H, Mennie G, Schroy PC, Wright W. Colorectal Cancer Screening: A Renewed Imperative for Primary Care Clinicians. Ilinois Academy of Family Physicians Evidence-Based CME 1, 2003.
9. Nieman LZ, **Foxhall L**E, Chuang AZ, Prager TC. Evaluating the Texas Statewide Family Practice Preceptorship Program. Academy Medicine 79(1):62-68, 2004.
10. Nieman LZ, Velasquez MM, Groff JY, Cheng L, **Foxhall L**. Implementation of a Smoking Cessation Counseling Module in a Preceptorship Program. Family Medicine 37(2), 2/2005.

Marsha L. Frazier, Ph.D., Professor in the Department of Epidemiology at the University of Texas MD Anderson Cancer Center and an Adjunct Professor at The University of Texas Health Science Center, Graduate School of Biomedical Science.

She has been a faculty member at MD Anderson for over 25 years, and has had continuous federal grant support since she joined the MD Anderson faculty. Prior to her appointment at MD Anderson, she was a Research Assistant Professor at the Baylor College of Medicine. She has directly mentored over 100 undergraduate students, graduate students and postdoctoral fellows in her laboratory.

Much of Dr. Frazier's research has focused on cancers of the gastrointestinal tract, with most of her studies focusing on colorectal and pancreatic cancer. She has a particular interest in families with Lynch syndrome (also known as hereditary nonpolyposis colorectal cancer) which is a genetic disorder resulting in a predisposition to cancer, with colorectal cancer being the most common cancer seen in these families.

Dr. Frazier grew up in Flint, Michigan, and earned a bachelor's degree at Michigan State University and a Ph.D. at Pennsylvania State University. Her postdoctoral training was done at MD Anderson.

Selected publications:

1. **Frazier ML**, Xi L, Zong J, Viscofsky N, Rashid A, Wu EF, Lynch PM, Amos CI, Issa JP. Association of the CpG island methylator phenotype with family history of cancer in patients with colorectal cancer. Cancer Res 63(16):4805-8, 8/2003. PMID: 12941799.
2. Chen LL, Trent JC, Wu EF, Fuller GN, Ramdas L, Zhang W, Raymond AK, Prieto VG, Oyedeji CO, Hunt KK, Pollock RE, Feig BW, Hayes KJ, Choi H, Macapinlac HA, Hittelman W, Velasco MA, Patel S, Burgess MA, Benjamin RS, **Frazier ML**. A missense mutation in KIT kinase domain 1 correlates with imatinib resistance in gastrointestinal stromal tumors. Cancer Res 64(17):5913-9, 9/2004. PMID: 15342366.
3. Wei C, Amos CI, Stephens LC, Campos I, Deng JM, Behringer RR, Rashid A, **Frazier ML**. Mutation of Lkb1 and p53 genes exert a cooperative effect on tumorigenesis. Cancer Res 65(24):11297-303, 12/2005. PMID: 16357136.
4. Zecevic M, Amos CI, Gu X, Campos IM, Jones JS, Lynch PM, Rodriguez-Bigas MA, **Frazier ML**. IGF1 gene polymorphism and risk for hereditary nonpolyposis colorectal cancer. J Natl Cancer Inst 98(2):139-43, 1/2006. PMID: 16418517.
5. Chen J, Sen S, Amos CI, Wei C, Jones JS, Lynch P, **Frazier ML**. Association between Aurora-A kinase polymorphisms and age of onset of hereditary nonpolyposis colorectal cancer in a Caucasian population. Mol Carcinog 46(4):249-256, 1/2007. PMID: 17219423.
6. Chen J, Li D, Wei C, Sen S, Killary AM, Amos CI, Evans DB, Abbruzzese JL, **Frazier ML**. Aurora-A and p16 Polymorphisms Contribute to an Earlier Age at Diagnosis of Pancreatic Cancer in Caucasians. Clin Cancer Res 13(10):3100-4, 5/2007. PMID: 17505013.
7. Pande M, Chen J, Amos CI, Lynch PM, Broaddus R, **Frazier ML**. Influence of methylenetetrahydrofolate reductase gene polymorphisms C677T and A1298C on age-associated risk for colorectal cancer in a caucasian lynch syndrome population. Cancer Epidemiol Biomarkers Prev 16(9):1753-9, 9/2007. PMID: 17855693.
8. Wei C, Amos CI, Zhang N, Wang X, Rashid A, Walker CL, Behringer RR, **Frazier ML**. Suppression of Peutz-Jeghers polyposis by targeting mammalian target of rapamycin signaling. Clin Cancer Res 14(4):1167-71, 2/2008. PMID: 18281551.
9. Pande M, Amos CI, Osterwisch DR, Chen J, Lynch PM, Broaddus R, **Frazier ML**. Genetic variation in genes for the xenobiotic-metabolizing enzymes CYP1A1, EPHX1, GSTM1, GSTT1, and GSTP1 and susceptibility to colorectal cancer in Lynch syndrome. Cancer Epidemiol Biomarkers Prev 17(9):2393-401, 9/2008. PMID: 18768509.
10. Wang J, Chen J, Chang P, LeBlanc A, Li D, Abbruzzesse JL, **Frazier ML**, Killary AM, Sen S. MicroRNAs in Plasma of Pancreatic Ductal Adenocarcinoma Patients as Novel Blood Based Biomarkers of Disease. Cancer Prev Res (Phila Pa) 2(2(9)):807-13, 9/2009. e-Pub 9/2009. PMID: 19723895.

Ellen R. Gritz, Ph.D., is professor and chair of the Department of Behavioral Science and holds the Olla S. Stribling Distinguished Chair for Cancer Research at MD Anderson. She is an established leader in cancer prevention and control research and internationally known investigator. Dr. Gritz has published extensively on cigarette smoking behavior: prevention, cessation, pharmacologic mechanisms, and special issues of concern to women and high-risk groups, including ethnic minorities, youth, cancer patients and persons living with HIV/AIDS. Dr. Gritz is currently PI of an NCI-funded R01 grant to evaluate an innovative, cell phone-based smoking cessation intervention in an HIV-positive, low income, tri-ethnic population. This is a medical high-risk, underserved population with elevated smoking prevalence (50 percent or higher).

Other research includes skin cancer prevention in children and high-risk individuals, genetic testing and counseling for hereditary cancers, and cancer survivorship. Dr. Gritz has served on several cancer center and other advisory boards. She is a member of the Institute of Medicine (IOM). From 2002-2008, Dr. Gritz served on the Board of Directors of the American Legacy Foundation, the large, non-profit public health foundation established in 1998 as part of the Master Settlement Agreement, and was vice-chair of the board (2005-2008). Dr. Gritz was president of the Society for Research on Nicotine and Tobacco (2006-2007), and president of the American Society of Preventive Oncology (ASPO) (1993-1995).

Dr. Gritz has received numerous honors, including the American Society of Preventive Oncology's (ASPO) Joseph W. Cullen Memorial Award for outstanding research in smoking, ASPO's Distinguished Achievement Award, and MD Anderson's Margaret and James A. Elkins, Jr. Faculty Achievement Award in Cancer Prevention. Most recently, Dr. Gritz was the 2008 recipient of both the Alma Dea Morani Renaissance Woman Award, which honors an outstanding physician or scientist, and the Society of Behavioral Medicine, Cancer Special Interest Group's Outstanding Biobehavioral Oncology Award. Dr. Gritz was the 2009 recipient of the Distinguished Professional Woman's Award, presented by UT Health Science Center at Houston. She is a fellow of the Society of Behavioral Medicine and the American Psychological Association, and is senior editor for Behavioral Sciences of the journal, *Cancer Epidemiology, Biomarkers, and Prevention.* Dr. Gritz has more than 265 publications to her credit, including numerous journal articles, as well as books, book chapters and teaching aids. Dr. Gritz holds a Ph.D. in psychology from the University of California at San Diego.

Selected publications:

1. **Gritz ER**, Dresler C, Sarna L. Smoking, the missing drug interaction in oncology clinical trials: Ignoring the obvious. Cancer Epidemiol Biomarkers Prev 14:2287-93, 2005.
2. **Gritz ER**, Vidrine DJ, Fingeret MC. Smoking cessation. A critical component of medical management in chronic disease populations. Special Issue on the State of the Science, Tobacco Control. American Journal of Preventive Medicine 33:S414-S422, 2007.
3. Vidrine DJ, Arduino RC, Lazev AB, **Gritz ER.** A randomized trial of a proactive cellular telephone intervention for smokers living with HIV/AIDS. AIDS 20:253-60, 2006.
4. Demark-Wahnefried W, Pinto BM, **Gritz ER.** Promoting health and physical function among cancer survivors: Potential for prevention and questions that remain. J Clin Oncol 24:5125-31, 2006.
5. Healton C, **Gritz ER**, Davis KC, Ghada H, McCausland K, Haviland ML, Vallone D. Women's knowledge of the leading causes of cancer death. Nicotine Tob Res 9:761-768, 2007.
6. Henningfield JE, Shiffman S, Ferguson SG, **Gritz ER.** Tobacco dependence and withdrawal: science base, challenges, and opportunities for pharmacotherapy. Pharmacol Ther 123(1):1-16, 2009.
7. Cole TR, Goodrich TJ, **Gritz ER.** Ed(s) Cole TR, Goodrich TJ, **Gritz ER.** Faculty Health in Academic Medicine: Physicians, Scientists and the Pressures of Success. Humana Press: Totowa, NJ, 2009.
8. Wefel JS, Vidrine DJ, Veramonti TL, Meyers CA, Marani SK, **Gritz ER.** Cognitive impairment in men with testicular cancer prior to adjuvant therapy. Cancer. In press.
9. **Gritz ER**, Lam CY, Vidrine DJ, Fingeret MC. Cancer Prevention: Tobacco Dependence and Its Treatment. In: Cancer: Principles and Practice of Oncology. 2, Part 3, Chapter 51, 9th edition. (Eds) V DeVita, T Lawrence, S Rosenberg. Lippincott Williams & Wilkins: Philadelphia, PA.
   In Press.

Dr. Ashraful Hoque, M.D., Ph.D., is an Associate Professor in the Departments of Clinical Cancer Prevention and Epidemiology, Division of Cancer Prevention and Population Sciences at The University of Texas MD Anderson Cancer Center.

Dr. Hoque's major research focus is molecular epidemiologic and translational biomarker studies in the area of hormonally-regulated cancer, particularly of the prostate and breast. The primary research focus is to define the molecular risks for prostate and breast cancer to discover effective ways of preventing these diseases in high-risk men and women.

Dr. Hoque has major team-science collaborations in prostate and breast cancer prevention research involving investigators of both MD Anderson Cancer Center (MDACC) and the Southwest Oncology Group (SWOG). Currently, Dr. Hoque is leading an investigation that utilizes the biospecimens and clinical and epidemiologic data collected in the Prostate Cancer Prevention trial of SWOG. Also, Dr.Hoque is actively involved with MDACC's NCI-supported early drug development consortium for chemoprevention trials.

Dr. Hoque earned his medical degree from Bangladesh and his doctoral degree in epidemiology from the School of Public Health at the University of Texas.

Dr. Hoque currently serves on the editorial board of Cancer Epidemiology Biomarkers & Prevention.

Selected publications:

1. **Hoque A**, Lippman SM, Boiko IV, Atkinson EN, Sneige N, Sahin A, Weber DM, Risin S, Lagios MD, Schwarting R, Colburn WJ, Dhingra K, Follen M, Kelloff GJ, Boone CW, Hittelman WN. Quantitative nuclear morphometry by image analysis for prediction of recurrence of ductal carcinoma in situ of the breast. Cancer Epidemiol Biomarkers Prev 10:249-59, 2001.
2. **Hoque A**, Sneige N, Sahin AA, Menter DG, Bacus JW, Hortobagyi GN, Lippman SM. Her-2/neu gene amplification in ductal carcinoma in situ of the breast. Cancer Epidemiol Biomarkers Prev 11:587-90, 2002.
3. **Hoque A,** Carter J, Xia W, Hung MC, Sahin AA, Sen S, Lippman SM. Loss of aurora A/STK15/BTAK overexpression correlates with transition of in situ to invasive ductal carcinoma of the breast. Cancer Epidemiol Biomarkers Prev 12:1518-22, 2003.
4. Kristal AR, King IB, Albanes D, Pollak MN, Stanzyk FZ, Santella RM, **Hoque A**. Centralized blood processing for the selenium and vitamin E cancer prevention trial: effects of delayed processing on carotenoids, tocopherols, insulin-like growth factor-I, insulin-like growth factor binding protein 3, steroid hormones and lymphocyte viability. Cancer Epidemiol Biomarkers Prev 14:727-30, 2005.
5. De Marzo AM, Platz EA , Epstein JI , Ali T , Billis A, Chan TY, Cheng L, Datta M, Egevad L, Ertoy-Baydar D, Farre X , Fine SW , Iczkowski KA, Ittmann M, Knudsen BS, Loda M, Lopez-Beltran A, Magi-Galluzzi C, Mikuz G, Montironi R, Pikarsky E, Pizov G, Rubin MA, Samaratunga H, Sebo T, Sesterhenn IA, Shah RB, Signoretti S, Simko J ,Thomas G, Troncoso P, Tsuzuki T, van Leenders G JLH, Yang XJ, Zhou M, Figg WD, **Hoque A** and Lucia MS. A Working Group Classification of Focal Prostate Atrophy Lesions. Am J Surg Pathol 30:1281-91, 2006.
6. **Hoque A**, Goodman P, Ambrosone CB, Figg WD, Price DK, Kopp W, Wu X, Conroy J, Lehman TA, Santella RM. Extraction of DNA from Serum for High-throughput Genotyping: Findings from Pilot Studies within the Prostate Cancer Prevention Trial. Urology 71:967-70, 2008.
7. **Hoque A**, Chen H, Xu XC. Statin induces apoptosis and cell growth arrest in prostate cancer cells. Cancer Epidemiol Biomarkers Prev 17:88-94, 2008.

Lovell Jones, Ph.D., is a professor in the Department of Health Disparities Research as well as the Department of Biochemistry & Molecular Biology at MD Anderson Cancer Center.

He has more than 35 years of experience in addressing minority health and the health of the underserved. As a scientist, Dr. Jones has done extensive research into the relationship between hormones, diet and endocrine responsive tumors and has presented his work both nationally and internationally. He has edited one of the few comprehensive textbooks on this subject: *Minorities & Cancer*. Dr. Jones has either chaired or co-chaired numerous major events regarding the underserved and cancers, including the American Cancer Society South Central U.S. Regional Hearings on Cancer and the Poor and the 1st National African Cancer Education meeting in Abuja, Nigeria. Dr. Jones is co-author of the congressional resolution designating the third full week in April as "National Minority Cancer Awareness Week." For his work, the NIH/National Center on Minority Health and Health Disparities recently awarded him its Director's Award for Excellence in Health Disparities.

Dr. Jones' research work also involves determining the mechanism by which natural and environmental estrogenic agents may initiate cancers in hormonally responsive tissue. He is the PI on two NIH grants, one titled "The Women's Health Eating and Living Study," an NCI grant studying the role of diet on prevention recurrence of second primaries in breast cancer survivors. The other grant was awarded by the Centers of Excellence for Community Partnership, Outreach, Research & Training from the National Center on Minority Health & Health Disparities. In addition, Dr. Jones is the PI on the Centers for Medicare and Medicaid Cancer Prevention and Treatment Demonstration grant titled: " Facilitated Assistance, Research, & Outreach Services ."

In January 2000, Dr. Jones was named the first director of the congressionally mandated Center for Research on Minority Health (CRMH), a multidisciplinary center which aims to a) foster research that addresses the causes of health disparities and translates scientific results back to the communities affected by those disparities; b) encourage minority students to pursue careers in the biomedical sciences; and c) increase recruitment and retention of minority and medically underserved populations into clinical trials. Dr. Jones received his Ph.D. from the University of California, Berkeley.

Selected Publications:

1. Pierce JP, Natarajan L, Caan BJ, Parker BA, Greenberg ER, Flatt SW, Rock CL, Kealey S, Al-Delaimy WK, Bardwell WA, Carlson RW, Emond JA, Faerber S, Gold EB, Hajek RA, Hollenbach K, **Jones LA**, Karanja N, Madlensky L, Marshall J, Newman VA, Ritenbaugh C, Thomson CA, Wasserman L, Stefanick ML. Influence of a diet very high in vegetables, fruit, and fiber and low in fat on prognosis following treatment for breast cancer: the Women's Healthy Eating and Living (WHEL) randomized trial. JAMA 298(3):289-298, http://jama.ama-assn.org/cgi/content/full/298/3/289, 7/2007. PMCID: PMC2083253.
2. Gor BJ, Shelton AJ, Esparza A, Yi JK, Hoang TV, Liang JC, **Jones LA**. Development of a Health Risk Factors Questionnaire for Chinese and Vietnamese Residents of the Houston, Texas Area. J Immigr Minor Health 10(4):373-377, http://www.springerlink.com/content/m3467128250481vr/fulltext.pdf, 8/2007. e-Pub 10/2007.
3. Pierce JP, Newman VA, Natarajan L, Flatt SW, Al-Delaimy WK, Caan BJ, Emond JA, Faerber S, Gold EB, Hajek RA, Hollenbach K, **Jones LA**, Karanja N, Kealey S, Madlensky L, Marshall J, Ritenbaugh C, Rock CL, Stefanick ML, Thomson C, Wasserman L, Parker BA. Telephone counseling helps maintain long-term adherence to a high-vegetable dietary pattern. J Nutr 137(10):2291-2296, http://jn.nutrition.org/cgi/content/full/137/10/2291, 10/2007. PMCID: PMC2064909.
4. Rock CL, Flatt SW, Laughlin GA, Gold EB, Thomson CA, Natarajan L, **Jones LA**, Caan BJ, Stefanick ML, Hajek RA, Al-Delaimy WK, Stanczyk FZ, Pierce JP. Reproductive steroid hormones and recurrence-free survival in women with a history of breast cancer. Cancer Epidemiol Biomarkers Prev 3(17):614-620, 3/2008. e-Pub 3/2008. PMCID: PMC2575111.
5. Hernandez-Valero MA, Thomson CA, Hernández M, Tran T, Detry MA, Theriault RL, Hajek RA, Pierce JP, Flatt SW, Caan BJ, **Jones LA**. Comparison of baseline dietary intake of Hispanic and matched non-hispanic White breast cancer survivors enrolled in the Women's Healthy Eating and Living (WHEL) study. J Am Diet Assoc 108(8):1323-9, 8/2008.

Lorna Haughton McNeill, Ph.D., M.P.H., is assistant professor of the Department of Health Disparities Research at MD Anderson Cancer Center and an adjunct faculty member at The University of Texas School of Public Health. Dr. McNeill joined Health Disparities Research in 2006.

Her research is on the elimination of cancer-related health disparities in minority populations. Her research has particular emphasis on understanding the influence of social and environmental determinants of cancer in minorities, with a special focus of the role of physical activity as a key preventive behavior. Her work involves the development and evaluation of ecological theoretically-based physical activity interventions with the goal of understanding potential mechanisms to behavior change.

Dr. McNeill has extensive experience in examining social and environmental correlates of physical activity and obesity in community-based minority populations. She is currently PI of three church-based studies—a 3-year cohort study examining cancer prevention risk factors in African American church-goers in Houston, a NIH-funded grant to evaluate social support for physical activity, and grant funded by the Houston Endowment, Inc. to address obesity in African Americans. Dr. McNeill also recently received a NIH grant to examine individual, social, and environmental determinants of PA among black and Latino adults using state-of-the-art ecological momentary assessment measures.

She earned her Ph.D. in public health studies from Saint Louis University and her master's in health behavior and health education from the University of North Carolina at Chapel Hill. Prior to her appointment at MD Anderson she was a postdoctoral fellow at the Harvard School of Public Health.

Selected publications:

1. McNeill LH, Wyrwich KW, Brownson RC, Clark EM, Kreuter MW. Individual, social environmental and physical environmental influences on physical activity among black and white adults: a structural equation analysis. Ann Behav Med 31(1)(1):36-44, 2006.
2. Kreuter M, Haughton LT. Integrating culture into health information for African American Women. American Behavioral Scientist 49(6):1-18, 2006.
3. Rehkopf DH, Haughton LT, Chen JT, Waterman PD, Subramanian SV, Krieger N. Monitoring socioeconomic disparities in death: comparing individual-level education and area-based socioeconomic measures. Am J Public Health 96(12):2135-2138, 2006.
4. McNeill LH, Kreuter M, Subramanian SV. Social environment and physical activity: a review of concepts and evidence. Soc Sci Med 63(4)(4):1011-1022, 2006.
5. Shelton RC, Puleo E, Bennett GG, McNeill LH, Goldman RE, Emmons KM. Racial discrimination and physical activity among low-income-housing residents. Am J Prev Med 37(6):541-5, 12/2009.
6. McNeill LH, Coeling M, Puleo E, Suarez EG, Bennett GG, Emmons KM. Colorectal cancer prevention for low-income, sociodemographically-diverse adults in public housing: baseline findings of a randomized controlled trial. BMC Public Health 9:353, 2009.
7. De Jesus M, Puleo E, Shelton RC, McNeill LH, Emmons KM. Factors Associated with Colorectal Cancer Screening among a Low-Income, Multiethnic, Highly Insured Population: Does Provider's Understanding of the Patient's Social Context Matter? J Urban Health 87(2):236-43, 3/2010.

Bo Peng, Ph.D., is an instructor at the Department of Epidemiology, The University of Texas MD Anderson Cancer Center. With a background in applied mathematics, biostatistics and bioinformatics, he specializes in large-scale individual-based population genetics simulations and is actively applying such simulation techniques to research topics in genetic epidemiology and public health genomics.

His research topic includes numerical analysis, parallel computation, bioinformatics and population genetics. His study was partly supported by a predoctoral Fellowship from the W.M. Keck Center for Interdisciplinary Bioscience Training.

Dr. Peng earned a Master's degree in applied mathematics from the Department of Mathematics, University of Houston and then a Ph.D. degree in biostatistics from the Department of Statistics, Rice University. Dr. Peng earned his bachelor's degree from the Department of Mathematics, Shanghai Jiao Tong Unviersity. After graduation, he worked as a lecturer in this department and pioneered in the application of computer software in mathematics education.

Dr. Peng joined the Department of Epidemiology, MD Anderson as a postdoctoral fellow. He was awarded a donor funded postdoctoral fellowship in Cancer Prevention for his study in the evolution of genetic diseases.

Selected publications:

1. **Peng B**, Kimmel M. simuPOP: a forward-time population genetics simulation environment. Bioinformatics 21(18):3686-7, 9/2005. PMID: 16020469.
2. **Peng B**, Kimmel M. Simulations provide support for the common disease-common variant hypothesis. Genetics 175(2):763-76, 2/2007. PMCID: PMC1800600.
3. **Peng B**, Amos CI, Kimmel M. Forward-time simulations of human populations with complex diseases. PLoS Genet 3(3):e47, 3/2007. e-Pub 2/2007. PMCID: PMC1829403.
4. **Peng B**, Amos CI. Forward-time simulations of non-random mating populations using simuPOP. Bioinformatics 24(11):1408-9, 6/2008. e-Pub 4/2008. PMCID: PMC2691961.
5. **Peng B**. Simulating gene-environment interactions in complex human diseases. Genome Med 2(3). e-Pub 3/2010. PMID: 20346093.
6. **Peng B**, Li B, Han Y, Amos CI. Power analysis for case-control association studies of samples with known family histories. Hum Genet. e-Pub 4/2010. PMID: 20383776.
7. **Peng B**, Amos CI Forward-time simulation of realistic samples for genome-wide association studies, BMC Bioinformatics, 2010. 11:442

Alexander V. Prokhorov, M.D., Ph.D., has spent most of his research career in Texas and is currently a professor in the Department of Behavioral Science, Director of the Tobacco Outreach Education Program (TOEP) and Co-Director of the Duncan Family Institute eHealth Technology Program.

During his tenure at MD Anderson, Dr. Prokhorov has established a strong record of obtaining state and federally funded research grants and has authored numerous peer-reviewed publications and book chapters. His work focuses primarily on creating and testing innovative tobacco prevention and cessation programs for high-risk teens and young adults. His interactive multimedia Web site ASPIRE (A Smoking Prevention Interactive Experience) has reached thousands of young users in Texas, across the nation and the world. He also develops programs aimed at increasing awareness of the tobacco risks among the general public and enhancing smoking cessation counseling skills among health care providers in Texas and beyond.

Dr. Prokhorov is a much sought after speaker for national and international conferences and seminars aimed at facilitating tobacco control and cancer prevention. He currently serves as a member of the Julius Richmond Center of Excellence with the mission to protect children from exposure to secondhand smoke. His honors include the World Health Organization (WHO) Medal and Certificate (1990), George and Barbara Bush Endowment for Innovative Cancer Research (2003), MD Anderson Educator of the Month (September 2003); an invitation to testify on smoking and adolescents before the President's Cancer Panel (2007); and the Robert M. Chamberlain Distinguished Mentor Award Nominee (2009). Most recently, Dr. Prokhorov was awarded the 2011 Joseph Cullen Award for Excellence in Tobacco Research from the American Society of Preventive Oncology.

Dr. Prokhorov received his MD from the 1st Moscow Sechenov School and his Ph.D. from The USSR Cardiology Research Center.

Selected Publications:

1. **Prokhorov AV**, Ford KH, Mullin Jones M. Smoking Cessation among College Students: Challenges and Outcomes. In: Smoking Cessation: Theory, Interventions and Prevention. Ed(s) JE Landow. Nova Science Publishers, Inc: Hauppauge, New York, 2008.
2. **Prokhorov AV**, Ford KH, Hudmon KS. Smoking Cessation. In: Lung Cancer, Third Edition. Ed(s) J Roth, JD Cox & WK Hong. Blackwell Publishing: United Kingdom, 2008.
3. Wilkinson AV, Waters AJ, Vasudevan V, Bondy ML, **Prokhorov AV**, Spitz MR. Correlates of susceptibility to smoking among Mexican origin youth residing in Houston, Texas: a cross-sectional analysis. BMC Public Health 8:337, 2008. PMCID: PMC2569937.
4. Wilkinson AV, Shete S, Vasudevan V, **Prokhorov AV**, Bondy ML, Spitz MR. Influence of subjective social status on the relationship between positive outcome expectations and experimentation with cigarettes. J Adolesc Health 44(4):342-8, 4/2009. e-Pub 10/2008. PMCID: PMC2705959.
5. Spelman AR, Spitz MR, Kelder SH, **Prokhorov AV**, Bondy ML, Frankowski RF, Wilkinson AV. Cognitive susceptibility to smoking: two paths to experimenting among Mexican origin youth. Cancer Epidemiol Biomarkers Prev 18(12):3459-3467, 12/2009.
6. Wilkinson AV, Spitz MR, **Prokhorov AV**, Bondy ML, Shete S, Sargent JD. Exposure to smoking imagery in the movies and experimenting with cigarettes among Mexican heritage youth. Cancer Epidemiol Biomarkers Prev 18(12):3435-3443, 12/2009. PMCID: PMC2791895.
7. Hudmon KS, Corelli RL, **Prokhorov AV**. Current approaches to pharmacotherapy for smoking cessation. Therapeutic Advances in Respiratory Disease 4(1):35-47, 2/2010.
8. **Prokhorov AV**, Kelder SH, Shegog R, Conroy JL, Murray N, Peters R, Cinciripini PM, De Moor C, Hudmon KS, Ford KH. Project ASPIRE: An interactive multimedia smoking prevention and cessation curriculum for culturally diverse high school students. Subst Use Misuse 45(6):983-1006, 5/2010.
9. **Prokhorov AV**, Hudmon KS, Marani S, Foxhall L, Ford KH, Luca NS, Wetter DW, Cantor SB, Vitale F, Gritz ER. Engaging physicians and pharmacists in providing smoking cessation counseling. Archives of Internal Medicine 170(18):1640-1646, 10/2010. e-Pub 10/2010.

Imad Shureiqi, M.D., M.S., is an associate professor in the Department of clinical cancer prevention and GI Medical Oncology at The University of Texas MD Anderson Cancer Center.

Dr. Shureiqi's research efforts have been focused on the identification of molecular cellular events that can be targeted to develop new drugs for the prevention and treatment of colon cancer. His research group work has lead to the identification of 15-lipoxygenase-1, an enzyme involved in lipid metabolism and lost in cancer cells, as a potential drug target to reactivate program cell death in cancer cells.

Additionally, the research effort from his group has contributed to the identification of another related gene involved in lipid metabolism, Peroxisome proliferator–activated receptor-delta, as another potential drug target for the treatment and prevention of colon cancer.

A native of Syria, Dr. Shureiqi earned his medical degrees at Damascus University and his master degree in Clinical Trial Design and Statistical Analysis at University of Michigan. He completed an internal medicine internship and residency at New York State University at Buffalo, and a medical oncology fellowship at University of Michigan. He joined The University of Texas MD Anderson Cancer Center in 1999 and he has been a recipient of The University of Texas MD Anderson Cancer Center Physician Scientist Award.

Selected publications:

1. **Shureiqi I,** Wojno KJ, Poore JA, Reddy RG, Moussalli MJ, Spindler SA, Greenson JK, Normolle D, Hasan AA, Lawrence TS, Brenner DE. Decreased 13-S-hydroxyoctadecadienoic acid levels and 15-lipoxygenase-1 expression in human colon cancers. Carcinogenesis 20:1985-1995, 1999.
2. **Shureiqi I,** Chen D, Lee JJ, Yang P, Newman RA, Brenner DE, Lotan R, Fischer SM, Lippman SM. 15-LOX-1: a novel molecular target of nonsteroidal anti-inflammatory drug-induced apoptosis in colorectal cancer cells. J Natl Cancer Inst 92:1136-1142, 2000.
3. **Shureiqi I,** Chen D, Lotan R, Yang P, Newman RA, Fischer SM, Lippman SM. 15-Lipoxygenase-1 mediates nonsteroidal anti-inflammatory drug-induced apoptosis independently of cyclooxygenase-2 in colon cancer cells. Cancer Res 60:6846-6850, 2000.
4. **Shureiqi I,** Lippman SM. Lipoxygenase modulation to reverse carcinogenesis. Cancer Res 61:6307-6312, 2001.
5. **Shureiqi I,** Jiang W, Zuo X, Wu Y, Stimmel JB, Leesnitzer LM, Morris JS, Fan HZ, Fischer SM, Lippman SM. The 15-lipoxygenase-1 product 13-S-hydroxyoctadecadienoic acid down-regulates PPAR-delta to induce apoptosis in colorectal cancer cells. Proc Natl Acad Sci U S A 100:9968-9973, 2003.
6. Zuo X, Shen L, Issa JP, Moy O, Morris JS, Lippman SM, **Shureiqi I.** 15-Lipoxygenase-1 transcriptional silencing by DNA methyltransferase-1 independently of DNA methylation. FASEB J 22:1981-92, 2008.
7. Wu Y, Fang B, Yang XQ, Wang L, Chen D, Krasnykh V, Carter BZ, Morris JS, **Shureiqi I.** Therapeutic Molecular Targeting of 15-Lipoxygenase-1 in Colon Cancer. Mol Ther 16:886-892, 2008.
8. Zuo X, Peng Z, Moussalli MJ, Morris JS, Broaddus RR, Fischer SM, **Shureiqi I.** Targeted genetic disruption of peroxisome proliferator-activated receptor-delta and colonic tumorigenesis. J Natl Cancer Inst 101:762-767, 2009.
9. **Shureiqi I,** Chen D, Day RS, Zuo X, Hochman FL, Ross WA, Cole RA, Moy O, Morris JS, Xiao L, Newman RA, Yang P, Lippman SM. Profiling lipoxygenase metabolism in specific steps of colorectal tumorigenesis. Cancer Prev Res. 3:829-838 2010.

Larkin L. Strong, Ph.D., M.P.H., is an Instructor in the Department of Epidemiology at The University of Texas MD Anderson Cancer Center. Dr. Strong's research interests focus on investigating and addressing cancer-related health disparities, with an emphasis on understanding how social, cultural, and environmental factors influence cancer preventive behaviors such as physical activity in minority populations.

A theme common throughout Dr. Strong's work is recognizing how the contexts in which people live, work, and play influence health and health behaviors. For her doctoral dissertation, Dr. Strong investigated the importance of the occupational and home environments, cultural beliefs, and family characteristics to the adoption of behaviors to reduce pesticide exposure among farmworkers and their families. During her post-doctoral fellowship, having developed an interest in physical activity as an important cancer preventive behavior, Dr. Strong worked with community and academic partners to design, implement, and evaluate a pilot intervention of neighborhood walking groups to promote physical activity and healthy lifestyles among low-income residents of Detroit, MI. Dr. Strong is currently examining relationships between physical activity participation and cultural factors, social support, and characteristics of the neighborhood physical environment among Mexican-American adolescents in Houston, TX

As a graduate student, Dr. Strong was selected as an Environmental Health Promotion Student Fellow by the Society for Public Health Education and was the recipient of a doctoral dissertation grant through the Fahs-Beck Fund for Research and Experimentation.

Dr. Strong completed her graduate work at the University of Washington School of Public Health, earning her doctorate in Health Services in 2006 and a Master of Public Health in social and behavioral sciences in 2002. Prior to coming to MD Anderson in October 2008, Dr. Strong completed a highly competitive postdoctoral fellowship at the University of Michigan with the Kellogg Health Scholars Program, a program that emphasizes skills in community-academic partnering as a meaningful approach for reducing racial, ethnic, and socioeconomic disparities in health.

Selected publications:

1. **Strong LL**, Zimmerman FJ. Occupational injury and absence from work among African American, Hispanic, and non-Hispanic White workers in the national longitudinal survey of youth. Am J Public Health 95(7):1226-32, 7/2005. PMCID: PMC1449344.
2. **Strong LL**, Thompson B, Koepsell TD, Meischke H. Factors associated with pesticide safety practices in farmworkers. Am J Ind Med 51(1):69-81, 1/2008.
3. **Strong LL**, Thompson B, Koepsell TD, Meischke H, Coronado GD. Reducing the take-home pathway of pesticide exposure: behavioral outcomes from the para niños saludables study. J Occup Environ Med 51(8):922-33, 8/2009.
4. **Strong LL**, Starks HE, Meischke H, Thompson B. Perspectives of Mothers in Farmworker Households on Reducing the Take-Home Pathway of Pesticide Exposure. Health Educ Behav 36(5):915-29, 10/2009. e-Pub 1/2009.
5. **Strong LL**, Israel BA, Schulz AJ, Reyes A, Rowe Z, Weir SS, Poe C. Piloting interventions within a community-based participatory research framework: lessons learned from the healthy environments partnership. Prog Community Health Partnersh 3(4):327-34, 2009. PMCID: PMC2820110.
6. Schulz AJ, Israel B, Coombe C, Gaines C, Reyes A, Row Z, Sand SL, **Strong LL**, Weir S. A Community-Based Participatory Planning Process and Multilevel Intervention Design: Toward Eliminating Cardiovascular Health Disparities. Health Promotion Practice. In Press.

Francesco Versace, Ph.D., is an experimental psychologist that currently holds an Instructor position in the Department of Behavioral Science at The University of Texas MD Anderson Cancer Center.

Before joining MD Anderson, Dr. Versace was a post doctoral student at the NIMH Center for the Study of Emotion at Attention at the University of Florida. There, he refined his expertise in affective neuroscience by conducting experiments aimed at studying the interactions between emotional and cognitive processes using functional MRI and high density event-related potentials (ERPs).

His current line of research focuses on the psychophysiology and psychopharmacology of nicotine addiction. In particular, he uses dense sensor array ERPs and fMRI to study the relationships between emotional processes and the maintenance of smoking behavior, cessation, and relapse.

Dr. Versace earned his Ph.D. at the University of Trieste (Italy) where his areas of interest were centered on cognitive psychophysiology, statistics, and research methods in psychology.

In April 2010, Dr. Versace received the first faculty fellowship from The University of Texas MD Anderson Cancer Center Duncan Family Institute for Cancer Prevention and Risk Assessment.

Selected Publications

1. **Versace, F.,** Minnix, J.A., Robinson, J.D., Lam, C.Y., Brown, V.L., & Cinciripini, P.M. (in press) Brain reactivity to emotional and neutral cues in smokers. *Addiction Biology*.
2. Robinson, J.D., Lam, C.Y., Carter, B.L., Minnix, J.A., Cui, Y., **Versace, F.**, Wetter, D.W., & Cinciripini, P.M. (in press). A multimodal approach to assessing the impact of nicotine dependence, nicotine abstinence, and craving on negative affect in smokers. *Experimental and Clinical Psychopharmacology*.
3. Lang, P.J, Wangelin, B.C., Bradley, M.M., **Versace, F.**, Davenport, P.W. & Costa V.D. (in press) Threat of suffocation and defensive reflex activation. *Psychophysiology*.
4. Costa V.D, Lang, P.J., Sabatinelli, D., Bradley, M.M., & **Versace, F.** (in press) Emotional imagery: Assessing pleasure and arousal in the brain's reward circuitry. *Human Brain Mapping*.
5. **Versace, F.**, Bradley, M.M., & Lang, P.J. (2010). Memory and ERPs for rapidly presented emotional pictures. *Experimental Brain Research*, 205(2): 223-233..
6. **Versace, F.**, Robinson, J.D., Lam, C.Y., Minnix, J.A., Brown, V.L., Carter, B.L., Wetter, D.W., & Cinciripini, P.M. (2010) Cigarette cues capture smokers' attention: Evidence from event-related potentials. *Psychophysiology* 47, 435–441
7. Miccoli, L., **Versace, F.**, Koterle, S., & Cavallero, C. (2008) Comparing sleepiness and sleep inertia: lapses make the difference. *Chronobiology International*, 25:725-44.
8. **Versace, F.**, Codispoti, M., & Mazzetti, M. (2008) The temporal stability of the effects induced by the cued reaction time task. *Assessment*, 15, 145-152

Chongjuan Wei, Ph.D., is an Assistant Professor in the department of Epidemiology, Division of Cancer Prevention and Population Sciences at The University of Texas MD Anderson Cancer Center.

Dr. Wei's research involves Peutz-Jeghers syndrome which is an autosomal dominant disorder characterized with gastrointestinal hamartomatous polyps. Patients with PJS have a dramatically increased risk for a variety of cancers. Developing such a mouse model will provide us a great tool to elucidate mechanism of PJS and PJS-associated cancer and interrogate novel experimental therapeutics. During her postdoctoral training, she was awarded an AACR-AFLAC Scholar-in-Training Award based on her observation showing that COX-2 inhibitors such as celecoxib could be a chemo-target for PJS.

Hyperactivation of mTOR has been associated with PJS. Dr. Wei's recent work for the first time demonstrated rapamycin, an mTOR inhibitory drug, effectively suppresses PJS polyposis. These preclinical studies in mouse models represent a new targeted therapy for prevention and treatment of PJS and PJS-associated cancer. Currently, Dr. Wei has been involved in evaluating the novel mTOR inhibitors and identifying the ones with the most effectiveness but fewest side effects on her mouse model. The long term goal of her research is to establish the PJS mouse model as intervention model for identification of effective agents for common cancers with dysregulated mTOR signaling in addition to PJS and PJS-associated cancer.

Dr. Wei received her Ph.D. in Biochemistry and Molecular Biology at the Institute of Microbiology, Chinese Academy of Science in 1999. Right after her graduation, she joined MDACC as a Postdoctoral Fellow, sponsored by "Janis Gordon Memorial Postdoctoral Fellowship", to develop a mouse model for Peutz-Jeghers syndrome.

Selected publications:

1. **Wei C**, Amos CI, Rashid A, Sabripour M, Nations L, McGarrity TJ, Frazier ML. Correlation of staining for LKB1 and COX-2 in hamartomatous polyps and carcinomas from patients with Peutz-Jeghers syndrome. J Histochem Cytochem 51(12):1665-1672, 12/2003. PMID: 14623934
2. Amos CI, Keitheri-Cheteri MB, Sabripour M, **Wei C**, McGarrity TJ, Seldin MF, Nations L, Lynch PM, Fidder HH, Friedman E, Frazier ML. Genotype-phenotype correlations in Peutz-Jeghers syndrome. J Med Genet 41(5):327-333, 2004. PMID: 15121768
3. **Wei C**, Frazier ML. LKB1: a critical mediator in suppressing initiation, differentiation and metastasis in lung cancer. Cell Science Reviews 4(2):40-47, 2007
4. **Wei C**, Amos CI, Zhang N, Wang X, Rashid A, Walker CL, Behringer RR, Frazier ML. Suppression of Peutz-Jeghers polyposis by targeting mammalian target of rapamycin signaling. Clin Cancer Res 14(4):1167-71, 2/2008. PMID: 18281551
5. **Wei C**, Amos CI, Zhang N, Zhu J, Wang X, Frazier ML. Chemopreventive efficacy of rapamycin on Peutz-Jeghers syndrome in a mouse model. Cancer Lett 277(2):149-54, 5/2009. e-Pub 1/2009. PMID: 19147279.

David W. Wetter, Ph.D., joined MD Anderson in 1995 and was appointed as the first Cullen Trust for Health Care Chair in the Department of Health Disparities Research in 2005.

His research is targeted at eliminating disparities in health-related behavior through T2 and T3 translational research. Specific research interests include: theoretical models of cancer and health risk behavior; the epidemiology and public health impact of those behaviors; and the development and evaluation of theoretically-based interventions. Dr. Wetter's theoretical work includes the development and evaluation of a sociocultural and biobehavioral model of addictive and health risk behavior investigating neighborhood- and individual-level social context, affective vulnerability, associations encoded in memory, and acute determinants of relapse vulnerability using implicit and explicit measurements derived from cognitive psychology, as well as ecological momentary assessments. His intervention work focuses on high-risk and underserved populations, including the development and evaluation of palmtop computer-delivered treatments, telephone-based counseling, motivational approaches, and mindfulness-based treatments. He has been conducting research on tobacco and tobacco-related disparities for almost 20 years and has an extensive NIH-funded grant portfolio with more than 100 publications. His research program has received awards from the Society of Behavioral Medicine, the Health Psychology Division of the American Psychological Association, and MD Anderson.

Dr. Wetter's has served as chair of the Community Level Health Promotion study section at NIH, contributed to the 2000 Report of the Surgeon General on Reducing Tobacco Use, chair of the Cancer Forum of the American Public Health Association, been a member of the editorial board for Health Psychology, served as scientific consultant for the Treating Tobacco Use and Dependence Clinical Practice Guideline and the Smoking Cessation Clinical Practice Guideline; and was program chair for two annual meetings of the Society for Research on Nicotine and Tobacco. He has been an invited participant in numerous NIH workgroups and committees. A passionate advocate for students and education, Dr. Wetter has trained 17 postdoctoral fellows since 1995 and was the inaugural winner of the Leading Mentor in Cancer Prevention award, and winner of the Robert M. Chamberlain Distinguished Mentor Award.

Dr. Wetter earned his doctorate in clinical psychology and a master's in epidemiology from the University of Wisconsin – Madison. He has a joint appointment in the Department of Behavioral Science and an adjunct appointment at The University of Texas School of Public Health.

Selected Publications:

1. Castro Y, Reitzel LR, Businelle MS, Kendzor DE, Mazas CA, Li Y, Cofta-Woerpel L, Wetter DW. Acculturation differentially predicts smoking cessation among Latino men and women. Cancer Epidemiol Biomarkers Prev 18(12):3468-75, 12/2009. PMCID: PMC2798575.
2. Reitzel LR, Mazas CA, Cofta-Woerpel L, Vidrine JI, Businelle MS, Kendzor DE, Li Y, Cao Y, Wetter DW. Acculturative and neighborhood influences on subjective social status among Spanish-speaking Latino immigrant smokers. Soc Sci Med 70(5):677-683, 3/2010. e-Pub 1/2010.
3. Kendzor DE, Businelle MS, Costello TJ, Castro Y, Reitzel LR, Cofta-Woerpel LM, Li Y, Mazas CA, Vidrine JI, Cinciripini PM, Greisinger AJ, Wetter DW. Financial strain and smoking cessation among racially/ethnically diverse smokers. Am J Public Health 100(4):702-706, 4/2010. e-Pub 2/2010. PMCID: PMC2836332.
4. Reitzel LR, Vidrine JI, Businelle MS, Kendzor DE, Costello TJ, Li Y, Daza P, Mullen PD, Velasquez MM, Cinciripini PM, Cofta-Woerpel L, Wetter DW. Preventing postpartum smoking relapse among diverse, low income women: A randomized clinical trial. Nicotine Tob Res 12(4):326-35, 4/2010. e-Pub 2/2010. PMCID: PMC2847071.
5. Businelle MS, Kendzor DE, Reitzel LR, Costello TJ, Cofta-Woerpel L, Li Y, Mazas CA, Vidrine JI, Cinciripini PM, Greisinger AJ, Wetter DW. Mechanisms linking socioeconomic status to smoking cessation: A structural equation modeling approach. Health Psychol 29(3):262-273, 5/2010.
6. Vidrine JI, Rabius V, Alford MH, Li Y, Wetter DW. Enhancing dissemination of smoking cessation quitlines through T2 translational research: A unique partnership to address disparities in the delivery of effective cessation treatment. J Public Health Manag Pract 16(4):304-308, Jul-Aug, 7/2010.
7. Reitzel LR, Cromley EK, Li Y, Cao Y, Dela Mater R, Mazas CA, Cofta-Woerpel L, Cinciripini PM, Wetter DW. The effect of tobacco outlet density and proximity on smoking cessation. Am J Public Health. In Press.

Xifeng Wu, M.D., Ph.D., is the Betty B. Marcus Chair in Cancer Prevention in MD Anderson's Department of Epidemiology. She earned her medical degree from Shanghai Medical University in 1984 and her doctorate from The University of Texas School of Public Health in 1994.

Dr. Wu has created an integrative research program that is visionary in concept and revolutionary in approach. The centerpiece of her research is based on a multifaceted, highly interactive and multidisciplinary molecular epidemiology program that bridges field epidemiology, laboratory study and clinical research. Her laboratory has developed or adapted an array of phenotypic and genotypic assays to study inherited susceptibility markers for population studies. The medium-term objective of her research program is to identify and validate genetic biomarkers for cancer risk assessment and for clinical outcome prediction, with the long-term goal of incorporating epidemiological, clinical and genetic information to develop personalized risk prediction models for cancer etiology, prevention, treatment response and clinical outcomes. In her initial demonstration of success, she constructed the first bladder cancer risk prediction model and also showed that incorporating genetic factors may significantly improve prediction efficiency over epidemiologic and clinical variables only.

Dr. Wu is a productive and highly regarded cancer epidemiologist with more than 200 peer-reviewed publications, many of which are in highly acclaimed journals. She is the principal investigator of nine NIH funded R01 or equivalent epidemiological studies with a total budget of approximately $22 million, and is a major collaborator on 10 other projects. Dr. Wu supervises a 40-member research team and serves as mentor or advisor for several junior faculty, pre- and post-doctoral trainees, and clinical fellows, many of whom have been recognized with prestigious awards from inside the institution and from outside sources.

Dr. Wu was previously a recipient of one of the institution's Faculty Scholar Awards. In 2006, she was awarded the prestigious Ashbel Smith Professorship (2006-2011) by The University of Texas system. More recently in 2008, she earned The Margaret and James A. Elkins Jr. Faculty Achievement Award in Cancer Prevention and received the Julie and Ben Rogers Award for Excellence in Research. Nationally and internationally, her prominence is evidenced by invitations to present at many workshops, lectures, seminars, organization events. She has chaired several conference sessions and serves on study sections for NCI, the American Cancer Society, and other national and international organizations. She is an associate editor for several scientific journals.

Selected Publications:

1. **Wu X**, Gu J, Grossman HB, Amos CI, Etzel C, Huang M, Zhang Q, Millikan RE, Lerner S, Dinney CP, Spitz MR. Bladder cancer predisposition: a multigenic approach to DNA-repair and cell-cycle-control genes. Am J Hum Genet. 2006 Mar;78(3):464-79. PubMed PMID: 16465622.
2. **Wu X**, Gu J, Wu TT, Swisher SG, Liao Z, Correa AM, Liu J, Etzel CJ, Amos CI, Huang M, Chiang SS, Milas L, Hittelman WN, Ajani JA. Genetic variations in radiation and chemotherapy drug action pathways predict clinical outcomes in esophageal cancer. J Clin Oncol. 2006 Aug 10;24(23):3789-98. PubMed PMID: 16785472.
3. **Wu X**, Lin J, Grossman HB, Huang M, Gu J, Etzel CJ, Amos CI, Dinney CP, Spitz MR. Projecting individualized probabilities of developing bladder cancer in white individuals. J Clin Oncol. 2007 Nov 1;25(31):4974-81. PubMed PMID: 17971596.
4. Xing J, Chen M, Wood CG, Lin J, Spitz MR, Ma J, Amos CI, Shields PG, Benowitz NL, Gu J, de Andrade M, Swan GE, **Wu X**. Mitochondrial DNA content: its genetic heritability and association with renal cell carcinoma. J Natl Cancer Inst. 2008 Aug 6;100(15):1104-12. PubMed PMID: 18664653.
5. Ye Y, Wang KK, Gu J, Yang H, Lin J, Ajani JA, **Wu X**. Genetic variations in microRNA-related genes are novel susceptibility loci for esophageal cancer risk. Cancer Prev Res (Phila Pa). 2008 Nov;1(6):460-9. PubMed PMID: 19138993.
6. Hildebrandt MA, Yang H, Hung MC, Izzo JG, Huang M, Lin J, Ajani JA, **Wu X**. Genetic variations in the PI3K/PTEN/AKT/mTOR pathway are associated with clinical outcomes in esophageal cancer patients treated with chemoradiotherapy. J Clin Oncol. 2009 Feb 20;27(6):857-71. PubMed PMID: 19164214.
7. Lin J, Kamat A, Gu J, Chen M, Dinney C P, Forman M L, **Wu X**. Dietary Intake of Vegetables, Fruits and the Modification Effects of GSTM1, NAT2 Genotypes on Bladder Cancer Risk. Cancer Epidemiol Biomarkers Prev. In Press.

Xiaochun Xu, M.D., Ph.D., is an Associate Professor working in the Department of Clinical Cancer Prevention at The University of Texas MD Anderson Cancer Center.

The research projects in Dr. Xu's laboratory are involved in Cancer Prevention. The objective of his research is to understand the molecular mechanisms responsible for esophageal carcinogenesis and to develop novel strategies in prevention or treatment of esophageal cancer. His current research focuses primarily upon the investigation of: **1**) the mechanisms underlying retinoic acid receptor-beta (RAR-β) isoforms (i.e., RAR-β_2 and RAR-β_4)-mediated effects on growth and tumorigenesis of esophageal cancer and interaction between RAR-β_2 and RAR-β_4; **2**) the mechanisms responsible for role of retinoid receptor-induced gene-1, RRIG1 in suppressing growth and invasion of esophageal cancer cells; **3**) tobacco carcinogens in esophageal carcinogenesis and biomarker discovery; **4)** expression of microRNAs (miRNA) as biomarkers and their regulation of esophageal cancer cell growth and gene expression; and **5)** discovery of tumor stem cells in esophageal cancer.

Dr. Xu received a medical training in 1982 and pathology training in 1985, both at Anhui Medical University, Hefei, China. After that, Dr. Xu worked as a Teaching Assistant, Lecturer, and Assistant professor in The Department of Pathology of Anhui Medical University between 1985 and 1988. He then went to West Germany and received his Ph.D. degree in 1991 from The University of Göttingen, Göttingen, Germany. From 1992 to 1995, he was a postdoctoral fellow in Department of Tumor Biology at MD Anderson Cancer Center. Afterwards, he worked in the Department of Clinical Cancer Prevention at The University of Texas MD Anderson Cancer Center as an Assistant Professor in 1995 and promoted to an Associate Professor in 2001.

Selected publications:

1. Hoque A, Lippman SM, Wu TT, Xu Y, Liang ZD, Swisher S, Zhang H, Cao L, Ajani JA, **Xu X-C,** Increased 5-lipoxygenase expression and induction of apoptosis by its inhibitors in esophageal cancer: A potential target for prevention. Carcinogenesis, 26: 785-91, 2005.
2. **Xu X-C,** Lee JJ, Wu TT, Hoque A, Ajani JA, Lippman SM. Increased retinoic acid receptor-β_4 correlates in vivo with reduced retinoic acid receptor-β_2 in esophageal squamous cell carcinoma. Cancer Epidemiology Biomarkers and Prevention, 14: 826-9, 2005.
3. Song S, Lippman SM, Zou Y, Ye X, Ajani JA, **Xu X-C**. Induction of cyclooxygenase-2 by benzo[a]pyrene diol epoxide through inhibition of retinoic acid receptor-β_2 expression. Oncogene, 24: 8268-76, 2005.
4. Liang ZD, Lippman SM, Wu TT, Lotan R, **Xu X-C.** RRIG1 mediates effects of retinoic acid receptor-β_2 on tumor cell growth and gene expression through binding to and inhibiting RhoA. Cancer Research, 66: 7111-8, 2006.
5. Jiang Y, Liang ZD, Wu TT, Cao L, Zhang H, **Xu X-C.** ATM expression is associated with tobacco smoke exposure in esophageal cancer tissues and benzo[a]pyrene diol epoxide in cell lines. International Journal of Cancer, 120: 91-95, 2007.
6. Huang J, Liang ZD, Wu TT, Hoque, A., Chen, H., Jiang Y, Zhang H, and **Xu X-C.** Tumor-suppressive effect of retinoid receptor-induced gene-1 (RRIG1) in esophageal cancer. Cancer Research, 67:1589–93, 2007.
7. Hoque A, Chen H, and **Xu X-C**. Statin induction of apoptosis and cell growth arrest through inactivation of RhoA. Cancer Epidemiology Biomarkers and Prevention, 17: 88-94, 2008.
8. Song S, Guan B, Men T, Hoque A, Lotan R, and **Xu X-C**. Antitumor effect of retinoic acid receptor-β_2 associated with suppression of cyclooxygenase-2. Cancer Prevention Research, 2: 274-280, 2009.
9. Hu Y, Correa AM, Hoque A, Guan B, Ye F, Huang J, Swisher SG, Wu TT, Ajani JA, and **Xu X-C.** Prognostic significance of differentially expressed miRNAs in esophageal cancer. International Journal of Cancer, online.
10. Ye F and **Xu X-C.** Benzo[*a*]pyrene diol epoxide suppresses retinoic acid receptor-β_2 expression by recruiting DNA (cytosine-5-)-methyltransferase 3A. Molecular Cancer, 9:93, 2010.

Yuanqing Ye, Ph.D., is an assistant professor at Department of Epidemiology, Division of Cancer Prevention and Population Sciences, The University of Texas MD Anderson Cancer Center.

Dr. Ye has rich knowledge and experiences in multidisciplinary areas including mathematics, computer science, statistics, genetics, and epidemiology. Dr. Ye's research interests are developing and applying novel statistical methods for medical research, especially genetic association studies and recursive partitioning based methods to deal with high dimension data. Dr. Ye is the key statistician for several GWAS studies and collaborations.

Dr. Ye has earned numerous awards including the AACR-AFLAC, Incorporated Scholar-in-Training Award and the Berlex Oncology Award in Patient-Oriented Research Poster Winner. He also gained the Janice David Gordon Memorial Fellowship through national competition for the proposed project to study the association of genetic variations and risk of renal cell carcinoma.

Dr. Ye graduated from North Carolina State University with Ph.D. in Mathematics in 2002. He completed a post-doctoral training in biostatistics at Yale University and in genetics and epidemiology at MD Anderson.

Selected publications:

1. **Ye Y**, Lippman SM, Lee JJ, Chen M, Frazier ML, Spitz MR, Wu X. Genetic variations in cell-cycle pathway and the risk of oral premalignant lesions. Cancer, 9/2008. PMID: 18823025.
2. **Ye Y**, Yang H, Grossman HB, Dinney C, Wu X, Gu J. Genetic variants in cell cycle control pathway confer susceptibility to bladder cancer. Cancer 112(11):2467-74, 6/2008. PMID: 18361427.
3. **Ye Y**, Wang KK,Gu J, Yang H,Lin J, Ajani JA and Wu X. Genetic Variations in MicroRNA-Related Genes Are Novel Susceptibility Loci for Esophageal Cancer Risk. Cancer Prev Res (Phila Pa) 1(6):460-9, 11/2008. PMID: 19138993.
4. Chen M*, **Ye Y***, Yang H, Tamboli P, Matin S, Tannir NM, Wood CG, Gu J, Wu X. Genome-wide profiling of chromosomal alterations in renal cell carcinoma using high-density single nucleotide polymorphism arrays. Int J Cancer 125(10):2342-8, 11/2009. e-Pub 6/2009. PMCID: PMC2768265. *co-first author
5. Wu X, Spitz MR, Lee JJ, Lippman SM, **Ye Y**, Yang H, Khuri FR, Kim E, Gu J, Lotan R, Hong WK. Novel susceptibility loci for second primary tumors/recurrence in head and neck cancer patients: large-scale evaluation of genetic variants. Cancer Prev Res (Phila Pa) 2(7):617-24, 7/2009. PMID: 19584075.
6. Wu X, **Ye Y**, Kiemeney LA, Sulem P, Rafnar T, Matullo G, Seminara D, Yoshida T, Saeki N, Andrew AS, Dinney CP, Czerniak B, Zhang ZF, Kiltie AE, Bishop DT, Vineis P, Porru S, Buntinx F, Kellen E, Zeegers MP, Kumar R, Rudnai P, Gurzau E, Koppova K, Mayordomo JI, Sanchez M, Saez B, Lindblom A, de Verdier P, Steineck G, Mills GB, Schned A, Guarrera S, Polidoro S, Chang SC, Lin J, Chang DW, Hale KS, Majewski T, Grossman HB, Thorlacius S, Thorsteinsdottir U, Aben KK, Witjes JA, Stefansson K, Amos CI, Karagas MR, Gu J. Genetic variation in the prostate stem cell antigen gene PSCA confers susceptibility to urinary bladder cancer. Nat Genet 41(9):991-5, 9/2009. e-Pub 8/2009. PMID: 19648920.
7. Li Y*, Sheu CC*, **Ye Y***, de Andrade M*, Wang L*, Chang SC*, Aubry MC, Aakre JA, Allen MS, Chen F, Cunningham JM, Deschamps C, Jiang R, Lin J, Marks RS, Pankratz VS, Su L, Li Y, Sun Z, Tang H, Vasmatzis G, Harris CC, Spitz MR, Jen J, Wang R, Zhang ZF, Christiani DC, Wu X, Yang P. Genetic variants and risk of lung cancer in never smokers: a genome-wide association study. Lancet Oncol 11(4):321-30, 4/2010. e-Pub 3/2010. PMID: 20304703. *co-first author

Jennifer H. Tektiridis, MS, CPA, is the executive director for research planning and development in the Division of Cancer Prevention and Population Sciences. She is responsible for developing and overseeing new divisional initiatives, including the Duncan Family Institute for Cancer Prevention and Risk Assessment.

Prior to her current role, Ms. Tektiridis was the administrative leader for the Cancer Center Support Grant, which funds 19 research programs and 24 core laboratory resources at MD Anderson. This grant was recently renewed with a 15 percent increase, for a five-year total of more than $52.7 million, following an "Outstanding" peer review rating. She was recognized as a Rogers Award nominee for her contributions.

Ms. Tektiridis joined MD Anderson in 2002 as the first executive director for the Gulf Coast Consortia, responsible for developing and administering this six-institution collaborative's interdisciplinary bioscience research and training programs.

Prior to joining MD Anderson, she held various executive leadership positions with responsibility for business operations, information technology and quality management functions in several organizations, including a laboratory supplies distributor and a retail energy start-up. She spent several years with a major consulting firm, providing process and IT planning and implementation expertise to companies in consumer and commercial service industries.

Ms. Tektiridis is a member of the Cancer Center Administrator's Forum and served on the Alliance for Dedicated Cancer Centers Research Committee. She has a bachelor's of science degree in Geology and Spanish from Dickinson College, a master's of science in management and is a certified public accountant in the State of Texas. She is currently enrolled in the Ph.D. in Health Management program at the UT School of Public Health.