American Cancer Society Awards New Research and Training Grants

Largest non-government, not-for-profit funding source of cancer research in the United States, has awarded 94 grants totaling $46.6 million in first of two grants cycles for 2011

ATLANTA—October 6, 2010 – The American Cancer Society, the largest non-government, not-for-profit funding source of cancer research in the United States, has awarded 94 national research and training grants totaling $46,633,000 to 70 institutions nationwide in the first of two grants cycles for 2011. The grants go into effect beginning January 1, 2011. Among the grants are two American Cancer Society Research Professors: Iswar K. Hariharan, MD, PhD, of University of California, Berkeley,and Helen Piwnica-Worms, PhD, of Washington University, St. Louis. In addition, one special funded Research Professorship in the area of thyroid cancer was awarded to Herbert Chen, MD, of University of Wisconsin, Madison.

For more than 60 years, the American Cancer Society has funded research and training of health professionals to investigate the causes, prevention, and early detection of cancer, as well as new treatments, cancer survivorship, and end of life support for patients and their families. Since its founding in 1946, the American Cancer Society's extramural research grants program has devoted more than $3.5 billion to cancer research and has funded 44 researchers who have gone on to win the Nobel Prize.

Below are highlights of new grants.

Cancer Causes

Iswar Hariharan, University of California, Berkeley, will use fruit flies to identify and characterize the genes that regulate growth, including regeneration. They plan to use a genetic approach to devise ways by which excessive tissue growth can be curtailed by manipulating cell metabolism.

Michael Feigin, Cold Spring Harbor Laboratory, will build upon the clinical observation that premalignant lesions display drastic changes in cell shape and tissue architecture, and investigate the molecular mechanisms by which these shape changes are induced. By the end of the fellowship period he anticipates discovering novel avenues for therapeutic intervention into early stage breast cancers, with the ultimate goal of eliminating invasive and metastatic progression.

Kevin A. Janes, PhD, University of Virginia, will take a closer look at cancer "mosaics," differences in behavior that indicate which cells within a tumor are dividing uncontrollably, while others are dying, and still others are progressing toward metastasis. Dr. Janes and colleagues hope to measure the extent to which certain genes are expressed in individual cells of a tumor to "see" the cancer mosaic. With that information, researchers could begin thinking about new ways to specifically eradicate the cancer cells that are most deadly to patients.

Tomasz Cierpicki, PhD, University of Michigan, will investigate menin, a tumor suppressor that directly

controls cell growth in endocrine organs, including parathyroid, pancreatic islets, and the pituitary gland. Mutations in the menin gene occur in about one in 30,000 individuals, more than 95 % of whom develop tumors of the endocrine glands by the fifth decade of life. The long term goal of the work is to pave the way towards development of novel drugs which could reverse its cancer-promoting effects.

Alexander Deiters, PhD, North Carolina State University, will investigate microRNAs, which are produced in every human cell and have been found to regulate thousands of genes. Misregulation of microRNAs has been linked to several cancers, including brain, breast, colon, liver, and lung cancer. The researchers hope to discover small molecule modulators of microRNA function, which could eventually lead to novel drugs.

Cancer Treatment

Yongcheng Song, PhD, Baylor College of Medicine is developing drug candidates to target an enzyme important for the growth of a form of leukemia that occurs in infants (MLL).

Dan Duda, DMD, PhD, Massachusetts General Hospital has proposed the development of a novel drug candidate that might prevent the spread of prostate cancer cells to the bone, common in late stage prostate cancer.

Scott Stuart, PhD, University of Colorado, working in the laboratory of Natalie Ahn, PhD, will evaluate a potential combination treatment of two promising drug candidates for melanoma patients.

Peter Park, MD, PhD, Sloan-Kettering Institute for Cancer Research, a postdoctoral fellow working in the laboratory of Samuel Danishefsky, PhD is helping develop a drug candidate that was originally isolated from Caribbean coral reefs that has shown promise against lung and breast cancer. Dr. Park hopes to find a way to synthesize the drug, called providencin, in sufficient quantity to do preclinical testing prior to evaluation of treatment in cancer patients.

Joseph Kim, MD, Beckman Research Institute of the City of Hope, will investigate the role of chemokines and their corresponding cell surface receptors in pancreatic cancer. Dr. Kim's group has discovered that chemokine CXCL12 may play a critical role in promoting the transformation from normal pancreas to pancreatic intraepithelial neoplasia (PanIN), the precursor lesion to invasive pancreatic cancer. The project will improve our understanding of how pancreatic cancer develops and also provide the rationale to formulate new therapeutic agents to target CXCL12 in order to prevent or treat patients with pancreatic cancer.

Detection and Prevention

Grace Chen, MD, PhD, University of Michigan will study the immune system's role in the association between chronic inflammatory bowel disease and the development of colon cancer. Dr. Chen has shown that a bacteria occurring normally in the gut inhibits growth of colon tumors. In this study, she will determine whether changes in diet or the addition of chemopreventive agents could increase this response.

Shahab Asgharzadeh, MD, The Children's Hospital of Los Angeles is developing gene expression tools in the hopes of leading to a diagnostic test the determine which children suffering from brain tumors can be cured with chemotherapy alone, sparing them from radiation treatment that can do permanent damage.

Palliative Care and Psychosocial/Behavioral Research

Barbara A. Hastie, PhD, University of Florida, will study pain in patients undergoing thoracic surgery for lung cancer, with the goal of developing a predictive model of who is at higher risk for acute pain or chronic pain after surgery for lung cancer.

Lara N. Traeger, PhD, Massachusetts General Hospital, will work to identify factors that impede treatment of depression in older lung cancer patients, with a focus on patients' perspectives.

Jessica Gorman, PhD, MPH University of California, San Diego, will develop a tool to accurately measure the fertility concerns and reproductive outcomes of young female cancer patients ages 16 to 30. This information will be used to develop a culturally appropriate reproductive questionnaire, including a specific set of questions to measure fertility concerns.

Clement K. Gwede, PhD, MPH, Moffitt Cancer Center, will investigate whether a culturally targeted "photo novella" his team has developed works better than a standard brochure to improve use of colorectal cancer screening tests in an ethically diverse black population.

Catherine Cubbin, PhD, University of Texas, is heading a study that will address gaps in information on how neighborhood environments influence obesity and smoking among women and their young children.

Heather M. Conklin, PhD, St. Jude Children's Research Hospital, will investigate the benefits of a working memory intervention in a sample of childhood cancer survivors and look at brain-based changes that may occur as the result of working memory intervention.

Christopher P. Fagundes, MS, Ohio State University, will investigate which psychosocial factors contribute to elevated inflammation, and possibly worse outcomes among breast cancer survivors.

Health Policy and Health Services Research

David S. Zingmond, MD, PhD, University of California, Los Angeles, will lead an in-depth population-based evaluation of the treatment of six cancers to evaluate the surgical care of the poor and underserved and to investigate potential improvements deriving from an expansion of Medicaid.

Christopher Carpenter, PhD, University of California, Irvine, will examine whether state laws requiring women to obtain referrals before obtaining a mammography benefits result in smaller increases in mammography use compared to states with laws without such requirements.

Melissa Millerick-May, PhD, Michigan State University, will investigate workers in three areas, an automotive foundry, chromium smelter workers, and dye manufacturing to determine if there is an increased risk for developing cancer in these occupations.

Jeanene A. Smith, MD, MPH, Oregon Health Policy and Research, will lead the first-ever randomized trial to assess the role of health insurance in improving outcomes in cancer prevention, detection, and treatment. The study will compare those with Medicaid benefits in Oregon and compare them with a waitlist of individuals hoping for entry into this program.

The American Cancer Society's research and training program emphasizes investigator-initiated, peer-reviewed proposals, and has supported groundbreaking research that has led to critical discoveries leading to a better understanding of cancer and cancer treatment. Grant applications are ranked on the basis of merit by one of several discipline-specific Peer Review Committees, each of which includes 12 to 25 scientific advisors or expert reviewers. The Council for Extramural Grants, a committee of senior scientists, recommends funding based on the relative merit of the applications, the amount of available funds, and the Society's objectives. No member of the American Cancer Society's Board of Directors or National Assembly may serve on a Peer Review Committee or as a voting member on the Council for Extramural Grants.

The Council for Extramural Grants also approved 93 research grant applications that could not be funded due to budgetary constraints. These "pay-if" grants represent work that passed the Society's multi-disciplinary review process but go beyond the Society's current funding resources, and which will be funded of additional monies become available. These grants serve as an important reminder that there continues to be promising research we would like to fund but cannot with our current resources.

About the American Cancer Society

The American Cancer Society combines an unyielding passion with nearly a century of experience to save lives and end suffering from cancer. As a global grassroots force of more than three million volunteers, we fight for every birthday threatened by every cancer in every community. We save lives by helping people stay well by preventing cancer or detecting it early; helping people get well by being there for them during and after a cancer diagnosis; by finding cures through investment in groundbreaking discovery; and by fighting back by rallying lawmakers to pass laws to defeat cancer and by rallying communities worldwide to join the fight. As the nation's largest non-governmental investor in cancer research, contributing about $3.4 billion, we turn what we know about cancer into what we do. As a result, more than 11 million people in America who have had cancer and countless more who have avoided it will be celebrating birthdays this year. To learn more about us or to get help, call us any time, day or night, at 1-800-227-2345 or visit cancer.org.

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