American Cancer Society Awards 152 New Research and Training Grants

ATLANTA—May 17, 2010 – The American Cancer Society, the largest non-government, not-for-profit funding source of cancer research in the United States, has awarded 152 new national research and training grants totaling $50,717,000 in the first of two grants cycles for 2010. The grants, primarily to early career researchers, cover a broad range of investigator-initiated ideas at 93 institutions nationwide, from whether cadmium exposure increases the risk of endometrial cancer, to studies of plant and bacterial-bourne compounds, to a study on a protein called survivin that could lead to novel drugs targeting prostate cancer.

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 about $3.4 billion to cancer research. It has funded 44 researchers who have gone on to win the Nobel Prize.

Below are highlights of new grants.

Cancer Causes

- Dr. Yana Zavros at the University of Cincinnati is studying how chronic infection with the bacterium Helicobacter pylori (H. pylori) causes gastric cancer, which in the U.S. strikes 20,000 people per year and causes 10,000 deaths. Worldwide stomach cancer is the second leading cause of cancer death. Dr. Zavros is studying the biological changes to the cells lining the stomach to better understand how these changes promote tumor initiation and growth.
- Dr. Wendy Rathmell at the University of North Carolina has detected a novel protein, Ror2 which is abundant in renal cell tumors, particularly those with a very poor prognosis. She will study how Ror2 and one other gene interact to cause kidney cancer, which should give important new insights about the disease, and provide the basis for the development of new treatment options.
- Dr. Mikhail Kolinin of the University of Texas Health Sciences Center in Houston is studying the association of obesity and cancer. In his studies, he is investigating how adipose tissue might promote tumor growth, perhaps providing avenues for new drug development or even to prevent cancer progression.
- Kimberley Evason, PhD, at the University of California at San Francisco is seeking to better understand the mechanisms involved in Hepatic Stellate Cells (HSC) development, and learn more precisely how these cells affect the behavior of liver cancer. These studies will improve the understanding of how liver cancer is initiated, grows, and metastasizes and in the long term may suggest ways in which HSCs could be targeted in humans to prevent or treat liver cancer.
- Sharon DeMorrow, PhD at Texas A&M University will test the idea that serotonin and dopamine help bile duct cancer cells migrate and invade other tissues, in hopes of identifying targets for the development of new treatment options for this devastating cancer.
- Dr. Emmanuel Skordalakes at the Wistar Institute is studying the role of telomerase in maintaining telomere length and thus preventing cell senescence. Determining the structure of telomerase will allow the design of therapies to inactivate this enzyme in cancers and prevent the immortalization that tumor cells have developed.

Cancer Prevention

- Jane McElroy, PhD of the University of Missouri, Columbia is studying the risk of endometrial

cancer as it relates to cadmium body burden levels, as measured by the amount of cadmium in urine. Her study seeks to investigate cadmium exposure and endometrial cancer risk in a population-based case-control study.

- Dorothy Apollonio, PhD, at the University of California at San Francisco is investigating how emerging research can be translated effectively to community decision-makers so that effective tobacco control polices can be created for marginalized populations, such as those with mental illness and/or substance abuse problems.
- Cheryl Holt, PhD at the University of Maryland is investigating whether framing cancer educational materials in a spiritual context will help increase informed decision making for prostate cancer testing among men in African American churches.
- Doctoral student Sarah Bollinger, MSW, in The Brown School of Social Work at Washington University will investigate recently identified links between the triple negative breast cancer subtype and psychosocial factors (including neighborhood violence, history of abuse, isolation, and depression) in the most frequently affected group: young, African American females.

Cancer Treatment

- Dr. Heidi Imker working at Harvard University is focused on a class of natural chemicals called syrbactins, originally isolated from a bacterial plant pathogen. Syrbactins have been shown to have antitumor activity and to inhibit a cellular system involved in cancer. Dr. Imker has developed a method for biosynthesis of syrbactins and a series of related compounds for testing in the laboratory and in animals as a prelude to human trials.
- Dr. Robert Huigens working at the University of Illinois is attempting to make the natural product, Englerin A, which was isolated in tiny quantities from a plant in Africa. Englerin A has generated excitement for showing highly potent and selective activity for elimination of renal cancer cells, a tumor that occurs in more than 50,000 people in the U.S. each year, and for which there are only a limited number of therapeutic options.
- Dr. Jonathan Brody at Thomas Jefferson University has made an important observation that the amount of a particular protein, HuR, correlates very well with the therapeutic benefit of gemcitabine, one of the few drugs showing any benefit in pancreatic cancer. Dr. Brody proposes to utilize an exciting nanotechnology approach to increase the levels of HuR in all patients to potentially enhance the therapeutic benefit of gemcitabine for a wider range of patients.
- Dr. Deric Wheeler at the University of Wisconsin discovered that colorectal as well as head and neck cancer cells that have become resistant to the drug Cetuximab show a unique property: the protein targeted by the drug, normally on the cell surface, has ‘hidden out’ in the nucleus of the tumor cell. He has also identified an enzyme involved in the change, and a drug that can prevent it. The finding has the potential to result in rapid patient benefit to restore the use of this class of drugs in colorectal and head and neck cancer patients.
- Shailaja Kesaraju, PhD, at Florida Atlantic University is studying the role of mitochondrial function in selective killing of tumor cells by sulindac and DCA. Understanding how the substances kill cancer cells may lead to a more potent combination of drugs.
- Ken Anderson, MD, PhD, at the Dana-Farber Cancer Institute is seeking to incorporate combined novel therapies into the initial treatment strategy for patients with Multiple Myeloma. Genetic analyses will allow the development and validation of the next generation of targeted therapies for clinical evaluation to further improve patient outcome.
- Daqing Wu, PhD at Emory Universitv will study the crucial role of the protein survivin and the molecular mechanism for regulation of survivin expression in invasive prostate cancer cells. Results should provide a firm basis for the rational design of novel drugs specifically targeting prostate cancer bone metastasis.
- Dr. David M. Weinstock at the Dana Farber Cancer Institute will identify genes with abnormal DNA involved in blood cancers (leukemia, lymphoma, multiple myeloma and others). Some of the abnormalities discovered can be targeted with specific drugs and thereby provide more specific and effective chemotherapies.

Cancer Survivorship and End of Life

- Maureen Lyon, PhD at the Children's Hospital National Medical Center will investigate when is the best time to have conversations with teenagers diagnosed with terminal cancer regarding psychological health, quality of life, and plans and actions. The findings have the direct potential to strengthen family relationships and communication, a critical aspect of quality of life and quality of care, and to become a national model for how to have these difficult conversations.
- Linda Emanuel, MD PhD of Northwestern University will study whether an intervention can improve the treatment of cancer pain for the more than a half a million cancer-related visits to emergency departments (EDs) each year. Although tested protocols exist, few EDs use them and patients remain in needless pain. The researchers propose to design and test an intervention for rapid-relief pain management in all EDs.
- Amy Davidoff, PhD at the University of Maryland, Baltimore will study the effect of supplemental medical and prescription drug coverage on treatment choices and costs of cancer therapy. This study will provide critical information on the relationship between supplemental medical, prescription drug insurance (e.g. Medicare Part D), cancer treatment and financial burden among Medicare beneficiaries.
- John D. Merriman, MS, at the University of California, San Francisco, will conduct research to determine if some cancer patients are at greater risk for “attentional fatigue,” a decrease in the ability to concentrate for a sustained period of time, as a result of their diagnosis. Mr. Merriman hopes to learn whether certain genes are associated with this symptom, leading to the development of screening tests to predict who will be afflicted and therapies to lessen the severity of the fatigue.

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 101 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 if 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.