American Cancer Society Awards New Research and Training Grants

ATLANTA—April 4, 2011– The American Cancer Society, the largest non-government, not-for-profit funding source of cancer research in the United States, has awarded 132 national research and training grants totaling $51,473,000 to 85 institutions nationwide in the second of two grants cycles for 2011. The grants go into effect beginning July 1, 2011; 118 are new grants and 14 are renewals of previous grants.

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

- **Anny Shai from the University of California-San Francisco** will study the connections in lung cancer cells between two oncogenes (cancer-causing genes) and the ability of tumors to stimulate new blood vessel formation (angiogenesis). She and her colleagues will investigate whether the oncogenes are associated with novel forms of angiogenesis with the goal of providing information valuable in designing new, targeted therapeutics.
- **Erik Kline of Emory University** will focus on the molecular steps that lead tumor cells to metastasize, with the goal of identifying subsets of lung cancer patients with a mutation that can be targeted for anti-metastatic drug therapies.
- **Sheila Stewart from Washington University in St Louis** will investigate the relationship between mutations in cancer cells and non-mutational changes in the surrounding noncancerous cells, called the stroma. She will analyze how stroma contributes to tumor development and tumor progression. Unlike cancer cells, stromal cells are genetically normal and much less likely to develop drug resistance.
- **Jeremy Nance of the New York University School of Medicine** will study how epithelial cells, the root of most of the common and deadly cancers, make connections (junctions) with one another and keep one another from dividing uncontrollably and from invading other areas as a basis for new treatment approaches.

Cancer Treatment

- **Arden M. Morris, MD, MPH of the University of Michigan** will investigate how the patient–provider relationship, specifically trust and communication, influences the use of chemotherapy among a diverse population-based sample of 1000 recently diagnosed colorectal cancer patients in Detroit and Atlanta cancer registries.
- **Edith Crumb, MS at the University of Louisville Kent School of Social Work** will explore the psychosocial needs of siblings of pediatric cancer patients and children who have lost a sibling to cancer, and developing interventions to meet those needs. Each year approximately 18,000 children learn that their brother or sister has been diagnosed with cancer.

Detection and Prevention

- **Jesse Nodora, Dr.PH of the University of Arizona** will use patient navigation, including health literacy

education, to facilitate follow up care and increase the number of women with timely diagnosis and initiation of treatment for cervical dysplasia or cervical cancer in a medically underserved community health center population.

Preclinical and Translational Research

- **Jin Xu, PhD** working in the laboratory of American Cancer Society Research Professor, Kevin Shannon, MD at th**e University of California at San Francisco** is working to understand why changes to a gene called N-RAS can cause leukemia while other members of the RAS family of genes cannot. For unclear reasons, leukemia mutations in the RAS gene family preferentially occur in the N-RAS member. A better understanding of what causes leukemia in children and adults will lead to improvements in detection and treatment.
- **Daniel Costa, MD, PhD at Beth Israel Deaconess Hospital** is analyzing lung cancer patient tumors that develop drug resistance to identify mutations that arise during therapy. The characterization of such mutations will guide second generation drug development.
- **Ramanuj Dasgupta, PhD at New York University School of Medicine**, and **Naoaki Fujii, PhD at St. Jude Children's Research Hospital** are developing inhibitors as drug candidates by focusing on different parts of the WNT pathway, aberrations in which are associated with a wide range of tumor types including liver, colon, breast, pancreas, bone, lung, and skin, and often with poor prognosis. For example, it is estimated that more than 80% of colon cancers are driven by mutations in this pathway.
- **Mark Chiang, MD, PhD at the University of Michigan** is focused on inhibitors of two genes, NOTCH and TLX1 both of which are found at much higher levels in acute lymphocytic leukemia (ALL). They will test novel drug combinations in a unique mouse model in which they can readily turn on and off some of the genes which allow ALL to develop.

Clinical Cancer Research and Immunology

- **Gang Chen of the University of Kentucky** will study how arsenic induces cell transformation leading to cancer. The outcomes of this study will provide valuable information for prevention and treatment of cancers caused by arsenic exposure.
- **Patrick Brown of Johns Hopkins University** will test whether new drugs lead to new, more effective treatments for children with leukemia caused by a mutation in a specific gene called MLL.
- **Fiona Simpkins of the University of Miami** is studying how to reverse the resistance to drugs targeting estrogen resistant cancers and use combination therapies to prevent anti-estrogen resistance or treat anti-estrogen resistance ovarian cancer.

Cancer Survivorship

- **Jessica Keim, MSN, at the University of Virginia** will study the experience of young women cancer survivors by analyzing their online postings and connections, e.g., on social networking sites. She will use this information to understand how young women cancer survivors describe their overall experience with cancer, understand barriers that exist in accessing the healthcare system as a survivor, and the physical, emotional, and psychological impacts of the disease during treatment and beyond into extended survivorship.
- **Emily Tonorezos, MD MPH at Memorial Sloan-Kettering Cancer Center** receives a career development award that will give her the time and the tools to investigate diet and insulin resistance in survivors of childhood cancer. Eventually, this work may lead to specific dietary recommendations for cancer survivors that will have a major impact on improving their health and longevity.
- **Dr. Elizabeth Kvale, at the University of Alabama at Birmingham** will lead a project to evaluate an intervention designed to empower and activate cancer survivors to self-manage their cancer survivorship.

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 82 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. For more information about the American Cancer Society Research Program, please visit http://www.cancer.org/research.