

American Cancer Society Awards 82 New Research and Training Grants Totaling \$47.4 Million

Nation's largest non-government, not-for-profit funder of cancer research announces awards at 59 institutions

ATLANTA, Nov. 17, 2021 /PRNewswire/ -- The American Cancer Society, the largest non-government, not-for-profit funding source of cancer research in the United States, has approved funding for 82 research and training grants totaling \$47.4 million. The grants will fund investigators at 59 institutions across the United States and include 67 new grants and 15 renewals of previous grants. All the grants were funded in 2021.

The grants include the renewal of one Research Professorship to Anil K. Sood, MD, of the University of Texas M.D. Anderson Cancer Center. The Research Professorship is a lifelong designation accompanied by a five-year \$400,000 commitment and is the most prestigious research grant made by the program.

"We are excited to support innovative research poised to contribute to advancing efforts to prevent, find, treat, and improve the quality of life for cancer survivors," said Ellie Daniels, MD, MPH, American Cancer Society Senior Vice President of Extramural Discovery Science. "Workforce diversity and inclusion and health equity are also foundational to our funded research."

The American Cancer Society seeks to improve the lives of cancer patients, families and caregivers through research, patient services, and advocacy. To maximize our impact, ACS has established six priority research areas to advance our mission: Etiology or causes of cancer, obesity/healthy eating and active living, diagnosis and screening, treatment, survivorship, and health equity across the continuum. These topics will require fundamental, preclinical, clinical and implementation research as well as multidisciplinary research teams to tackle the complexities of cancers and cancer care.

Requiring alignment of Extramural Discovery Science grant applications with identified high-potential areas for significantly reducing the burdens of cancer in the US is critical at this time. The number of research priorities are relatively few, yet these topics cast a wide net spanning the full cancer research continuum and requiring multidisciplinary teams to tackle the complexities of cancer.

Highlights from each of the focus areas of funding in the current grant cycle include:

CAUSE & ETIOLOGY

Paula D. Bos, PhD
Virginia Commonwealth University
Regulation of Breast Cancer progression by Treg Cells
Research Scholar Grant

In order to design better immunotherapies that improve survival, we need to understand how immune cells behave in the tumor environment. The main goal of Dr. Bos's grant is to investigate the interactions between regulatory T cells and myeloid cells, two prominent immune cell populations in breast tumors. Understanding these interactions will provide important information for the design of new cancer therapies.

OBESITY/HEALTHY EATING & ACTIVE LIVING

Marjan Rafat, PhD
Vanderbilt University
Examining Obesity-Associated Inflammation in Breast Cancer Recurrence
Research Scholar Grant

Radiation therapy is crucial to many breast cancer patients because it is employed to eliminate any tumor cells remaining after surgery and chemotherapy. However, studies show that the relapse rate for patients after this treatment can be as high as 20%, and obesity leads to higher levels of recurrence. Dr. Rafat will study tissue properties after radiation to understand why irradiated tissues recruit tumor cells and how obesity affects the

immune microenvironment following radiotherapy.

SCREENING & DIAGNOSIS

Irene Georgakoudi, PhD

Tufts University

Label-free, Multi-scale Imaging for Improved Detection of Peritoneal Metastasis

Mission Boost Grant

The paradigm for detecting many cancers relies on visualizing the surface of an organ or a cavity by illuminating it and then collecting the reflected light to identify subtle changes from the patterns that are expected in healthy tissues. Dr. Georgakoudi's objective is to change this paradigm by bringing the microscope to the patient to enable non-invasive or minimally invasive visualization of the human tissues with high-resolution and without the need to take a biopsy. Two-photon microscopy has the potential to generate images that reveal exquisite morphological details of the cells and the fibrous tissues in three-dimensions, yielding information about appearance, organization, and function, and can help in cancer diagnosis.

TREATMENT

Hanlee Ji, MD

Stanford University, Stanford CA

Novel Immunotherapeutic Targets in the Gastric Tumor Microenvironment

Mission Boost Grant

Gastric cancer that has metastasized has few effective treatments. Dr. Li's team has analyzed the composition of immune cells surrounding gastric cancer, referred to as the tumor microenvironment, and identified two protein receptors that are expressed in these cells: GITR and TIGIT. Using an innovative experimental system, they will examine the effects of targeting these proteins to develop a new immunotherapy strategy for gastric cancer.

SURVIVORSHIP

Eric S. Zhou, PhD

Dana-Farber Cancer Institute

Development of a Novel Insomnia Treatment for Pediatric Cancer Patients

Clinician Scientist Development Grant

Insomnia is often assumed by families and oncologists to be an expected challenge in the course of treatment that will resolve with time, but these sleep problems often persist and are associated with significant physical and psychological health consequences. There are no FDA-approved pharmacological treatments for pediatric insomnia, and over-the-counter treatments can be risky because of a lack of research data demonstrating their effectiveness and their long-term safety. Behavioral insomnia treatments are a proven approach for healthy children, but there has never been a research study conducted to examine if a comprehensive behavioral insomnia treatment approach can be effective for pediatric cancer patients. Findings from this study can have a dramatic impact on improving the health outcomes and quality of life for pediatric cancer patients and their families.

HEALTH EQUITY ACROSS THE CANCER CONTINUUM

Kathleen J. Porter, PhD

The Rector and Visitors of the University of Virginia

weSurvive: Improving Quality of Life and Health Behaviors of Rural Cancer Survivors

Research Scholar Grant

Rural Appalachia is disproportionately impacted by cancer. While there are growing efforts related to early detection and prevention, there are no known evidence-based programs for cancer survivors implemented in the region, and existing programs do not meet the region's unique needs. To meet this need, Dr. Porter worked with an advisory team of local stakeholders to develop weSurvive, a multi-modal behavioral intervention designed to improve the quality of life of cancer survivors by addressing multiple behaviors (e.g., dietary behaviors, physical

activity, tobacco cessation) associated with better survivorship outcomes.

The American Cancer Society Extramural Research program currently supports research and training in a wide range of cancer-related disciplines at 185 institutions. With an investment of more than \$5 billion since 1946, ACS is the largest private, not-for-profit source of cancer research funds in the U.S., and has funded 49 researchers who have gone on to be awarded the Nobel Prize. The program primarily funds early career investigators, giving the best and the brightest a chance to explore cutting-edge ideas at a time when they might not find funding elsewhere.

The Council for Extramural Research also approved 47 grant applications totaling \$25,607,100 that could not be funded due to budgetary constraints. These "Pay-If" applications represent work that passed the Society's multi-disciplinary review process but are beyond the Society's current funding resources. They can be and often are subsidized by donors who wish to support research that would not otherwise be funded.

SOURCE American Cancer Society

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