Stand Up To Cancer and Cancer Research Institute Announce New Immunology Translational Research Dream Team

AACR

$10 Million Grant Over Three Years Will Fund Research Focusing on the Immunological Treatment, Control and Prevention of Cancer.
SU2C Donor, the Entrepreneur and Philanthropist Sean Parker, Contributed to Support the Immunology Dream Team.

PHILADELPHIA — Stand Up To Cancer (SU2C) and the Cancer Research Institute (CRI) announce the formation of a Dream Team project dedicated to cancer immunology — “Immunologic Checkpoint Blockade and Adoptive Cell Transfer in Cancer Therapy.” Cancer immunology is a field of research that explores the complex relationship between cancer and the immune system, with the goal of discovering immune-based solutions to curing cancer.

The SU2C-CRI Cancer Immunology Translational Research Dream Team will receive $10 million in funding over three years for this translational cancer research project that will unite laboratory and clinical efforts leading to the immunological treatment, control and prevention of cancer.

The team will be led by James P. Allison, Ph.D., and Antoni Ribas, M.D., Ph.D. Allison is chairman of the department of immunology, director of the immunotherapy platform and co-director of the David H. Koch Center for Applied Research of Genitourinary Cancers at The University of Texas MD Anderson Cancer Center. Ribas is professor of medicine, surgery and molecular and medical pharmacology, director of the tumor immunology program area at the Jonsson Comprehensive Cancer Center, and member of the Eli and Edythe Broad Center for Regenerative Medicine and Stem Cell Research at the University of California, Los Angeles (UCLA).

“The goal of our Dream Team is to expand, optimize and explore combinations of two novel immunotherapies, immune checkpoint blockade and adoptive T-cell transfer,” said Allison. “It is our dream, indeed our expectation, that by optimizing these two uniquely successful and complementary approaches, we will be able to achieve durable responses in a large percentage of patients suffering from a variety of types of cancer.”

“The SU2C-CRI Dream Team brings together a leading group of tumor immunologists working to speed up the pace of scientific advances to use the immune system to fight cancer,” said Ribas.

Co-leaders of the Dream Team are Drew M. Pardoll, M.D., Ph.D., and Cassian Yee, M.D. Pardoll is director of the division of immunology and Abeloff professor in the departments of oncology, medicine, pathology and molecular biology and genetics

at the Sidney Kimmel Comprehensive Cancer Center, The Johns Hopkins University in Baltimore, Md. Yee is a member of the Clinical Research Division and program in immunology at Fred Hutchinson Cancer Research Center; a professor of medicine at the University of Washington School of Medicine; and an attending physician at the Seattle Cancer Care Alliance in Seattle, Wash.

Scientists on this Dream Team represent eight institutions: MD Anderson Cancer Center, UCLA, The Johns Hopkins University, Fred Hutchinson Cancer Research Center, Dana-Farber Cancer Institute, California Institute of Technology, Memorial Sloan-Kettering Cancer Center and the Netherlands Cancer Institute.

“The clinical advances in immunotherapy just in the past two years have shown that these strategies indeed empower the patient’s own immune system to successfully fight their cancer. Single interventions opened the door; the future is combinatorial therapy, and the synergistic expertise of our Dream Team will catalyze the development of the most innovative combinations,” said Pardoll.

“Adoptive T cell therapy in recent years has really come into its own. Novel strategies to generate long-lasting, highly effective T cells are being developed, and in combination with new immunomodulatory agents like the checkpoint inhibitors, we can fully exploit the immune system to treat patients with cancer. We are so fortunate to now have the opportunity to explore these new frontiers in immunotherapy,” said Yee.

Significant scientific developments in the field of cancer immunology and the recent FDA approvals of two cancer immunotherapies highlight the field’s potential to transform cancer treatment. The formation of this Dream Team focused on this promising area of cancer research aligns with CRI’s 60-year mission to advance cancer immunology and SU2C’s mission to accelerate the translation of scientific discovery into new treatments for cancer patients.

“Because of my deep respect for the innovative approach to cancer research taken by Stand Up To Cancer, I wanted to support the creation of a team dedicated to this emerging area of research,” said tech entrepreneur and philanthropist Sean Parker. “I am delighted that SU2C and the Cancer Research Institute have combined their expertise to select a Dream Team with such great potential to move the field forward through cutting-edge technology and science.”

“Cancer immunology, a field which the Cancer Research Institute pioneered and has led for sixty years, is a high-potential area of medical research that is producing some of today’s greatest breakthroughs in cancer patient treatment, and I am confident that this Dream Team is going to succeed in making the next great advance,” said Jill O’Donnell-Tormey, Ph.D., chief executive officer and director of scientific affairs at CRI.

“Stand Up To Cancer is excited to make this investment in exploring strategies that can activate and enhance the body’s own natural ability to fight cancer. The field of cancer immunology is ripe with possible breakthroughs that could change the landscape of cancer treatment, and thus perfectly suited to Stand Up To Cancer’s

mission to accelerate research that can make more cancer patients survivors," said Sherry Lansing, SU2C co-founder, founder of the Sherry Lansing Foundation, and chairperson of the Entertainment Industry Foundation's (EIF) Board of Directors. (SU2C is a program of EIF, which is a 501(c)3 charitable organization.)

"Along with collaboration, innovation is a pillar of SU2C's model of cancer research, and we are incredibly grateful to have the support of a true innovator in the world of technology like Sean Parker," said SU2C Co-founder Rusty Robertson. "With this immunology-focused Dream Team, we have the opportunity to utilize Sean Parker's generous contribution to advance a cutting-edge field that holds great potential to save lives."

The SU2C-CRI Cancer Immunology Translational Research Project

Cancer immunologists have long hypothesized that specific interventions could stimulate and "re-educate" patients' own immune systems to attack their cancer. In one immunology-based cancer treatment approach, what kills cancer cells is a type of white blood cell called the T lymphocyte. Expanding these T lymphocytes outside the body, engineering them to be more potent and reinfusing these souped up anti-cancer lymphocytes into patients – a process termed adoptive cell therapy or ACT – is like adding more soldiers to the immune army. However, lymphocytes also have inhibitory receptors, termed checkpoints, that put the brakes on immune responses. Cancers exploit these checkpoints to resist immune attack by the anti-tumor lymphocytes. Blocking checkpoints with specific antibodies disables the brake and allows the immune system to get the upper hand.

The Dream Team will focus on two approaches to overcome these obstacles. First, they will investigate checkpoint blockade, where the checkpoints themselves are inhibited using antibodies, once again allowing T lymphocytes to kill the cancer cells. Second, the team will pursue multiple ACT approaches.

Using tumors obtained from patients, the team will evaluate checkpoint expression before and after ACT and/or checkpoint blockade, and will test the hypothesis that multiple T lymphocyte targets are generated in the tumor. The clinical impact of this project lies with the potential synergy of combining these two immunology-based therapeutic approaches to treat a range of tumor types to improve the lives of patients with cancer.

The project is estimated to start in the spring of 2013, with the first clinical trials scheduled to open in early 2014.

Dream Team Selected Through Unique, Rigorous Process

A SU2C-CRI Joint Scientific Advisory Committee (JSAC) conducted a unique, interactive, rapid and rigorous evaluation of the applications using a multi-step scientific review process. The JSAC is composed of highly accomplished senior laboratory researchers and physician-scientists, as well as patient advocates.

The committee is chaired by Nobel laureate Phillip A. Sharp, Ph.D., institute professor at the David H. Koch Institute for Integrative Cancer Research at the

Massachusetts Institute of Technology. It is co-chaired by Giorgio Trinchieri, M.D., and Carl H. June, M.D. Trinchieri is director of the Cancer and Inflammation Program and chief of the Laboratory of Experimental Immunology at the Center for Cancer Research, National Cancer Institute, and associate director for basic science at the Trans-NIH Center for Human Immunology. June is director of translational research at the Abramson Cancer Center at the University of Pennsylvania, and is an investigator with the Abramson Family Cancer Research Institute. He is also a professor in the department of pathology and laboratory medicine.

The review process began with a call for letters of intent in March of 2012 by the American Association for Cancer Research (AACR), SU2C's scientific partner. The committee then chose four finalist teams, each of which met in person with the JSAC to present plans for their research and respond to questions about their projects – a level of interaction between applicants and reviewers that is unique among scientific review processes.

The AACR is responsible for administering the grant and provides ongoing scientific oversight to ensure that progress is being made. Since the launch of Stand Up To Cancer, the AACR has played an integral role as SU2C's scientific partner by providing scientific leadership, expert peer review and grants administration.

Dream Team Principals and Advocate Members

The "Immunologic Checkpoint Blockade and Adoptive Cell Transfer in Cancer Therapy" Dream Team consists of a multidisciplinary group of experts that includes laboratory and clinical researchers, young investigators and senior scientists who have not worked together in the past, as well as patient advocates. Besides Allison, Ribas, Pardoll and Yee, team members include:

Principals:

- David Baltimore, Ph.D., California Institute of Technology, Pasadena, Calif.
- Glenn Dranoff, M.D., Dana-Farber Cancer Institute, Boston, Mass.
- Philip D. Greenberg, M.D., Fred Hutchinson Cancer Research Center, Seattle, Wash.
- Michel Sadelain, M.D., Ph.D., Memorial Sloan-Kettering Cancer Center, New York, N.Y.
- Ton Schumacher, Ph.D., Netherlands Cancer Institute, Amsterdam, The Netherlands
- Jedd D. Wolchok, M.D., Ph.D., Memorial Sloan-Kettering Cancer Center, New York, N.Y.

Advocates:

- Robert E. Behrens, REB Investments Inc.
- Debra Black, Melanoma Research Alliance
- Roy Doumani, cancer survivor
- Valerie Guild, Aim at Melanoma

- Jonathan W. Simons, M.D., Prostate Cancer Foundation
- Mary Elizabeth Williams, Salon.com

A video with more information about this new dream team is available at bit.ly/12jHPpa [1].

Since Stand Up To Cancer's launch in 2008, SU2C has awarded grants to nine Dream Teams and one International Translational Cancer Research Grant. Twenty-six Innovative Research Grants have been awarded to individual young investigators. These recipients comprise more than 450 scientists from 87 institutions.

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[1] http://bit.ly/12jHPpa