



Transatlantic Dream Team of Top Researchers Selected To Tackle One of Cancer's Deadliest Forms: Pancreatic Cancer

Stand Up To Cancer, Cancer Research UK, and The Lustgarten Foundation Fund Team with \$12 million

BOSTON — The Stand Up To Cancer – Cancer Research UK –Lustgarten Foundation Dream Team of top cancer researchers from the United States and the United Kingdom was named here today to launch a fresh attack on pancreatic cancer, one of the deadliest forms of cancer on both sides of the Atlantic.

Daniel D. Von Hoff, MD, physician-in-chief and distinguished professor at the Translational Genomics Research Institute (TGen) in Phoenix, Arizona, chief scientific officer at HonorHealth, and professor of medicine at the Mayo Clinic, will lead the team, with Ronald M. Evans, PhD, professor and director of the Gene Expression Laboratory at the Salk Institute for Biological Studies in La Jolla, California, and Gerard I. Evan, PhD, professor and chair of the department of biochemistry at the University of Cambridge in the United Kingdom, as the co-leaders.

Stand Up To Cancer (SU2C), Cancer Research UK, and The Lustgarten Foundation selected the team and are providing \$12 million in funding over three years. The team was announced during the 2015 International Conference on Molecular Targets and Cancer Therapeutics sponsored by the American Association for Cancer Research (AACR), the National Cancer Institute, and the European Organisation for Research and Treatment of Cancer. The AACR is SU2C's Scientific Partner and will administer the grant.

Serving as principal investigators on the team are Christopher Heeschen, MD, PhD, lead, Centre for Stem Cells in Cancer & Ageing at the Barts Cancer Institute, Queen Mary University of London, U.K.; David Propper, MD, a consultant medical oncologist at Barts Cancer Institute and the London NHS Trust; and Joshua D. Rabinowitz, MD, PhD, professor of chemistry and integrative genomics at Princeton University in Princeton, New Jersey.

The team also includes more than two dozen other researchers based in the U.S. and the U.K., and two advocates, Suzanne Berenger of England and Howard Young of the United States, both of whom are pancreatic cancer survivors.

Pancreatic cancer typically has a dismal outlook, with a five-year survival rate around 7 percent in the U.S. and 3 percent in the U.K. It takes the lives of approximately 40,000 people per year in the U.S. and 8,000 in the U.K. The new Dream Team's research project will focus on reprogramming the biology of cells in pancreatic tumors – both the cancer cells themselves as well as the surrounding noncancerous

cells upon which the cancer cells rely for support – so that the tumors can be stopped. They have found gene networks in pancreatic tumors controlled by genetic “hot spots” in the DNA called super enhancers (SEs) that are known to control wound repair and tissue regeneration. Unlike the normal system of wound healing that has a shut-off mechanism, in tumors the process remains on, “hijacked” to drive constant growth.

The SU2C-Cancer Research UK-Lustgarten Foundation Dream Team aims to develop new approaches to reset malfunctioning SEs in pancreatic tumors, thereby dialing up sensitivity to chemotherapy and to anticancer immune cells and pushing pancreatic tumors into lasting remission. To achieve this goal, team members will take a three-pronged approach. They will use cutting-edge technology to analyze pancreatic tumor SE hot spots so that they can understand the biological “hacking” of normal wound-healing regenerative processes. They will seek to understand how SEs allow cancer cells to obtain nutrients from nearby normal cells, while at the same time avoiding detection by the immune system. They will also initiate clinical trials in pancreatic cancer with a new class of SE-targeted drugs that are geared to enhance chemotherapy and revitalize the immune response. The trials are slated to start in the first year of the Dream Team’s funding.

“We are going after pancreatic cancer in a different way,” Von Hoff said. “We will use new and existing agents to reprogram the master regulatory biological machinery in cancer cells that drives tumor growth. This machinery comprises molecular complexes of DNA and proteins that are known as ‘super enhancers’ for their ability to coordinate the expression of a large number of genes.

“By resetting the malfunctioning genome in both pancreatic tumor cells as well as the surrounding non-cancer cells on which the cancer cells rely for support,” Von Hoff said, “the team will try to increase the sensitivity of tumors to chemotherapy and make them vulnerable to the patient’s immune response.”

“Cancer is a like a wound that does not heal,” Evans said, “in part because the super enhancer master switch is stuck in the ‘on’ position. By deploying a completely new class of drugs, our goal is to reboot the circuit, reprogram the entire cell, and send the pancreatic cancer into durable remission. By thinking differently, we will bring a new approach to defeat this disease.”

Gerard Evan described another goal of the research.

“Despite the apparent diversity in pancreatic cancer, there is a remarkable underlying commonality in the biological pathways that drive pancreatic tumors,” Evan said. “Our goal is to exploit these commonalities that underlie pancreatic cancer to identify common targets against which to develop more durable, more accurate, and more effective treatments.”

A Joint Scientific Advisory Committee (JSAC) composed of highly accomplished researchers and physician-scientists, as well as advocates, conducted a rapid, interactive, and rigorous evaluation of the applications and recommended the team led by Von Hoff and co-led by Evans and Evan for funding.

“Cancer of the pancreas poses some very difficult challenges because the diagnosis is often made at a late stage, and surgery is often impossible,” said Phillip A. Sharp, PhD, Nobel laureate, institute professor at the David H. Koch Institute for Integrative Cancer Research at the Massachusetts Institute of Technology, and chairperson of the JSAC. “The Dream Team will bring new insights such as inhibition of novel gene control processes to the battle against this terrible disease.”

Cancer Research UK, the largest charitable funder of cancer research in the world, supports a broad range of research to better understand, diagnose, prevent, and treat all cancers. The international collaboration between SU2C and Cancer Research UK launched with a live Stand Up To Cancer telecast on Channel 4 in the United Kingdom in 2012. Through annual telecasts on Channel 4, the U.K. SU2C campaign has generated more than \$35 million to accelerate groundbreaking cancer research in the U.K. and abroad. The new Dream Team is the first supported by the transatlantic collaboration between SU2C and Cancer Research UK.

Iain Foulkes, PhD, executive director of research funding for Cancer Research UK, said: “Survival from pancreatic cancer is low; only 7 percent of patients live for five years. Frankly, progress has not been good enough and it’s why we have invested \$6 million in this Dream Team. These are among the finest researchers in the world and we’re really excited by the potential of their ideas in the fight against this terrible disease.”

The Lustgarten Foundation, located in Bethpage, New York, is America’s largest nonprofit private funder of pancreatic cancer research dedicated to scientific and medical advancements related to the prevention, diagnosis, treatment, and cure of pancreatic cancer. As a longstanding partner of SU2C, The Lustgarten Foundation’s co-funding of this new Dream Team will be the third Dream Team supported by the Foundation, bringing the organization’s total investment in SU2C’s research program to \$12 million.

“Eradicating pancreatic cancer will take a collaborative effort, and private funding plays a critical role in accelerating the development of new clinical trials for this deadly disease,” said Kerri Kaplan, executive director and chief operating officer of The Lustgarten Foundation. “This international collaboration will bring together leading global experts in the field of pancreatic cancer research, and together we will focus on developing new therapies and innovative approaches so patients can benefit and live longer lives.”

Serving as vice-chairs of the JSAC were Richard M. Marais, PhD, director of the Cancer Research UK Manchester Institute, where he also heads the Molecular Oncology Group; and David A. Tuveson, MD, PhD, director of research for The Lustgarten Foundation and director of The Lustgarten Foundation Pancreatic Cancer Research Lab at Cold Spring Harbor Laboratory in Cold Spring Harbor, New York.

In addition to TGen, Salk Institute, and Cambridge, institutions participating in the project are Princeton University, Queen Mary University of London, St. Bartholomew's Hospital, Moores Cancer Center at UC San Diego Health, Mayo Scottsdale, and the University of Pennsylvania.

As the official scientific partner of SU2C since its launch in 2008, the AACR provides scientific leadership, expert peer review, and grants administration for SU2C’s extensive research program.

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The Stand Up To Cancer Initiative

Stand Up To Cancer (SU2C) raises funds to accelerate the pace of research to get new therapies to patients quickly and save lives now. SU2C, a program of the Entertainment Industry Foundation (EIF), a 501(c)(3) charitable organization, was established in 2008 by film and media leaders who utilize the industry's resources to engage the public in supporting a new, collaborative model of cancer research, and to increase awareness about cancer prevention as well as progress being made in the fight against the disease. As SU2C's scientific partner, the American Association for Cancer Research (AACR) and a Scientific Advisory Committee led by Nobel Laureate Phillip A. Sharp, PhD, conduct rigorous, competitive review processes to identify the best research proposals to recommend for funding, oversee grants administration, and provide expert review of research progress.

Cancer Research UK

- Cancer Research UK is the world's leading cancer charity dedicated to saving lives through research.
- Cancer Research UK's pioneering work into the prevention, diagnosis and treatment of cancer has helped save millions of lives.
- Cancer Research UK receives no government funding for its life-saving research. Every step it makes towards beating cancer relies on every pound donated.

- Cancer Research UK has been at the heart of the progress that has already seen survival rates in the UK double in the last forty years.
- Today, 2 in 4 people survive cancer. Cancer Research UK's ambition is to accelerate progress so that 3 in 4 people will survive cancer within the next 20 years.
- Cancer Research UK supports research into all aspects of cancer through the work of over 4,000 scientists, doctors and nurses.
- Together with its partners and supporters, Cancer Research UK's vision is to bring forward the day when all cancers are cured.

Stand Up To Cancer (UK)

Stand Up To Cancer is a joint national fundraising event from Channel 4 and Cancer Research UK.

- 2014's campaign raised £15,585,444.15
- In 2014, the live fundraising event was hosted by Davina McCall, Alan Carr and Dr. Christian Jessen and featured celebrity interviews and moving real life stories
- Stars such as Kate Moss, Naomi Campbell, Noel Gallagher, Nicole Scherzinger, Pharrell Williams, Tom Hardy, Benedict Cumberbatch, Gillian Anderson, Britney Spears, Idris Elba, Andy Murray, Bradley Cooper, Taylor Swift, Martin Freeman, Jamie Oliver, Kathy Burke, Miranda Hart, Paul O'Grady and Richard Ayoade are just some of the talent who support Stand Up To Cancer

Visit standuptocancer.org.uk or channel4.co.uk/SU2C for further information

The Lustgarten Foundation

Founded in 1998, The Lustgarten Foundation is America's largest private foundation dedicated to funding pancreatic cancer research. Based in Bethpage, New York, the Foundation supports research to find a cure for pancreatic cancer, facilitates dialogue within the medical and scientific community, and educates the public about the disease through awareness campaigns and fundraising events. Since its inception, the Foundation has directed more than \$110 million to research and assembled the best scientific minds with the hope that one day, a cure can be found. Due to the support of Cablevision Systems Corporation, a leading media and telecommunications company, 100 percent of every dollar donated to the Foundation goes directly to pancreatic cancer research. The Lustgarten Foundation and Cablevision are also partners in the curePC public awareness campaign in support of the fight against pancreatic cancer. For additional information, please visit www.lustgarten.org.

American Association for Cancer Research

Founded in 1907, the American Association for Cancer Research (AACR) is the world's oldest and largest professional organization dedicated to advancing cancer research and its mission to prevent and cure cancer. AACR membership includes more than 35,000 laboratory, translational, and clinical researchers; population scientists; other health care professionals; and patient advocates residing in 101 countries. The AACR marshals the full spectrum of expertise of the cancer community to accelerate progress in the prevention, biology, diagnosis, and treatment of cancer by annually convening more than

30 conferences and educational workshops, the largest of which is the AACR Annual Meeting with over 18,500 attendees. In addition, the AACR publishes eight peer-reviewed scientific journals and a magazine for cancer survivors, patients, and their caregivers. The AACR funds meritorious research directly as well as in cooperation with numerous cancer organizations. As the Scientific Partner of Stand Up To Cancer, the AACR provides expert peer review, grants administration, and scientific oversight of team science and individual grants in cancer research that have the potential for near-term patient benefit. The AACR actively communicates with legislators and policymakers about the value of cancer research and related biomedical science in saving lives from cancer. For more information about the AACR, visit www.AACR.org.