$1 million Movember-Prostate Cancer Foundation Challenge Award will fund City of Hope immunotherapy research

Project will examine a multipronged approach that stimulates immune cells and dismantles prostate cancer’s defenses

DUARTE, Calif. — A team of City of Hope researchers has received a two-year, $1 million Movember-Prostate Cancer Foundation (PCF) Challenge Award for a double-armed project to treat advanced prostate cancer. The team will be studying two novel agents’ promising ability to stage a combined immunotherapeutic attack against prostate cancer cells, which have previously been resistant to such an effort.

“Immunotherapy is emerging as a powerful approach for treating a variety of tumors – directing and stimulating the patient’s own immune system to combat cancer,” said Stephen J. Forman, M.D., Francis & Kathleen McNamara Distinguished Chair in Hematology and Hematopoietic Cell Transplantation at City of Hope and the principal investigator of the project. “We are developing and testing an innovative immunotherapy for patients with advanced-stage prostate cancer that combines two therapies developed at City of Hope.”

Prior research at City of Hope and other institutions found that numerous cancer cells – including those of prostate cancer – activate a protein called STAT3 to evade the immune system and promote their own growth and spread. In one arm of the new project, Marcin Kortylewski, Ph.D., assistant professor at City of Hope’s...
Department of Cancer Immunotherapeutics and Tumor Immunology, will be designing a unique agent — a nucleotide-based drug that delivers a small, interfering RNA called CpG-STAT3 — to inhibit STAT3 activity, thus stripping the cancer’s ability to grow and dodge the immune system, while simultaneously bolstering the patient’s own anti-tumor immunity.

In another arm of the project, Christine Brown, Ph.D., City of Hope’s group leader in T cell therapy preclinical research, and Saul Priceman, Ph.D., assistant research professor, will be extracting T cells and engineering them to specifically target and attack prostate cancer cells. The reprogrammed T cells will then be administered on their own and alongside the anti-STAT3 agent to test their effectiveness in fighting prostate cancer. Ultimately, researchers hope, the combination of the two agents will mount a three-way strike that halts the tumor’s spread, breaks down the cancer’s anti-immunity barriers and directs an immunological assault against the cancerous cells throughout the body.

“Our proposed studies comprise a novel combined approach that will help release the brakes that are placed on the immune system by the cancer and also improve our genetically modified T cell therapy for patients with advanced-stage prostate cancer,” Forman said. “If successful, our approach will create a powerful immune response against prostate cancer, with the potential to better treat and possibly cure this disease.”

If the preclinical studies show the expected results, Forman and his colleagues hope to begin human trials by early 2016.

“We believe that engineered T cell therapy for the treatment of advanced prostate cancer will be the next life-prolonging therapy. We are delighted to include Dr. Forman’s team and treatment discovery program at City of Hope in the Prostate
Cancer Foundation’s portfolio of research excellence,” said Howard R. Soule, Ph.D., chief science officer and executive vice president of the Prostate Cancer Foundation. “PCF is grateful to Movember for providing the generous resources for this important therapy development project in immunotherapy.”

“Movember is honored to partner with City of Hope and PCF to fund a team of investigators who will perform first-in-field prostate cancer research in the area of immunotherapy,” said Mark Hedstrom, director of Movember U.S. "This financial aid, raised by our generous community of Mo Bros and Mo Sistas, will be used to accelerate the progress towards reducing the number of deaths and suffering due to recurrent or advanced prostate cancer."

According to the American Cancer Society, there will be approximately 238,000 new diagnoses of – and more than 29,000 deaths from – prostate cancer this year in the United States. For men with distant metastases of prostate cancer, the five-year survival rate is 28 percent.

Other City of Hope researchers involved in this study include Sumanta Pal, M.D., assistant professor in the Department of Medical Oncology & Therapeutics Research, and Joycelynne Palmer, Ph.D., senior biostatistician and hematological malignancies section head in the Department of Research Information Sciences.

Movember, a global men's health charity, encourages men to grow (and women to support) a moustache for the 30 days of November to raise awareness and funds for men’s health causes. The organization has partnered with Prostate Cancer Foundation, the world’s largest philanthropic source funding world-class prostate cancer research, to create the Movember-PCF Challenge Awards. These awards are designed to link researchers with diverse intellectual capabilities – scientists who otherwise might conduct isolated research – into productive, synergistic
teams of investigators in strategic areas of prostate cancer research. The awards are given to projects not yet funded by a government or foundation program. The Movember-PCF Challenge Award for Forman and his team was selected through a global competition of 17 team applications from 17 medical institutions across three countries. PCF’s designation as a National Cancer Institute-approved funding entity ensured that the 17 applications were subject to a rigorous peer review process that conforms to the highest standards set forth by the National Institutes of Health.

About City of Hope

City of Hope is a leading research and treatment center for cancer, diabetes and other life-threatening diseases. Designated as a comprehensive cancer center, the highest recognition bestowed by the National Cancer Institute, City of Hope is also a founding member of the National Comprehensive Cancer Network, with research and treatment protocols that advance care throughout the nation. City of Hope’s main hospital is located in Duarte, Calif., just northeast of Los Angeles, with clinics in Antelope Valley and South Pasadena. It is ranked as one of "America's Best Hospitals" in cancer by U.S.News & World Report. Founded in 1913, City of Hope is a pioneer in the fields of bone marrow transplantation and genetics. For more information, visit www.cityofhope.org or follow City of Hope on facebook, twitter, youtube or flickr.

About the Prostate Cancer Foundation

The Prostate Cancer Foundation (PCF) is the world’s largest philanthropic source of support for accelerating the most promising research for better treatments and cures for prostate cancer. Founded in 1993, PCF has raised more than $575 million and provided funding to more than 1,600 research programs at nearly 200 cancer centers and universities in 18 countries. PCF advocates for greater awareness of prostate cancer and more efficient investment of governmental research funds for
transformational cancer research. Its efforts have helped produce a 20-fold increase in government funding for prostate cancer. More information about the PCF can be found at www.pcf.org.

About Movember

Movember aims to forever change the face of men's health through the power of the moustache, by raising vital awareness and funds for men's health issues to combat prostate and testicular cancer and mental health challenges. Movember programs are focused on awareness and education, living with and beyond cancer, and research to achieve our vision of an everlasting impact on the face of men's health. Since 2003, 4 million participants have raised over $550 million for the cause, funding more than 570 programs globally, with official Movember campaigns taking place in 21 countries. Movember is fully accredited by the Better Business Bureau, and for the past two years, has been named a Top 100 best NGO by The Global Journal. For more information please visit Movember.com. Movember is a registered 501(c)(3) charity.

# # #