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Dear Friends and Supporters,

These have been a busy few months at the USC Center for Applied Molecular Medicine (CAMM) and Westside Cancer Center (WCC). The March *Rebels With A Cause* gala at Paramount Pictures was a tremendous success and once again demonstrated to me the greatness and generosity of the Los Angeles community. The event supported our cancer research conducted at CAMM and WCC and was co-chaired by Cassandra and Brad Grey, along with our own Dean Carmen Puliafito, and was presented by co-sponsors, Lynne and Marc Benioff. The evening's honoree was Larry Ellison, Oracle CEO and co-founder. When Larry accepted his award and heard that the event had raised \$4.5 million dollars, he agreed to match it. We are so grateful to Larry and all who contributed. In total the gala raised over \$9 million dollars through 120 individual gifts. Emceed by Jimmy Kimmel, the gala brought out some of Hollywood's finest and included special performances by Pharrell Williams and Barry Manilow. I was truly honored to be in the room. Our team looks forward to this event in the coming years.

The laboratory and the clinic continuously strive to progress against this deadly disease. We are proud of the exciting advances discovered over this past year; however, we have much more to accomplish. We cannot rest until we put an end to the pain and suffering caused by cancer.

Thank you for joining our fight against this horrible disease.

With respect,

David B. Agus, MD

Keck School of
Medicine of USC

Rebel Event Raises Over \$9 Million for WCC & CAMM

More than 500 luminaries including notables from entertainment, medicine and technology joined in honoring technology titan and powerhouse philanthropist Larry J. Ellison, co-founder and chief executive officer of Oracle Corporation at the second annual *Rebels With A Cause* gala at Paramount Pictures Studios in Hollywood. The evening raised over \$9 million to benefit the revolutionary and life-saving research of David B. Agus, M.D., director of the USC Westside Cancer Center and the USC Center for Applied Molecular Medicine (CAMM).

Cassandra and Brad Grey, chairman and chief executive officer of Paramount Pictures and Carmen A. Puliafito, M.D., M.B.A., dean of the Keck School of Medicine, co-chaired. Co-presenting sponsors were Lynne and Marc Benioff, founder, chairman and chief executive officer of salesforce.com. Sixteen-time Grammy Award-winner David Foster, who also took to the stage, served as the evening's musical director. Internationally acclaimed director and producer Don Mischer was event producer.

Grammy Award-winning hip-hop and R&B singer-songwriter-record producer Pharrell Williams opened the evening performing his Oscar-nominated hit, "Happy." Host Jimmy Kimmel welcomed guests including Sacha Baron Cohen and Isla Fisher, January Jones, John Stamos, Bob Saget, Jerry Bruckheimer, Anna Kendrick and Chris Pine, then introduced the evening's co-chair, Brad Grey. Grey stated, "Tonight I am happy to announce we will build a new transformational cancer institute here in Los Angeles. It will be a life changing and life saving facility dedicated to personalized medicine, that will give cancer patients the chance they need and the chance they deserve." Grey will chair the endeavor.

A highlight of the evening was a series of poignant, life-changing letters written by cancer patients and read on-stage by actors Jonah Hill and Anna Kendrick.

David Agus, M.D. introduced the night's honoree, Larry Ellison, calling him "a champion of our Center's work from day one when his foundation announced funding for the initiation of our cancer research at the USC Center for Applied Molecular Medicine. His generous support through the years," Agus continued, "has allowed us to explore unique approaches to medical oncology that will help us better control a disease which impacts millions worldwide."

When honoree Larry Ellison was introduced, his words were brief... "whatever we've made tonight, I'm matching!" His magnanimous contribution brought the evening's total to over \$9 million.

The evening ended with wild applause for special guest performer, Grammy, Tony and Emmy-winning music superstar, Barry Manilow who brought the crowd to its collective feet with a trio of hits including "I Made It Through the Rain," "Copacabana" and "One Voice," the latter joined by the 62 member USC Choir.

Bridging the Gap from Laboratory to Patients

By: Mitchell Gross, MD, PhD

Much of cancer research occurs in a laboratory. In this setting, we can grow and study a near limitless supply of cancer cells under carefully controlled conditions. Many fundamental discoveries explaining how normal cells are transformed into cancerous ones have been made with this approach. However, treating cancer in living patients is not the same as treating cancer cells grown in the laboratory. Until recently, sampling of cancer tissue has required invasive biopsies which are difficult to perform and only represent cancer from one particular area sampled at any given time. Therefore, we are unable to determine if gene and protein changes observed in carefully controlled, artificial laboratory conditions are actually occurring in any particular patient. Furthermore, invasive biopsies can only be performed infrequently during the course of any one patient's diagnosis and treatment. This may make it difficult to tell if therapies which work a certain way in the laboratory are actually performing as intended in living patients.

In our group we are studying how circulating tumor cells (CTCs) may provide a critical bridge to translate what we have learned in the laboratory to improve care for patients. In some cancer patients cells derived from the cancer may be found in patient blood samples. Using a portion of blood samples obtained for routine testing (as performed in any medical office), we are developing new ways to identify and analyze CTCs. This work involves several collaborators who help us study how our treatments may or may not be working in particular patients. Of specific relevance to prostate cancer, a protein called the androgen receptor (AR) is an "on switch" to which we can target many types of prostate cancer therapies. We have used the CTC technology to study how many CTCs express the AR protein. Furthermore, we can determine if AR is localized to the nucleus (where it may be active in promoting the growth of cancer cells) or isolated in the cytoplasm (where it is inactive). Amazingly, our collaborators have even developed a way to analyze genetic alterations in individual cancer cells based on the CTC technology. Using this approach, we have studied how a patient with metastatic prostate cancer responded to treatment with conventional chemotherapy as well as a newer, higher-potency androgen synthesis inhibitor. This exciting work has been presented at several national meetings as we suggest how genetic switches, first identified in laboratory studies, are actually operating in living patients.

As a physician-scientist, I have long sought out ways to bridge laboratory studies with improving patient care. I am very excited about the studies we are performing involving CTCs that will serve as a critical piece in this ongoing endeavor.

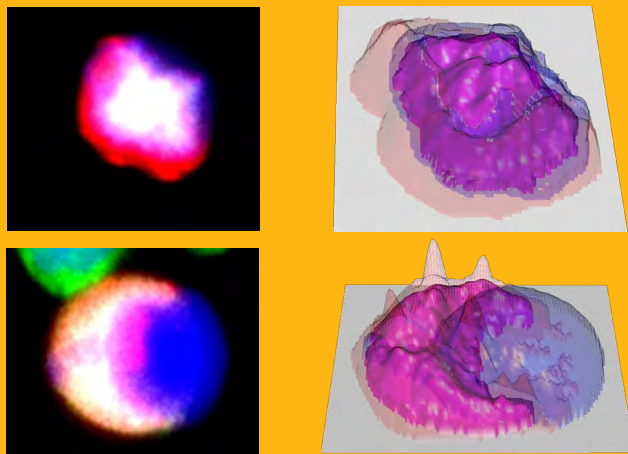


Figure: Circulating tumor cells (CTCs) in one of our prostate cancer patients. Top: Androgen receptor (AR, white) in the nucleus represents the "on" position. Bottom: AR localized in the cytoplasm represents an "off" position. Credit: Peter Kuhn Lab, TSRI

Spotlight on Olga Castellanos

Clinical Research Program Manager



Olga is the Clinical Research Program Manager at the USC Westside Cancer Center. She has been working with Drs. Agus and Gross for 11 years on clinical trials, which are research studies involving patient volunteers to investigate new ways to prevent, detect, diagnose and treat cancer and other diseases.

Olga works closely with our doctors, pharmaceutical companies, the FDA and the University to create new studies as well as open existing trials from around the country. This work helps provide our patients with access to the most advanced treatments available in the nation. Once studies are open, she manages them at our Center and at Norris Hospital to make sure our patients are getting the best care possible and the studies adhere to protocol guidelines.

Olga and the clinical research team have led many clinical trials on drugs that were once considered experimental and are now FDA-approved. Our studies range from treatment investigations, which examine the effects of cutting-edge drugs on cancer, to specimen studies, which collect samples from patients for doctors and scientists to analyze for a wealth of information regarding genes, proteins and other cancer biomarkers. With each study we try to learn more about cancer treatment options and their effects on the patient and his or her disease.

Olga graduated in 1997 from the University of California, Irvine with a bachelor's degree in biological sciences. Previously, she worked at the UC Irvine Medical Center and at Cedars-Sinai Medical Center. She is a member of the Society of Clinical Research Associates and has completed the Clinical Research Professional certification program. Olga enjoys what she does and loves getting to know our patients. In her spare time, she treasures spending time with her Samoyeds, going to dog shows and celebrating a win with a good glass of wine.

You Can Help! To help support our ongoing cancer research efforts at WCC & CAMM please use the enclosed envelope or visit our website today.

<http://keck.usc.edu/donateWCC>

Thank you, your generosity means so much!