USC Norris Comprehensive Cancer Center
Keck Medicine of USC

May/June 2024, Issue 22

# COMMUNITY for a CURE


## An Evening of Enlightenment at the Huntington: Promoting Health and Wellbeing


Photo Credit: Dean Russell

On a serene summer evening in the beautiful Chinese Garden of the Huntington Library, Art Museum, and Botanical Gardens in San Marino, the USC Norris Comprehensive Cancer Center (USC Norris) hosted a special event dedicated to health and wellness. It provided an enriching experience for all attendees, combining the beauty of nature with the invaluable knowledge shared by experts from USC Norris. The evening brought together esteemed physicians, scientists, and friends of USC Norris for an enlightening and informative experience.

The event began with a private guided tour of the Botanical Garden where participants marveled at the exquisite landscapes and serene atmosphere. This tranquil setting provided the perfect backdrop for the evening's focus on health and wellness. Following the tour, attendees gathered for a delightful reception featuring healthy Asian-inspired bites and refreshments.


Photo Credit: Dean Russell

The evening commenced with an inspiring program on the latest innovations in health promotion and cancer prevention featuring Drs. Casey O'Connell, Xiaoyue Mona Guo, and Jennifer Tsui. These experts shared their insights on a variety of topics related to health and wellness, such as tips on how to maintain a healthy immune system, integrative oncology, and collaborative efforts that are working to improve health equity for Asian Americans. Participants had the opportunity to engage directly with the speakers, asking questions and delving deeper into the topics presented.

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Photo Credit: Dean Russell


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The event was a resounding success and concluded with a renewed sense of purpose and commitment to health and wellness. The insights gained from the evening emphasized the importance of proactive health measures in cancer prevention and care.

## *Faculty Spotlight*


Photo Credit: Dean Russell

**Saul Priceman, PhD**

Dr. Saul Priceman will join USC Norris and the Department of Medicine in the Keck School of Medicine on September 1, 2024. A renowned tumor immunologist and national leader in cellular immunotherapy, Dr. Priceman will be the founding director of the new KSOM/USC Norris Center for Cancer Cellular Immunotherapy Research. Dr. Priceman will work closely with leaders of our growing research programs, Good Manufacturing Practices (GMP), and clinical teams to lead and prioritize translational immunotherapy programs that bring new and promising treatments to people with cancer.

> **"I'm fortunate to be joining USC at this moment,"** said Priceman. **"As director of the KSOM/USC Norris Center for Cancer Cellular Immunotherapy Research, I will help coalesce and expand the phenomenal translational research and clinical efforts that are underway here, with the aim of growing a program that crystalizes USC as a leader in the field of cancer cellular immunotherapy. Collaborative science is at the heart of what we do; it elevates the research to achieve beyond that of any single lab or institution. Our Center will strengthen existing collaborations and establish new opportunities to advance the most promising science and effective treatment strategies that reach patients sooner."**

Over the last decade, Dr. Priceman's research program has centered on the development of engineered anti-cancer immunity, including Chimeric Antigen Receptor (CAR)-based T cell immunotherapy with a focus on metastatic disease in prostate, pancreas, breast, and ovarian cancers.

> **"I believe rewiring and redirecting the immune system will be key to effectively treating most, if not all, human disease, including and beyond cancer. I had that relatively naïve view over 20 years ago that was fueled by passion, and it has been reinforced every year by our own translational work and by the enormous growth in the field."**

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Dr. Priceman and his team have successfully translated innovative research from bench to bedside into clinical trials for many of these diseases, exemplified by a recent Nature Medicine article on results from a phase 1 trial evaluating CAR T cell therapy for metastatic castration-resistant prostate cancer patients. He has also translated CAR T cells for other solid tumors including metastatic breast cancer and ovarian cancer, with aims to clinically develop cellular therapies for other challenging tumor types including pancreatic cancer.

The Priceman laboratory focuses on novel combinatorial and gene engineering strategies to overcome challenges facing solid cancers, with strong team science programs that have been continuously funded by the National Institute of Health, the Department of Defense, the California Institute for Regenerative Medicine, and other agencies. Dr. Priceman has also partnered with industry to develop some of these therapies through technology licensing and sponsored research agreements around CAR T cell therapies and oncolytic virus therapies, and he also sits on the scientific advisory board of several companies that are developing immunotherapy strategies for the treatment of cancer and other human diseases.

> **"Engineered cellular immunotherapy is one of the most exciting areas of research and clinical development, and a major focus of my laboratory's efforts. I am confident that our cell therapy work, along with others at USC and in the broader community, will contribute to clinical practice changing medicines for people with cancer."**

Dr. Priceman earned his undergraduate degree in microbiology at the University of California Santa Barbara and his doctoral degree in molecular and medical pharmacology at the University of California, Los Angeles. He currently holds a faculty position of Associate Professor and is Associate Director of Translational Sciences in the T Cell Therapy Program at the City of Hope.

## *2nd Annual Cancer Research Day*

Since its inception in 1973, USC Norris has remained committed to eradicating the burden of cancer through innovative research. From uncovering the genetic underpinnings of various cancers to developing targeted therapies, the USC Norris research team has revolutionized cancer treatment and provided hope to patients and their families across the globe. On May 23, 2024, USC Norris hosted their 2nd annual Cancer Research Day, an event showcasing the transformative and groundbreaking cancer research being conducted by our exceptional scientists, researchers, physicians, and learners to our USC scientific and patient community.

> **"Celebrating the success of our second annual Cancer Research Day, we are invigorated with a renewed sense of determination and shared purpose,"** said Neman. **"We proudly showcased groundbreaking and innovative cancer research conducted at USC Norris. This year's event has further fostered collaboration, sparked innovation, and offered a valuable platform for meaningful dialogue. With the insights gained from this enriching day-long conference and poster session, the USC Norris Comprehensive Cancer Center remains steadfast in our pursuit of improving outcomes and transforming lives in the realm of cancer research and treatment for patients."**

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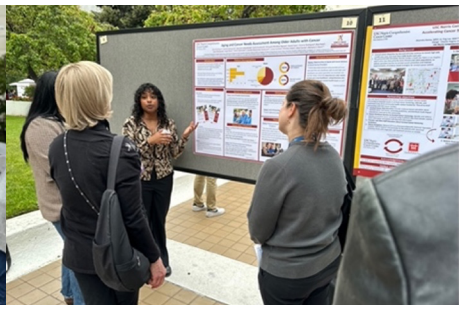
The morning sessions, started with an overview presentation from Dr. Neman regarding the USC Norris Cancer Research Training and Education Coordination Program. This presentation was followed by a series of presentations focused on the transformative and life-saving basic, translational, and clinical research being conducted at the cancer center by our extraordinary scientists and physicians.





The afternoon included an interactive poster session, which provided an opportunity for faculty, post docs, and graduate students to present on all of the exciting laboratory and clinical science that is ongoing at the Cancer Center. Posters showcasing the latest advancements in cancer research and care at USC Norris filled Pappas Quad at the Health Sciences Campus. The afternoon session ended with awards given to the five best posters, decided upon by a panel of judges.

This event was a powerful testament to the significant strides we have made in advancing cancer research, igniting discovery for new ways to prevent, diagnose early, and treat cancer for all people.

## *Honors and Recognitions*

**Dr. Mark Agulnik has been appointed as a new co-leader of the USC Norris Translational and Clinical Sciences (TACS) Program.** Dr. Agulnik is a respected clinician, educator, and researcher who specializes in the treatment of sarcomas. The overarching mission of the TACS Program is to discover and develop innovative treatments and biomarkers to improve clinical outcomes for cancer patients.

**Congratulations to Dr. Claradina Soto, member of the USC Norris Cancer Control Research Program, who was the recipient of the Latina Woman of the Year Award for Women in STEM** at the 43rd Annual National Women's Conference sponsored by the Mexican American Opportunity Foundation (MAOF), one of California's largest social service nonprofits.

**Congratulations to Dr. George Yaghmour, member of the USC Norris Translational and Clinical Sciences Program, for being named the Greater Los Angeles 2024 Team Member of the Year by the Leukemia & Lymphoma Society.** We also extend our heartfelt congratulations to his team, Sparkle Strong, for winning the 2024 Visionaries of the Year award. Their remarkable achievement of raising over $205,000 supports blood cancer patients, promotes health care equity, and underscores their unwavering commitment to making a positive impact in the fight against blood cancer.

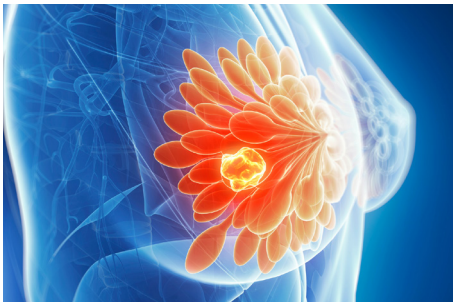
**Congratulations to Dr. Lourdes Baezconde-Garbanati, Associate Director for Community Outreach and Engagement at USC Norris, who received an award at this year's American Association for Cancer Research (AACR) Annual Meeting on April 8.** She was recognized for her hard work and dedication to the Minorities in Cancer Research Council and its membership. This council is committed to preventing and curing cancer while meeting the professional needs and advancing the careers of minority scientists. The Council brings together scientists, cancer survivors, patient advocates, and others to fulfill its mission.

**The Los Angeles City Council President Paul Krekorian has declared May as Brain Tumor Awareness Month,** thanks to the USC Brain Tumor Center's advocacy efforts. This is a big step in raising public awareness about brain tumors.

**Congratulations to Joi Torrence-Hill, chief of operations at USC Norris Cancer Hospital, who was featured as a Black Healthcare Leader to Know in 2024 by Becker's Hospital Review.** The leaders featured on this list are shaping the patient experience, educating and training the next generation of healthcare providers, and furthering equity and inclusion.

## *New Grants, Scientific Advances and Discoveries:*

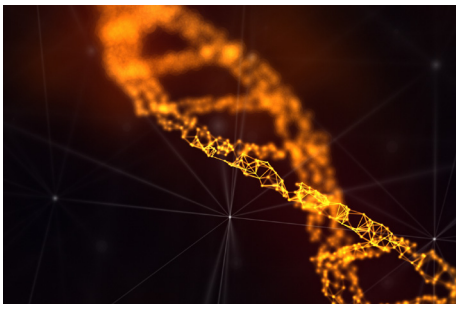
**Congratulations to Dr. Dechen Lin, member of the USC Norris Translational and Clinical Sciences program, who received a major grant from the National Cancer Institute to investigate whether problems with Platelet Activating Factor (PTAF) and free fatty acid (FFA) metabolism, influenced by unusual interactions involving a specific gene regulator called HNF4A, contribute to abnormal cell growth and the early stages of cancer development in the cells lining the area where the esophagus meets the stomach.** These studies aim to reveal the key factors driving early cancer development at the gastroesophageal junction, where your food pipe (esophagus) joins your stomach. By understanding the link between fat metabolism and gene regulation, they hope to identify new ways to prevent or treat early cancer changes in this area.



## USC Norris Researchers create novel syngeneic model of spontaneously metastatic HER2-positive breast cancer

Metastatic disease happens when cancer cells spread from their original location to other parts of the body, which is the main cause of death in advanced breast cancer patients. Published in the ***Journal Clinical & Experimental Metastasis***, Dr. Evanthia Roussos Torres, co-leader of the USC Norris Tumor Immunology and Microenvironment Program, and her team developed a new model using a specific breast cancer cell line. These cancer cells were implanted into the mammary glands of immune-competent mice that can express a protein similar to human HER2 - a protein involved in aggressive breast cancer. Their results showed that these cancer cells quickly spread to the lungs and, within a month, also spread to bones, spleen, colon, and liver. Besides investigating mechanisms of metastatic progression, this new model may be used for the rationalized development of novel therapeutic interventions and assessment of therapeutic responses, particularly those targeting HER2-positive cancers.

> **"We use models that develop these metastases naturally to study how cancer spreads and to test new treatments. In this study, we confirmed that these metastases expressed the NeuN protein, the murine equivalent of human epidermal growth factor 2 (HER2) and show changes in certain markers that suggest they have a high potential to spread. Genetic analysis supported these findings, showing activation of pathways that regulate this process." said Dr. Roussos Torres.**



## A Comprehensive Analysis: Minimally Differentially Methylated Regions Common to Pediatric and Adult Solid Tumors

Cancer is the second most common cause of death in children aged 1–14 years in the United States, with 11,000 new cases and 1,200 deaths annually. Published in the journal ***npj Precision Oncology***, Dr. Bodour Salhia, co-leader of the USC Norris Epigenetic Regulation in Cancer Program, and her team explored the potential of DNA methylation profile across various pediatric cancers. In doing so, she found these methylation changes were detectable in cell free (cf) DNA and could serve as potential cfDNA methylation biomarkers for early detection or minimal residual disease.

> **"The rarity of pediatric cancers poses a significant challenge to developing cancer-type specific biomarkers for diagnosis, prognosis, or treatment monitoring. Pediatric cancers typically have lower mutational burden compared to adult-onset cancers, however, the epigenomes in pediatric cancer are highly altered, with widespread DNA methylation changes. The DNA methylation panel in this study has potential utility in minimal residual disease monitoring and early detection and warrants further investigation in both pediatric and adult cancer." said Dr. Salhia.**

## *Community Outreach: DNA Day*

On May 29th, the USC Norris Office of Community Outreach and Engagement, in collaboration with USC Center for Optimization of Participant Engagement for Cancer Characterization (COPECC), hosted their inaugural DNA Day. The COPECC Center is a member of the Participant Engagement and Cancer Genome Sequencing (PE-CGS) Network, part of the Cancer Moonshot Initiative that is intended to accelerate cancer research and improve cancer outcomes among Hispanic/Latinx colorectal cancer patients.

This event was created to celebrate ENLACE and KABB study participants and give them the opportunity to learn more about the center and studies. The purpose of the ENLACE and KABB studies are to address gaps in knowledge about the cancer characteristics among Hispanic patients with colorectal cancer, and to improve the engagement of Hispanic/Latino/x cancer patients in cancer genomics research, respectively. Participants also had the opportunity to ask questions to better understand the importance of their role in the fight against colorectal cancer. Participants completed fun activities and some even won raffled prizes! To learn more about these studies or COPECC, go here: https://usccopecc.org.

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## *Contact Us*

Have something to contribute to Community for a Cure? Send it to Hinde.Kast@med.usc.edu

To learn more about giving to USC Norris, please contact Minhaal M. Nathani, Executive Director of Development, at Minhaal.Nathani@med.usc.edu

Learn more about the USC Norris Comprehensive Cancer Center on our website:
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