

YEAR IN REVIEW

Head and Neck Cancer Center
Moores Cancer Center at UC San Diego Health



UC San Diego Health

A Health Care Leader

UC San Diego Health had over 100 physicians in 47 specialties named "Top Docs" in the annual San Diego Magazine "Physicians of Exceptional Excellence" survey.

UC San Diego Health Awarded Top 10 Vizient Award for Quality

UC San Diego Health was recognized as sixth among the top academic medical centers in the U.S. for excellence in delivering high-quality care.

Top Cancer Innovator

Anchored by Moores Cancer Center, UC San Diego Health is home to the only National Cancer Institute-designated Comprehensive Cancer Center in the region. Moores Cancer Center is at the forefront in developing promising new therapies and bench-to-bedside innovation and offers the latest surgical technologies, plus more than 300 leading-edge precision and immune therapy trials.

Best Medical Schools 2020

UC San Diego Medicine is ranked 6th nationally among public research-intensive medical schools specialties (US News and World Report).



Thank you

It is a pleasure to share the 2019 – 2020 annual report for the Head and Neck Cancer Center at Moores Cancer Center at UC San Diego Health. In the pages ahead, you will see highlights showcasing innovative physician-scientists, incredible exploration, and forward-thinking partners contributing to our ability to improve care and redefine how we understand and treat head and neck cancer.

The Head and Neck Cancer Center has had an extraordinary year. Dr. J. Silvio Gutkind was recently elected to the National Academy of Medicine and has had a transformative impact on our scientific as well as translational and educational efforts. Dr. Andrew Sharabi and members of our team have been awarded nearly \$2 million in funding from the National Institute of Health (NIH), and Dr. Ezra Cohen continues to forge new paths with groundbreaking immunotherapeutic approaches, recently published in *The Lancet*.

I am particularly proud to share how much our team has grown in the past year. Our focus is not just on hiring outstanding physicians, but on building a comprehensive, interdisciplinary team that facilitates the very best patient experience and outcomes. With an exemplary group of physicians, nurses, dental experts, speech therapists, survivorship nurse practitioners, and basic and translational scientific researchers, we address every care aspect critical to supporting our patients and their loved ones.

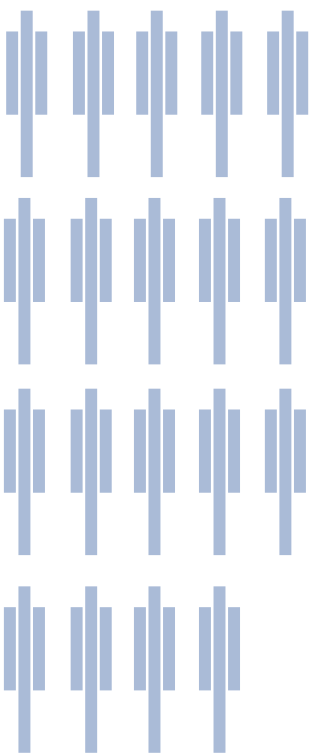
Our team has 19 active trials currently, representing concepts developed here at UC San Diego Health. Our team has been empowered to pursue collaborative, groundbreaking research that will transform head and neck cancer therapy, and improve quality of life for the many patients we are helping to fight this disease.

We — our faculty, our staff and friends like you — are truly a united front in the fight against cancer. I am excited to share a year of wins and discoveries with you, and look forward to many more.

A handwritten signature in black ink, appearing to read "Joe Califano".

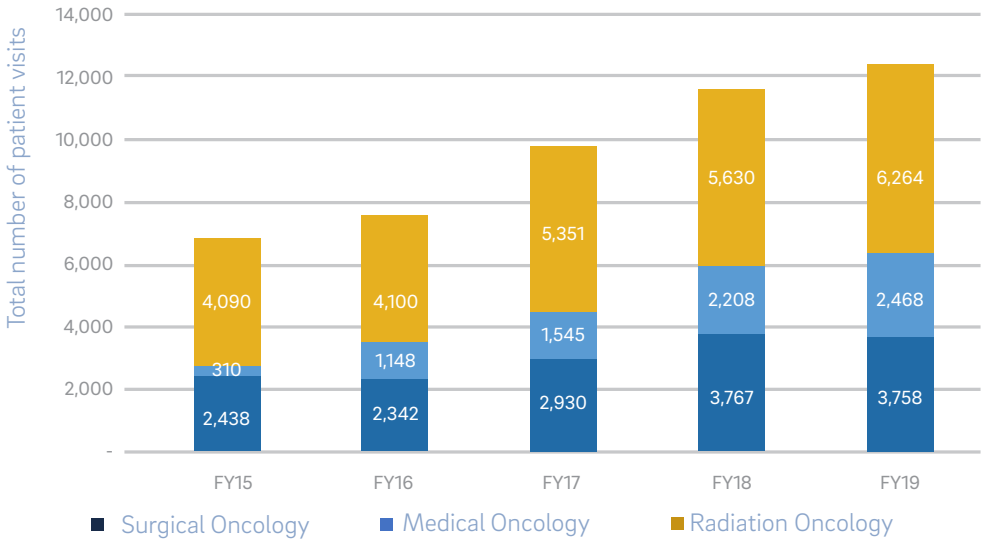
Thank you.

Joseph A. Califano III, MD
Physician in Chief, Moores Cancer Center
Director, Head and Neck Cancer Center
Co-Leader, Structural and Functional Genomics
Professor, Division of Otolaryngology-Head and Neck Surgery
Department of Surgery
University of California, San Diego

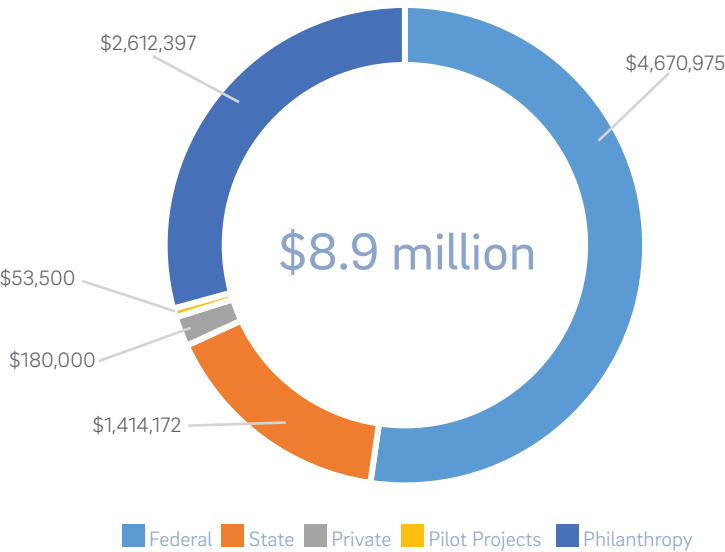


x19 Active clinical trials currently underway in Head and Neck Cancer

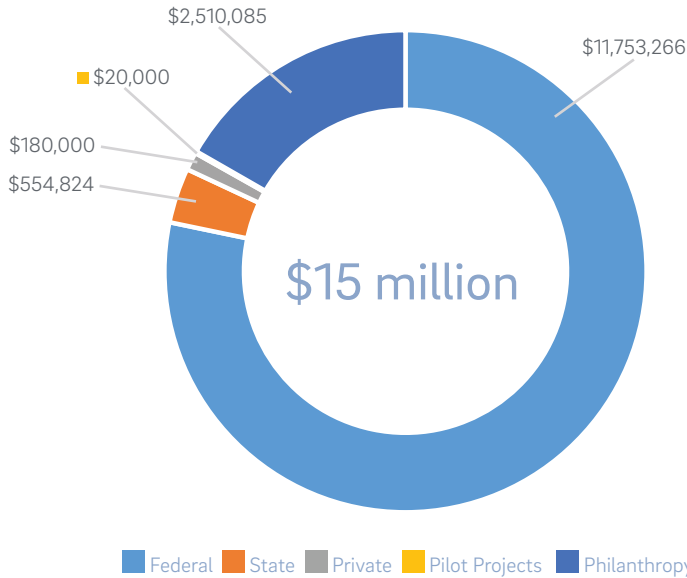
Head and Neck Cancer Center Visits by year and sub-specialty



TOTAL AWARDED FUNDS in Fiscal Year 2019



TOTAL FUTURE FUNDING in Fiscal Year 2020-Onward



Dr. Andrew Sharabi Receives 5 year NIH Grant for 1.9 Million Dollars, Role of B-cells in Responses to Radiation and Immunotherapy in Head and Neck Cancer



Andrew Sharabi, MD, PhD

Andrew Sharabi, MD, PhD, Assistant Professor in the Department of Radiation Medicine, recently received notification that his NIH R01 grant application was selected and approved for funding. This 5 year NIH grant for 1.9 million dollars will focus on the role of B-cells in responses to radiation and immunotherapy in Head and Neck cancer. The project, with co-investigators and collaborators:

Dr. Joseph Califano, Dr Ezra Cohen, Dr. Loren Mell, Dr. Karen Messer and Dr. J. Silvio Gutkind aims to elucidate the role of B-cell mediated anti-tumor antibody responses after treatment with radiation and immunotherapy. Dr. Sharabi is also Co-Investigator on an NIH U01 Cancer Moonshot award which seeks to discover new combinatorial therapies for head and neck cancer. He has successfully translated his findings into patients and is the Principle Investigator of multiple investigator initiated clinical trials, including a Phase II randomized study combining stereotactic body radiation therapy with checkpoint blockade immunotherapy. Research blood draws from these clinical trials

are being analyzed in Dr. Sharabi's lab to identify predictors of response, mechanisms of resistance, and next generation treatments for Head and Neck Cancer patients.

Dr. Andrew Sharabi is a physician-scientist, board-certified radiation oncologist, and director of the Radiation Medicine Core facility at UC San Diego Health Moores Cancer Center. He received his M.D and Ph.D. in Immunology from Baylor College of Medicine. He completed his radiation oncology residency and research fellowship at Johns Hopkins University. While at Johns Hopkins he was awarded the prestigious John G. Rangos Medal of Honor for Creativity in Cancer Discovery and published one of the first studies combining radiation therapy with anti-PD-1 checkpoint blockade immunotherapy. In addition, Dr. Sharabi serves on the ASTRO Education Committee for Immunotherapy and is an Advisory Board Member for the San Diego Center for Precision Immunotherapy (SDCPI). Dr. Sharabi's independent research laboratory at UC San Diego Health Moores Cancer Center focuses on development of novel immunotherapies and strategies to combine radiation with novel targeted agents in head and neck cancer.

Medical & Radiation Oncologists of the Year

September 22, 2019, the American Cancer Society, Desert Coastal Area Board, held its Inaugural San Diego Celebration of Cancer Care Champions. The celebration recognized individuals and institutions, nominated by their patients and peers for excellence in cancer care in 2018-2019. We are proud to announce the award for Medical Oncology of the Year went to UC San Diego Health's Dr. Ezra Cohen (peer) and Radiation Oncologist of Year went to Dr. Andrew Sharabi (patient).

Dr. Joseph Califano named Physician-In-Chief for Moores Cancer Center at UC San Diego Health

Dr. Joseph Califano will retain his roles as Professor of Surgery and Director of the Head and Neck Cancer Center, as well as maintain an active clinical practice in head and neck surgery.

The principal role of the physician in chief is to oversee clinical operations related to Moores Cancer Center and all related inpatient and outpatient oncology services at UC San Diego Health, as well as operations with affiliates and outreach clinics. As physician in chief, Dr. Califano will be appointed to the Cancer Center Executive Committee and will work in partnership with the chief administrative officer on operational and strategic opportunities that further the mission and vision of the cancer center, including reviewing and redesigning the organizational structure for cancer center medical leadership, advising on clinical faculty recruitments and resource allocation, standardizing cancer center processes and procedures and coordinating with cancer center leaders for clinical research and education efforts.



Highlighting Success

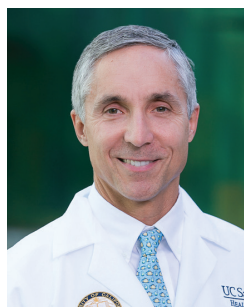


Dr. Loren Mell

National Trial Aims to Introduce Immunotherapy for Head and Neck Cancer Patients Who Can Not Tolerate Chemotherapy

Dr. Loren Mell is the PI of the NRG Cooperative Group Phase II/III for NRG-HN004 - a clinical trial that is comparing any good and bad effects of usual radiation plus the study treatment, Durvalumab, to the usual therapy of radiation plus Cetuximab, in patients with head and neck cancer who cannot take the chemotherapy drug Cisplatin. Durvalumab is an immunotherapy that works by boosting your immune system to help recognize and fight cancer. It is FDA approved for cancer of the urinary system, but it is not approved for use with radiation therapy in head and neck cancer. Cetuximab is an antibody therapy. This study will allow the researchers to know whether the different approach (radiation plus Durvalumab, the immune therapy) is better, the same, or worse than the usual approach (radiation plus Cetuximab, the antibody therapy).

"I am excited that we can offer this trial for head and neck cancer patients who historically have been excluded from trials because of older age or other health problems," Mell states. "Up to one third of patients with advanced but curable head and neck cancer have a contraindication to chemotherapy, and alternative treatments often result in poor outcomes and/or severe side effects. The trial aims to introduce a novel immunotherapy strategy in combination with radiation therapy, with the goal of boosting the immune system's ability to fight cancer, which is reduced with older age or comorbid disease. Hopefully this trial will be able to define a new standard of care that is better tolerated and as effective as chemotherapy with radiation." (clinicaltrials.gov, NCT03258554).



Joseph Califano, MD

Defining a New Paradigm for Control of Genes in Cancers

A research team led by Dr. Joseph Califano published a key study on the regulation of genes in cancers in the journal *Nature Communications*, on May 16, 2019. Califano and the team discovered that the brakes on many cancer genes, including lung and head and neck cancers, are turned off at transcriptional start sites, where DNA translation is started, rather than at a distance as has been previously thought in other cancers. This mechanism of turning off key genes that prevent cancers involves changes in key proteins, histones, that change the way the DNA code is read. In addition, the team defined a key subtype of HPV related head and neck cancers that use this mechanism in combination with changes to DNA structure,

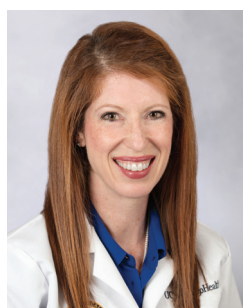
called methylation, and that this subtype of cancer contains specific mutations to genes that broadly change DNA structure. "This represents a key shift in the way we understand how the HPV virus causes cancer, as well as the way that genes are turned off in many different types of cancer," explains Califano. "This also opens up avenues for therapies based on drugs that change the way genes are turned on and off."



J. Silvio Gutkind, PhD

Gutkind and Members of UC San Diego Health Head & Neck Cancer Center Address mTOR Protein in the American Association for Cancer Research (AACR)

Members of the Head & Neck Cancer Center at UC San Diego Health have discovered that head and neck cancers are addicted to the activity of a protein known as mTOR. Inhibiting mTOR represents a therapeutic option for this disease. Dr. J Silvio Gutkind, Dr. Joseph Califano, Dr. Scott Lippman and Dr. Alfredo Molinolo recently obtained encouraging results in a recent clinical trial treating head and neck cancer patients with mTOR inhibitors. However, the molecular targets contributing to the clinical response of these inhibitors have not yet been identified. Research indicates that a specific mTOR target, known as 4E-BP1, acts as a tumor suppressor in head and neck cancer, and that its expression levels can help predict the patients that will respond better to mTOR inhibitors in future precision oncology trials.



Liza Blumenfeld, CCC-SLP

Collaborative San Diego State University (SDSU) and UC San Diego Health investigation Wins New Centuries Scholarship Grant from the American Speech and Hearing Association (ASHA)

Ignatius Nip (Associate Professor, SDSU), Philip Weissbrod (Associate Professor, UC San Diego Health), and Liza Blumenfeld (Co-Director, Head and Neck Cancer, UC San Diego Health Moores Cancer Center) were recently awarded a New Century Scholars Grant from the American Speech-Language-Hearing Foundation. The one-year grant will allow the team to evaluate speech and swallowing movement changes pre- and post-radiation therapy for patients with oropharyngeal cancer. "This award will allow us to precisely understand how head and neck cancer treatment influences some of our most important functions, eating and talking," Blumenfeld states. This is the first known study that will use electromagnetic articulography to measure real-time tongue and jaw movements during speech and swallowing in this population.

Highlighting Success



J. Silvio Gutkind, PhD

UC San Diego Health Moores Cancer Center's J. Silvio Gutkind Elected to National Academy of Medicine

By: Yadira Galindo, Media Relations
UC San Diego Health

Considered one of the highest honors in the fields of health and medicine, J. Silvio Gutkind, PhD,

Distinguished Professor of Pharmacology at University of California San Diego School of Medicine and associate director for basic science at Moores Cancer Center, has been elected to the National Academy of Medicine (NAM).

Gutkind is being recognized by his peers for his contributions in the understanding of cancer signaling networks, and pioneering the study of the PIK3CA-mTOR signaling circuitry — which is important in regulating the cancer cell growth — in oral, head and neck cancer progression, metastasis, and in therapy resistance.

“Silvio’s arrival at Moores Cancer Center has had a transformative impact on our scientific, translational and educational efforts at all levels,” said Scott M. Lippman, director of UC San Diego Moores Cancer Center, who is co-leading a National Cancer Institute-funded study with Gutkind that aims to develop therapeutic options to intercept and prevent oral cancer development in patients with precancerous lesions of the mouth.

“Silvio’s contributions go well beyond head and neck cancer. His research has led to novel preclinical models and strategies for treating and preventing many types of malignancies.”

“It is a true privilege to be elected as a member of the National Academy of Medicine,” said Gutkind. “I am most proud of our team’s contributions towards understanding the molecular basis of cancer. Based on these early findings, I have had the opportunity to lead a multidisciplinary and multi-institutional effort aimed at exploring the biochemical consequences and clinical benefits of treating newly diagnosed head and neck cancer patients with mTOR inhibitors.



Dr. Thanos Kristallis and
Dr. Katya Archambault

UC San Diego Health Welcomes The San Diego Dental Health Center

The San Diego Dental Health Center is an independent private practice that has started to see UC San Diego Health patients as of February 1, 2019. The Dental Clinic is located on-site at the Perlman Medical Offices on the La Jolla campus and treats patients Monday through Friday 7:00 am - 5:00pm.

Both Doctors Katya Archambault and Thanos Kristallis are affiliated with the Department of Head and Neck Surgery and Plastic Surgery as adjunct clinical faculty. The Dental Center provides treatments that contribute to the teams multidisciplinary approach. Treatments include include photobiomodulation (low level laser treatment) for oral mucositis, dysphagia, dysgeusia, xerostomia and short and long term fibrosis due to radiation and chemotherapy. CO2 hard and soft tissue laser is available to remove tooth decay without drilling and treat osteoradionecrosis (ORN) of the bone. Oral and maxillofacial radiology services including CBCT interpretation, oral and maxillofacial prosthetic rehabilitation as well as dental oncology services make the San Diego Dental Health Center an integral portion of the UC San Diego Head & Neck Cancer Center team. Both doctors provide virtual surgical planning and post-operative head and neck cancer reconstruction as well as guided dental Implant surgery for dental full mouth reconstruction.

We Deem All of Our Head and Neck Cancer Patients "Cancer Survivors"

With a growing aging population, in combination with more people being diagnosed with cancer and living through treatment, we have more cancer survivors than ever before.

Our board-certified nurse practitioner, Carie Montesa, sees patients from the time of diagnosis and follows them for years after treatment is completed. She provides patients with a treatment summary and a survivorship care plan, and empowers patients to share their unique survivorship care plan with their other healthcare providers. The survivorship clinic also provides cancer surveillance, coordination of care, referrals, health promotion education, and smoking cessation counseling.

We are very excited to provide this much-needed service to all of our head and neck cancer patients.



Immunotherapy Better than Chemotherapy for Recurrent Metastatic Head and Neck Cancer

By: Yadira Galindo, Media Relations UC San Diego Health



Ezra Cohen, MD

A randomized clinical trial involving 97 medical centers in 20 countries, including Moores Cancer Center at UC San Diego Health, found that treating patients who have chemotherapy-resistant head and neck cancer with the immunotherapy drug pembrolizumab is more effective and less toxic than standard chemotherapy, reports an international team of researchers in the online issue of *The Lancet*.

Previous research had shown that pembrolizumab (Keytruda) was safe and effective for treating patients with recurrent or metastatic head and neck squamous cell carcinoma whose disease had progressed while on or after receiving standard chemotherapy. Data from this clinical trial called KEYNOTE-040, a phase III study sponsored by Merck & Co., the manufacturer of the drug, takes the research a step further by comparing the immunotherapy drug head-to-head to three go-to chemotherapy drugs currently used as standard treatment: methotrexate, docetaxel and cetuximab.

“We compared pembrolizumab against standard of care to see if it fulfilled the promise of early data for patients who are unlikely to do well on standard therapy,” said Ezra Cohen, MD, professor of medicine at University of California San Diego School of Medicine and corresponding author on the study.

“In this trial, patients who received pembrolizumab alone had a higher response rate compared to those receiving standard chemotherapy while those responses lasted, on average, one-and-a-half years. Furthermore, the median survival at one year was markedly better. I feel it is safe to say that these types of therapies should be the new standard therapy for people with cancer that recurs and is resistant to therapy.”

Over a 17-month period, 247 patients were randomized to receive pembrolizumab and 248 patients were randomly selected by their physicians to receive one of the three standard therapies. The median overall survival for patients receiving immunotherapy was 8.4 months and 6.9 months for patients treated with standard care. Patients received treatment until their cancer progressed, they developed unacceptable toxicity, they withdrew or their physician removed them.

The median duration of response was 18.4 months in the pembrolizumab group, compared with five months in the standard therapy group.

Twelve months after initiating the trial, 37 percent of patients receiving pembrolizumab were alive compared to 26.5 percent of patients on standard therapy.

Our Team

Surgical Oncology

Michael Bouvet, MD
Kevin Brumund, MD
Joseph Califano, MD*
Charles Coffey, MD
Ryan Orosco, MD

Medical Oncology

Anjali Bharné, MD
Ezra Cohen, MD*
Greg Daniels, MD
Kathryn A. Gold, MD
Derek Helton, MD, FACP
Scott Lippman, MD
Assuntina Sacco, MD
Fareeha Siddiqui, MD
Sarah McGhee, MS, ANP-BC

Radiation Oncology

Loren Mell, MD*
Douglas Rahn, MD
Brent Rose, MD
Parag Sanghvi, MD, MSPH
Andrew Sharabi, MD
James Urbanic, MD

Clinical Informatics Specialist

Celia Ramsey

Dietary/Nutrition

Heather Diamond, RD
Patricia Rubio, RD, CNSC

Graphic Design

Tracy Dezenzo

Laryngology

Andrew Vahabzadeh-Hagh, MD
Philip Weissbrod, MD

The Lynn and Richard Gordon Family Patient Navigator

John Fouania

Neurotology, Rhinology and Skull Base Surgery

Joseph Califano, MD
Adam DeConde, MD, PhD
Rick Friedman, MD, PhD
Jeffrey Harris, MD, PhD

Pathology

Grace Lin, MD
Alfredo Molinolo, MD, PhD

Pharmacist

Linda Barnachea, Pharm.D. BCOP

Program Manager

Jayna Athas, MA

Reconstructive Surgery

Jacqueline Greene, MD
Frederic Kolb, MD
Ryan Orosco, MD
Christopher Reid, MD

Rehabilitation Services

Liza Blumenfeld, MA
Catherine Burgess, DPT, OCS
Resie Collins, OTR/L
Alyssa Mikut, OTR/L

Research Director

J. Silvio Gutkind, PhD*

Social Worker

Margaret Sheridan, LCSW

Speech Language Pathology

Liza Blumenfeld, CCC-SLP, BCS-S*
Andi Docktor, MA, CCC-SLP
Kristen Linnemeyer, CCC-SLP

Survivorship Program

Carie Montes, NP

*denotes center co-directors

Moving Forward

What the Future Holds for the Head and Neck Cancer Center

The past year has been exciting and exceptionally productive, and we look to our next steps with optimism and an entrepreneurial spirit. It is because of your support that we have been able to make great strides in a short time frame.

As we continue to evolve, we look forward to continuing to provide up-and-coming cancer care leaders with the opportunity to work side-by-side with our experts; contribute to novel discoveries, treatments, and technologies; and hone their skills in an innovative, science-driven clinical setting. We also aim to create startup funds and pilot funds for research faculty and younger faculty members. These will fuel investigative endeavors not typically supported through grant and government funding and create a powerful foundation for the game-changers of tomorrow to begin forward-thinking work today.



Learn More

Jayna Athas | Program Manager

Pilar Gose | Director of Development

UC San Diego Health Advancement

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At the University of California San Diego, challenging convention is our most cherished tradition. The Campaign for UC San Diego is a university-wide comprehensive fundraising effort to empower the next generation of innovators to blaze a new path toward revolutionary ideas, unexpected answers, lifesaving discoveries, and planet-changing impact. All gifts since July 1, 2012, have already contributed to the momentum and success of the Campaign.

UC San Diego respects your privacy. If you would like to be removed from future UC San Diego Health fundraising communications, please contact us at optout-hsdev@ucsd.edu or 800-588-2734.

**The Campaign For
UC San Diego**