



SHOWCASING OUR IMPACT:

SUCCESS STORIES FROM 2019-2020



SC CTSI

Southern California

Clinical and Translational Science Institute

Translating Science into Solutions for Better Health

Dear SC CTSI Investigators, Faculty, Staff, Students, and Community Members:

As we take a look back at our impact over the past year, we wanted to thank you for your support of our services and resources. From increasing our breadth of service offerings to making strides toward greater inclusion of diverse and underrepresented research participants, we have a lot to be proud of this year.

As a result of our support, we assisted 806 investigators from 12 schools on 69 projects from 2019 to 2020. These projects have catalyzed clinical and community-based research in our neighborhoods, our city, county, and globally.

Enclosed you will find just a few of our success stories, which would not have been possible without the hard work and expert advice of our CTSI staff and faculty. Our core groups provide consultations, toolkits, educational programming, research tools, trained study staff, and expert advice to assist in every phase of clinical research operations.

We look forward to serving you in the future and sharing in your success!

Warm wishes,



Thomas Buchanan, M.D.

SC CTSI Director & Principal Investigator
Vice Dean for Research
Chief, Division of Endocrinology and Diabetes, Department of Medicine
Professor of Medicine, Obstetrics and Gynecology, and Physiology and Biophysics
Keck School of Medicine, University of Southern California



Michele Kipke, Ph.D.

SC CTSI Co-Director & Director of Community Engagement
Professor of Pediatrics and Preventive Medicine, Keck School of Medicine, University of Southern California
Vice Chair of Research, Department of Pediatrics, Children's Hospital Los Angeles
Director of Clinical Research, The Saban Research Institute

[Learn about SC CTSI's new services and resources by clicking here!](#)



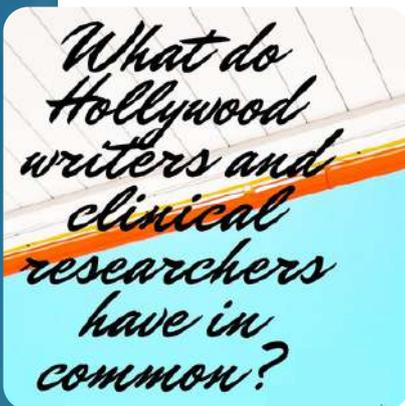
CHLA AND SC CTSI DEVELOP INTERACTIVE VIRTUAL ROBOT CHARACTER TO BOOST PARTICIPATION OF DIVERSE POPULATIONS IN CLINICAL RESEARCH

Kids and adults at Children's Hospital Los Angeles engaged with "Zippy" the virtual research navigator to learn the basics about clinical research and why it's so vitally important for people from every population group to participate.



SAVING LIMBS AND LIVES: USC INVESTIGATOR ASSEMBLES NOVEL TRIAGE AND TREATMENT TEAM TO PREVENT AMPUTATION AMONG DIABETES PATIENTS

The SC CTSI championed a pilot study to develop a multidisciplinary "hot foot line" team led by David Armstrong, D.P.M., M.D., Ph.D. The team is designed to rapidly assess and treat diabetic patients with foot ulcers to preserve limbs and prevent amputation.



SC CTSI LEVERAGES UNIQUE PROXIMITY TO HOLLYWOOD ENTERTAINMENT INDUSTRY TO INCLUDE HEALTH AND CLINICAL RESEARCH STORYLINES IN POPULAR TELEVISION PROGRAMS

The SC CTSI continued its collaboration with Hollywood, Health & Society (a health communications program based at the USC Annenberg Norman Lear Center) to consult with the writers and creators of popular television shows and movies about how to integrate content about health and clinical research into their storylines. Health-related storylines have appeared in shows like Grey's Anatomy, Empire, This is Us, and more



BUILDING BRIDGES: A UNIQUE COLLABORATION BETWEEN ACADEMIC AND PUBLIC INSTITUTIONS HELPS ADVANCE THE FIELD OF TRANSLATIONAL SCIENCE

Through a multidisciplinary collaborative effort, SC CTSI faculty and staff tackled a big problem currently facing the scientific community: effectively translating research into policy and practice. This team consisted of Amytis Towfighi, M.D., Director of Health Delivery Science; Allison Orechwa, Ph.D., Director of Programmatic Development; and Daniella Meeker, Ph.D., Clinical Research Informatics Co-Director. Through their collaboration, the team identified common interests between the government and health organizations and the CTSA hubs so that they could both work towards a shared goal. SC CTSI partnered with UCLA's CTSI and the Los Angeles County Department of Health Services to create an intramural pilot funding program for projects that test interventions to enhance quality, efficiency, and patient-centeredness of care.



USC/CHLA INVESTIGATOR DEVELOPS IMPROVED METHOD TO ENABLE EARLIER ASSESSMENTS OF LUNG HEALTH FOR BABIES WITH A POSITIVE NEWBORN SCREENING FOR CYSTIC FIBROSIS

Thousands of children are born each year with genetic variants associated with cystic fibrosis, a disease that can interfere with function of the lungs and pancreas, leading to a range of resulting health impacts and possibly to lifespans shortened by decades. The noninvasive, improved method established by SC CTSI KL2 alumna Danieli B. Salinas, M.D., can spot early signs of lung disease in newborn babies to guide diagnosis and care.



MAKING SENSE OF BIG DATA: USC BIOSTATISTICIAN HELPS LEAD RESEARCH TO IDENTIFY INCREASED STROKE RISK IN AORTIC REPAIR SURGERIES

Li Ding, M.D., M.P.H., a biostatistician at the SC CTSI, worked on a retrospective analysis of thousands of patients whose outcomes were recorded in a national patient registry. The study could help vascular surgeons better protect patients from the risk of stroke during endovascular aortic repair procedures. Their retrospective study, an analysis of outcomes involving a subset of approximately 11,600 of the patients in the VQI data, suggested important differences in the risks associated with the various entry points and approaches that may eventually lead to improved guidelines to help surgeons better protect their patients from stroke.



RESEARCH BY CHLA PEDIATRIC HOSPITALIST SEEKS TO SHARPEN CLINICAL GUIDELINES FOR CHILDREN WITH RESPIRATORY INFECTIONS RELATED TO TRACHEOSTOMY

Children with tracheostomy are at high risk for infections of the airway and lungs, which can lead to frequent hospitalization, overuse of antibiotics, and other problems. Christopher J. Russell, M.D., M.S., Associate Professor of Clinical Pediatrics at CHLA, investigates better ways to improve health outcomes for this understudied patient population. Russell is a SC CTSI KL2 alumni and Pilot Funding awardee, and he was mentored by BERD Director Wendy Mack, Ph.D. Developing evidence-based guidelines and improving care for these patients has been one of Russell's primary research goals for several years, and he recently completed a retrospective cohort study of 210 children under 18 years old to identify the factors associated with chronic Pa infection in the first two years after tracheotomy.

"I was promoted to Associate Professor in 2019 and could not have achieved this without KL2 support at the beginning of my appointment as junior faculty." – Joyce Javier, M.D., Pediatrics/Childrens Hospital

"The services we received from Daniella Garofalo and Hira Sherazi have been invaluable in helping us derive the data we need from the i2b2 system." – Janet Sobell, Ph.D., Psychiatry & The Behavioral Sciences



FUNDING THE FUTURE: SC CTSI GRANT SUPPORTS STUDENT RESEARCH ON CRITICAL TOPICS IN TRANSLATIONAL SCIENCE

Funded by a grant from SC CTSI, Karen Chan, Annie Ly, and Christian Reyes all submitted digital posters on their research to this year's Drug Information Association Global Meeting. They are students in the USC Department of Regulatory and Quality Sciences in the School of Pharmacy. Financing the next generation of researchers and supporting the pursuit of innovative research like what these three students have been working on is critical to the future of translational science and aligns well with the overall CTSA mission.

"As a result of the CTSI funds, we were able to receive \$100,000 of additional departmental funds to support our Practice-Based Research Network activities." – John Brekke, Ph.D., Suzanne Dworak-Peck School of Social Work

"The voucher funding was extremely helpful for me in working with my department to get my shared medical appointments program off the ground." – Elizabeth Joe, M.D., Neurology - Clinical Faculty

"The Team Building grant in particular was impactful and definitely resulted in creation of our new USC Center for Young Adult Cancer Survivorship. We anticipate additional downstream impact as this Center becomes more established and mature." – David Freyer, D.O., Pediatrics/Children's Hospital

KECK SCHOOL OF MEDICINE AND SC CTSI GIVE BACK TO COMMUNITY DURING COVID-19

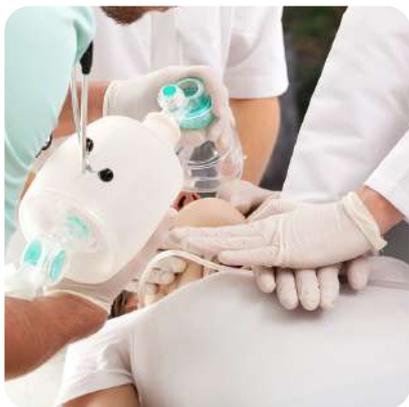
SC CTSI worked alongside Keck School of Medicine in giving back to our local community most affected during the COVID-19 pandemic. In addition to awarding mini-grants to organizations in the Norris Comprehensive Cancer Center, donations have also been made to LAC+USC Medical Center for COVID-19 related items. Donations included more than 5,600 PPE items, 3,000 hand sanitizers to families in LA, and 1,403 free meals and drinks from local restaurants. KSOM medical students tutored children of healthcare workers, and KSOM distributed 4,000 educational materials in 12 different languages to families in need around LA.





SC CTSI ALUM BRIAN LEE, MD PH.D, IS AWARDED NIH K23 CAREER DEVELOPMENT GRANT TO CONTINUE RESEARCH INTO BRAIN-COMPUTER INTERFACE TECHNOLOGIES

Brian Lee, M.D., Ph.D., a neurosurgeon who recently completed a three-year mentored career development training program at the SC CTSI was awarded a new five-year NIH research grant to advance his research into human brain-computer interface technologies.



STRESS IN THE ER: HOW RESEARCHERS ARE USING WEARABLE TECH TO STUDY DOCTORS IN ACTION

Now more than ever, doctors face stress associated with making life changing decisions on a daily basis. Researchers at Keck School of Medicine and PM Pediatrics, a specialized urgent care company, studied the stress impact performing a resuscitation had on healthcare workers throughout their shifts. Doctors participating in the study wore a Hexoskin--a wireless vest that monitors HR using Bluetooth--under their work clothes. Oral swabs were used to measure changes in cortisol levels. Before the study, researchers knew that stress levels increased directly after a resuscitation. However, researchers concluded that stress levels remained high throughout the work shift of doctors, not just in the immediate time period after performing a resuscitation.

"We are appreciative of the services that SC CTSI provided related to REDCap migration, creation, and working with our consortium partners." - Tracy Bastain, Ph.D., Environmental Health

"The SC CTSI pilot funding was pivotal in helping us develop an app and digital health tool for caregivers. As a result, we are now preparing a grant application to the National Institute on Aging. Thank you!" - Shinyi Wu, Ph.D., M.S., Suzanne Dworak-Peck School of Social Work

"I will not hesitate to work with Nicki Karimipour and the team of clinical research coordinators again, they were fantastic!" - Bonnie Olsen, Ph.D., Family Medicine - Clinical Faculty