



University of Southern California • Children's Hospital Los Angeles



# SOUTHERN CALIFORNIA CLINICAL AND TRANSLATIONAL SCIENCE INSTITUTE ANNUAL IMPACT REPORT

2023

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# From the Directors



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.

We are thrilled to report we assisted 284 investigators from nine schools in 2023. 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.

Sincerely,

*Tom Buchanan, MD*

*SC CTSI Director/Principal Investigator*

*Michele Kipke, PhD*

*SC CTSI Co-Director/CE Director*





# 2023 Core Group Highlights

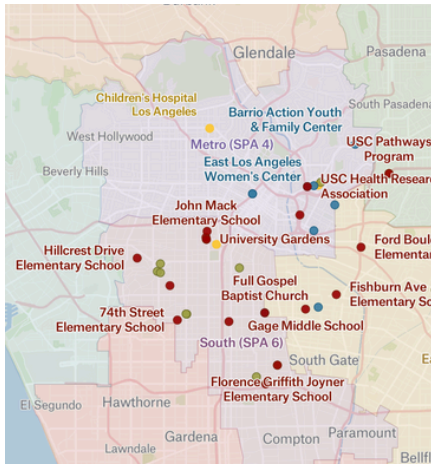


## BIostatISTICS, EPIDEMIOLOGY AND RESEARCH DESIGN

\* **By the Numbers:** 55 publications, supported 36 grant proposals, 7 funded.

\* **Testimonial:** “BERD has been an invaluable asset to our research team. From assisting with study design to data analysis, BERD has helped our group produce high-quality groundbreaking research.”

**Program Highlight:** 3 REDCap workshops at USC and CHLA in 2023; 46 attendees. “It was very helpful to learn all of the tools REDCap has to offer, including the best-practice and principles of building a database in REDCap, and how to cite this in publications. I really appreciated so many people being there to answer our questions during the hands-on activities.”



## COMMUNITY ENGAGEMENT

\* **By the numbers:** 134 promotoras trained, 121 research education workshops, 18 listening sessions.

\* **Testimonial:** "The collaboration with SC CTSI's Community Engagement team definitely enhances and reinforces the knowledge of our promotores. The Fundamentals of Health Research training is now a staple with each new cohort we graduate. At the end of the training, our promotores are well-prepared to share the information with their community and to clarify and dismantle any misinformation or disinformation about research.”

**Program Highlight:** We have worked with the Housing Authority of the City of Los Angeles, plus partners within and outside of USC to bring services and resources to the Nickerson Gardens community.



## CLINICAL RESEARCH INFORMATICS

\* **By the numbers:** Fulfilled 368 help desk requests from 87 USC investigators, 230 from Airtable and TriNetX from 42 CHLA investigators across 22 departments. Additionally, these requests resulted in the generation and validation of 86 new datasets.

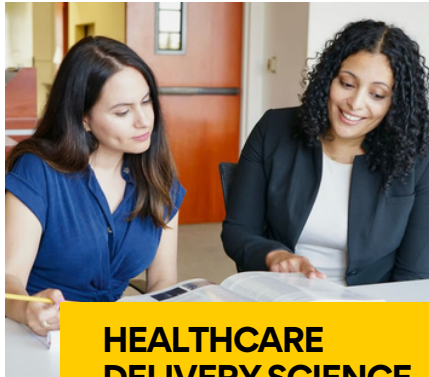
\* **Testimonial:** “[My biggest takeaway was learning] there are many useful tools available to do preliminary research for future projects/grants that I didn’t know existed.”

**Program highlight:** The introduction of KeckCap, a 21 CFR Part 11 validated iteration of REDCap, marks a significant advancement in data management at Keck and USC. This robust platform now serves as the primary repository for nearly all FDA studies conducted at USC, effectively addressing a critical gap in data management infrastructure. At CHLA, they TriNetX, a multi-site cohort discovery platform, and acquired over 50 new TriNetX users since its re-launch.





# 2023 Core Group Highlights



## HEALTHCARE DELIVERY SCIENCE

\* **By the numbers:** 80 participants attended the inaugural symposium “Healthcare Delivery Science: Innovation and Partnerships for Health Equity Research Symposium (DESCIPHER)” in June 2023.

\* **Testimonials:** “The [Intro to Healthcare Delivery Science] course was a great introduction to complex subjects.”

**Program highlight:** Launched the HDS online training program with courses in 10 topics like behavioral economics, leadership and management, stakeholder engagement and more.



## RESEARCH DEVELOPMENT

\* **By the numbers:** 22 attendees at the team science workshop.

\* **Testimonials:** “I appreciated the information about authorship practices, particularly how community members/stakeholders can be involved in the process of publication even if they don't necessarily “write” parts of the paper.”

**Program highlight:** We provided tailored team science support to two multidisciplinary pilot projects in 2023, including surveys, consultations, and ongoing training, to enhance their team capabilities and capacity for success. The 22 attendees of our team science workshop series reported an increase in understanding of team science concepts, tools and ability to apply them to improve the performance of their research team after attending the workshop.



## REGULATORY KNOWLEDGE & SUPPORT

\* **By the numbers:** Since the launch of the monitoring (2018) and auditing (2021) modules, RKS' online training is still being widely used. The monitoring module had 264 users, and the auditing module had 165 users in 2023. We held two symposia, and over 95% of survey responses reported they would recommend these event to others.

\* **Testimonials:** “Lectures were extremely captivating and informative on each topic discussed. Lecturers were knowledgeable and helpful in explaining complicated procedures.”

**Program highlight:** Our symposia continue to attract many people from diverse groups each year. Our first symposium in 2023 attracted 138 attendees from 34 institutions and our second symposium attracted 112 attendees from 54 institutions.



# 2023 Core Group Highlights



\* **By the numbers:** 7 interns were placed at SC CTSI.

\* **Testimonials:** “[The internship] showed me what it is like to be in a professional workplace, showed me how to communicate with high knowledge individuals, and it influenced me as I fell in love with doing research.”

## WORKFORCE DEVELOPMENT

**Program highlights:** Ongoing internship programs with Bravo High School, California State University Los Angeles, and USC to engage and inspire the next generation of the clinical research workforce. 74 Bravo students attended career workshops led by SC CTSI leadership. The CHLA WD team created a comprehensive intranet that houses all resources relevant to researchers using a centralized organizational framework.

# 2023 Impact

## SC CTSI Service Provision



### BIostatistics, EPIDEMIOLOGY, AND RESEARCH DESIGN (BERD)

**184** consultations from Biostatistics, Epidemiology, and Research Design (BERD).

**ROI:** \$1,405,104 in new funding awards.

**55** publications.

**10** papers submitted & in review.

**9** grants submitted & in review.



### WORKFORCE DEVELOPMENT

**21** consultations from Workforce Development (WD) for various KO1, K12, K22, K23, K24, K99, KL2, RO1, and R25.

**ROI:** \$3,692,125 in new funding awards.



### KL2 PROGRAM

**13** active KL2 scholars.

**11** KL2 applications for Cohort 15.

**18%** of scholars are from historically underrepresented backgrounds.

**ROI:** \$2,289,000 in new funding awards.

**ROI:** 1 Team Building Voucher Awardee.

**ROI:** \$410,000 in new funding awards.



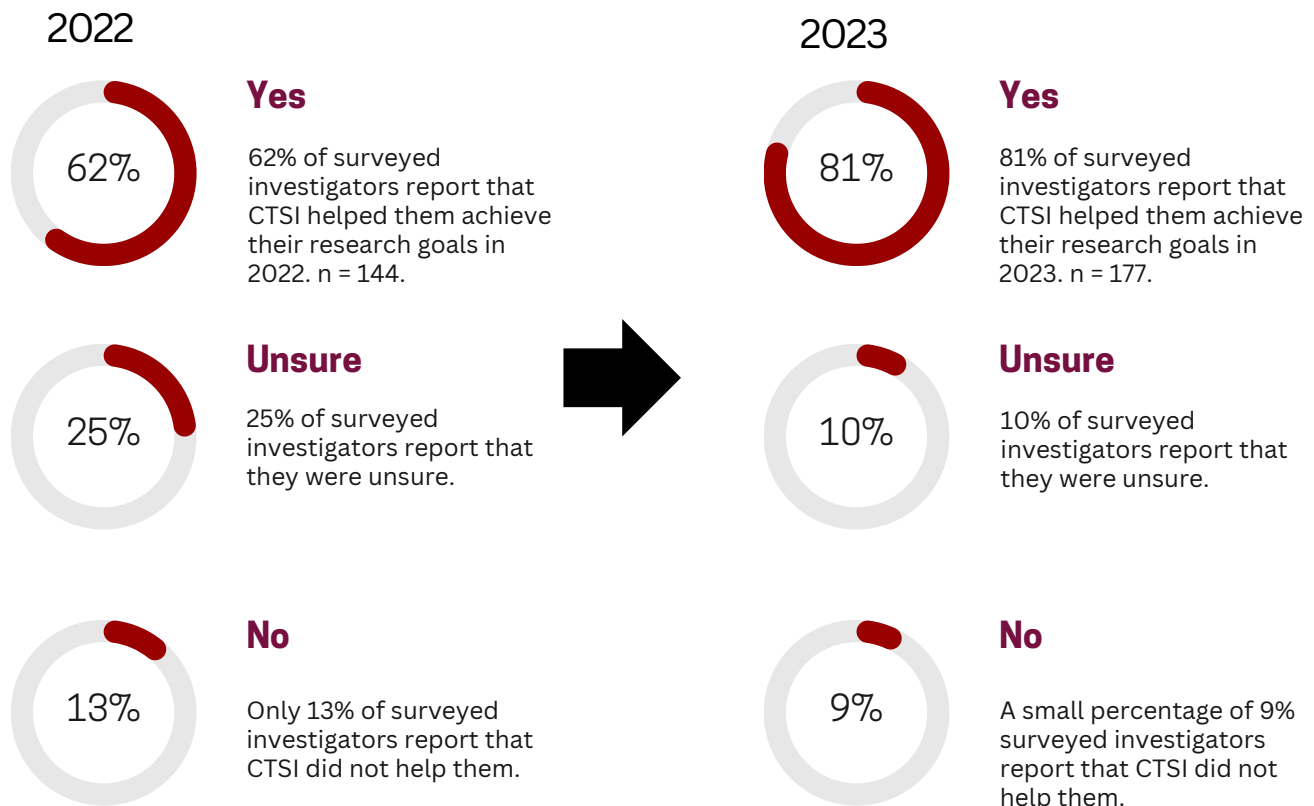
# 2023 Impact



## Milestones



## Did CTSI help investigators reach their research goals?

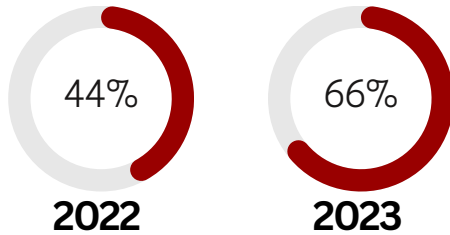


**This is a 19% increase in the reported utility of SC CTSI services from the prior year.**

# 2023 Impact



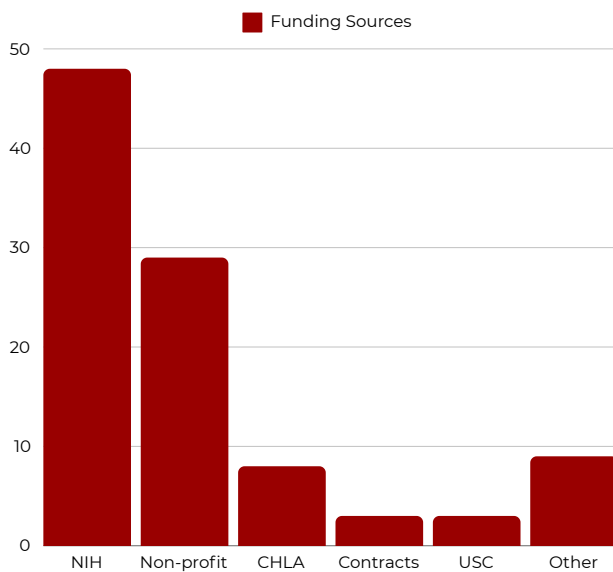
## Dissemination of Research Findings



66% of surveyed investigators reported dissemination of research findings in 2023. A 22% increase from the prior year.

- We disseminated research at over **70** conferences.
- Peer-reviewed publications remain a main source of dissemination to scientific audiences, with **314** new CTSI-related publications in 2023, which have already garnered **408** citations. On average, each publication garnered **1.3** citations, with the most influential publication receiving **42** citations.

## Furthering Clinical and Community Research



Funded ROI Distribution Graph

- Based on annual survey data, **32** CTSI-supported investigators reported **38** newly funded grants in 2023, totaling **\$54,778,875**. Funding sources include NIH (48%), non-profit/foundation (29%), CHLA (8%), other government contracts (3%), USC (3%), and other (9%).
- **83%** of the newly funded grants are multidisciplinary in nature, **33%** multi-PI in nature, and **25%** engage a community partner.
- Based on annual survey data, **38%** of CTSI-supported investigators (n= 58 of 153) submitted at least 80 new grant proposals in 2023 to NIH (63%), other government agencies (10%), non-profit and foundations (16%), industry (1%), and other (15%).

# Funding Recipients



## Research Development Pilot Awards

- **Julie Cederbaum, PhD**, Associate Professor of Social Work
  - “Support in the transition to adulthood for youth in foster care.”
- **Fumito Ito, MD, PhD**, Associate Professor of Surgery
  - “Early on-treatment blood-based biomarkers for prediction of response to immunotherapy in melanoma.”
- **Steve Sussman, PhD**, Professor of Population and Public Health Sciences
  - “Interviews of treatment providers from among the Newsweek America’s best treatment centers regarding the breadth of treatment offered.”
- **Benjamin Xu, MD, PhD**, Assistant Professor Of Clinical Ophthalmology
  - “Role of in vivo ultrasound elastography measurements of human ocular tissue stiffness in glaucoma.”



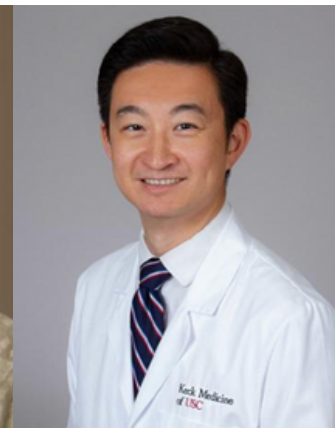
Julie Cederbaum, PhD



Fumito Ito, MD, PhD



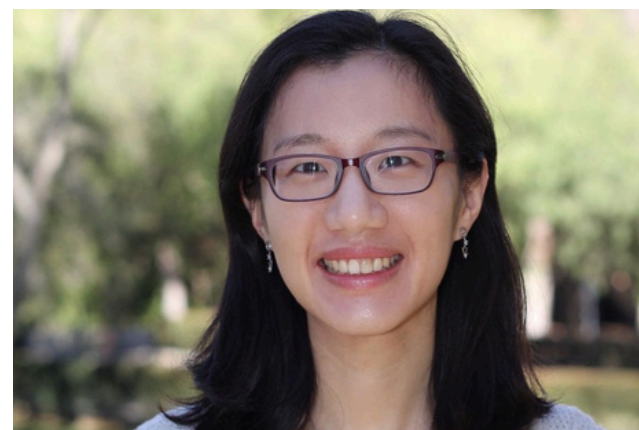
Steve Sussman, PhD



Benjamin Xu, MD, PhD

## Research Development Team Building Awards

- **Yao Du, PhD**, Clinical Assistant Professor of Otolaryngology-Head and Neck Surgery
  - “Exploring neurodiverse individuals’ lived experiences with online games and virtual worlds as novel platforms and tools for telehealth: Implications for speech-language and occupational therapy.”



Yao Du, PhD



# Funding Recipients



## Research Development Multidisciplinary Pilot Awards

- **Sophie Terp, MD**, Associate Professor of Clinical Emergency Medicine
- **Sarah Axeen, PhD**, Assistant Professor of Research Emergency Medicine
- **Brian Nguyen, MD**, Associate Professor of Clinical Obstetrics and Gynecology
  - “Characterizing and Evaluating Variations in the Management and Morbidity of Obstetric Emergencies as Impacted by Abortion Restrictions.”
- **Jason Kutch, PhD**, Associate Professor of Biokinesiology & Physical Therapy
- **James Finley, PhD**, Associate Professor of Biokinesiology and Physical Therapy
- **Heather Culbertson, PhD**, Assistant Professor of Computer Science and Aerospace and Mechanical Engineering
  - “The neuroscience and engineering of ocean wave surfing as a therapy for chronic pain.”



Sophie Terp, MD



Sarah Axeen, PhD



Brian Nguyen, MD



Jason Kutch, PhD



James Finley, PhD



Heather Culbertson, PhD

# Funding Recipients



## Mentored Career Development of Clinical and Translational Science (MCD-CTS) Program

- The Mentored Career Development in Clinical and Translational Science (MCD-CTS) award is a three-year program created to support research career development for health professionals or individuals with research doctoral degrees.

## Five New KL2 Scholars Awarded in 2023

### Cohort 14 (2023-2026)

**Melissa Bent, MD**, Assistant Professor of Pediatric Orthopedics

- “The use of exergaming with augmented reality (AR) to promote physical activity in children with Cerebral Palsy.”

**Bridgid Conn, PhD**, Assistant Professor of Clinical Pediatrics

- “Developing an Intervention Model to Address Chronic, Severe Mental Health Symptoms Among Transgender and Non-Binary Adolescents and Young Adults.”

**Taylor Burkholder, MD, MPH**, Assistant Professor of Clinical Emergency Medicine

- “Evaluating the implementation of the WHO Emergency Care Toolkit in Zambia.”

**Issac Asante, PhD, MS, BPharm**, Assistant Professor of Research Ophthalmology

- “Docosahexaenoic acid Metabolic Dysregulation in APOE4 Carriers and its Role in the Development of Alzheimer's Disease.”

**Jessica Sheth Bhutada, MD, MS**, Assistant Professor of Clinical Pediatrics

- “Determining Modifiable Risk Factors for Metastatic Gastric Cancer in Adolescents and Young Adults.”



Melissa Bent, MD



Bridgid Conn, PhD



Taylor Burkholder, MD



Issac Asante, PhD



Jessica Sheth Bhutada, MD



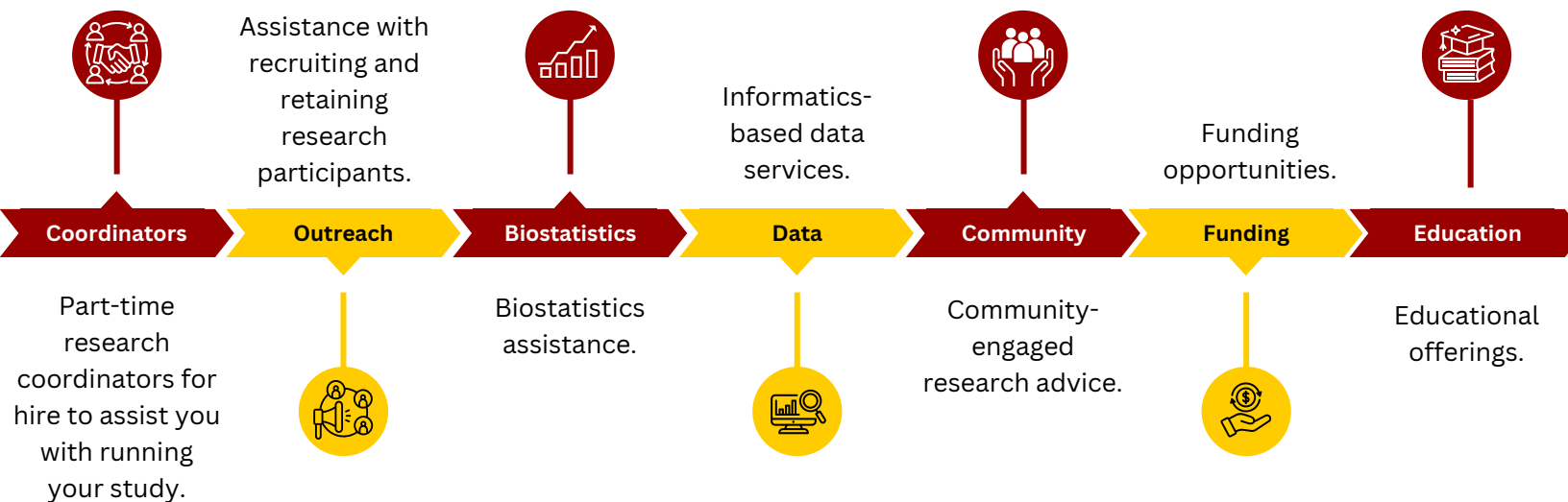


# How to Engage with CTSI Services

## REACH OUT TO US

Whether you are a new or established researcher, SC CTSI has numerous resources to assist you. Reach out to us at [CRS@SC-CTSI.org](mailto:CRS@SC-CTSI.org) or call us at 323-442-CTSA.

## WHAT SERVICES DO WE PROVIDE?



*...and much more!*



# ACKNOWLEDGEMENTS



Thank you to all of our academic and community partners, research personnel, participants, faculty, and staff.

This 2023 Impact Report was compiled by the SC CTSI Communications and the Evaluation & Improvement cores to develop an integrated overview of the organization's key achievements, progress markers, and future directions based on input and content from diverse institutional stakeholders. This report reflects tremendous efforts made by all SC CTSI faculty and staff.



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