Weill Cornell Medicine’s Clinical and Translational Science Center Awarded NIH Renewal Grant for $61.9 Million

The Weill Cornell Clinical and Translational Science Center (CTSC) led by Founding Director and Principal Investigator, Dr. Julianne Imperato-McGinley has received a $61.9 million Clinical and Translational Science Award from the National Center for Advancing Translational Sciences (NCATS) for an additional five years of funding to support the CTSC and its efforts to speed the translation of scientific discoveries from the laboratory bench to the patient's bedside.

This is the fourth consecutive renewal for the CTSC. It received the first award in 2007, followed by awards in 2012, 2017, and most recently in 2022. Since its initial award in 2007 the CTSC has grown significantly and has transformed the research landscape at Weill Cornell. In the next five years, the CTSC will build on its progress by developing and disseminating novel tools, enhancing education and community outreach, informatics, and other resources in translational science, while participating in national clinical trials and recruitment and enhancing diversity in all aspects. The overarching goal is to engage all phases of the research enterprise, including collaborating with NCATS to form a network of 60 CTSA interdependent hubs and stakeholders, while continuing to foster creativity, innovation, and dissemination.


NEW SCHOLARS AND TRAINEES

We're excited to welcome the new incoming students to the CTSC! Please join us in giving the KL2 Scholars and TL1 Trainees a warm welcome!

New Incoming KL2:

Faten Taki, PhD, MS, MA
Instructor of Pharmacology Research in Anesthesiology, WCM

Dr. Taki will investigate the feasibility of a cross-sectional study with refugees in New York City to identify epigenetic biomarkers (i.e., DNA methylation) of mental illness and explore the challenges experienced by refugees when participating in molecular research
Erin Mulvey, MD  
Assistant Professor of Medicine, WCM  
Dr. Mulvey will evaluate the safety of scalp cooling in patients with lymphoma undergoing treatment with anthracycline-based chemotherapy.

New Incoming TL1:

Neil Gallagher, PhD  
Postdoctoral Associate in Psychiatry, WCM  
Dr. Gallagher will work to develop interpretable EEG-based network biomarkers that predict the efficacy of the protocol Stanford Neuromodulation Therapy (SNT) Repetitive transcranial magnetic stimulation (rTMS) in treating depression and OCD.

Mengying Hu, PhD  
Postdoctoral Associate in Pediatrics, WCM  
Dr. Hu’s research focused on oncology will concentrate on addressing the mechanisms of T cell extracellular vesicle (EV)-mediated reprogramming of tumor cells and investigate the translational value of T cell exosomes and exosomal DNA.

Richard Garner, BS, MS  
PhD Candidate, Cell and Developmental Biology, WCGMS  
Richard’s research aims to determine if FOXA2 serves as a useful biomarker to identify prostate adenocarcinoma (PCA) cells that will transition to neuroendocrine prostate cancer (NEPC).

Alikhan Fidai, BS  
PhD Candidate, Biomedical Engineering, Cornell University  
Alikhan’s research proposal investigates how bone marrow-derived mesenchymal stem cells (BMSC) and their mitochondrial (MT) counts influence patient Intervertebral Disc Syndrome (IVD) healing outcomes.

Arsalan Haghdel, BS, MPH  
Medical Student, WCM
Arsalan is interested in Diagnostic Radiology. His project goal is to gain a more precise understanding of the relationship between radiographic and histopathologic features of meningioma, the most common primary brain tumor.

Valerie Gallegos, BS
PhD Candidate, Biochemistry & Molecular Biology (BCMB) Program, WCGMS

Valerie’s TL1 research project aims to develop a combination treatment that uses senolytics to reduce the senescent cell population and treat cancer simultaneously. Fibroblasts provide support for the tumor mass. Senescent fibroblasts have been shown to increase the aggressiveness of cancer.

RECENT AWARDS

Congratulations to Dr. Manikkam Suthanthiran
Distinguished CTSC KL2 Mentor receives The Transplantation Society's Medawar Prize

Dr. Suthanthiran will receive The Medawar Prize at the TTS 2022 President's Plenary Session held on September 14, 2022 in Buenos Aires, Argentina. The Medawar Prize is considered to be the world's highest dedicated award for the most outstanding contributions in the field of transplantation. The award recognizes investigators whose contributions have had a profound influence on the field of organ transplantation. https://medicine.weill.cornell.edu/news/dr-suthanthiran-receives-transplantation-societys-medawar-prize

Congratulations to Dr. Phyllis August
on Receiving the Belding H. Scribner Award (ASN Lifetime Achievement
The CTSC congratulates Dr. Phyllis August on receiving the American Society of Nephrology’s Scribner Award. Dr. August is an illustrious and pioneering physician-investigator in the field of preeclampsia and a CTSC mentor to KL2 scholars and TL1 trainees. The Belding H. Scribner Award is presented annually to individuals who have made outstanding contributions that have a direct impact on the care of patients with renal disorders or have substantially changed the clinical practice of nephrology. Dr. August’s research focuses on hypertension and kidney disease during pregnancy, as well as hypertension associated with kidney disease.


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**Dr. Anais Rameau, K Scholar Alumna**

**First Otolaryngologist to Receive NIA K76 Prestigious Emerging Leaders Career Development Award**

Congratulations to Dr. Anaïs Rameau, Assistant Professor of otolaryngology. She is KL2 Scholar Alumna, on receiving the National Institute on Aging (NIA) K76 Paul B. Beeson Emerging Leaders Career Development Award. She is the first otolaryngologist to receive this prestigious grant from the NIH. Per Dr. Rameau, “This award would not have been possible without the support of the CTSC!”

The over-arching goals of Dr. Rameau’s Beeson proposal are to two-fold: first, to develop an easy-to-use, highly accurate bedside clinical decision support tool to identify swallowing...
dysfunction in older adults using analysis of features of their recorded voice, cough and speech; and second, to become a leader in the nascent field of geriatric otolaryngology with a focus on management of communication and swallowing issues in older adults with Alzheimer’s disease and related dementias (AD/ADRD).

https://voice.weill.cornell.edu/about-us/news-and-updates/sean-parker-institute-laryngologist-ana%C3%AFs-rameau-md-receives-national

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**TL1 Alumnus, Dr. Kiel Telesford**  
**Awarded the K22 Career Transition Award from the NIH**

Congratulations to TL1 Alumnus Kiel Telesford, PhD, on being awarded the K22 Career Transition Award funded through the National Institute of Neurological Disorders and Stroke (NINDS). This award supports outstanding investigators in building key skills required for their envisioned research program as they move towards establishing an independent laboratory. [https://bit.ly/3QMF125](https://bit.ly/3QMF125).

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**RECENT PUBLICATIONS**

*Since 2007, the CTSC trainees have published 7,564 original journal articles and pilot awardees published 282 original journal articles directly related to their research projects. In the last few months, the below publications have been issued.*

**The CTSC Informatics Core** recently published an article in the Journal of the American Medical Informatics Association which describes the WebCAMP data model and how it could serve as a future standard for research administrative data warehousing.


The medical students from the Office of Medical Education with the **CTSC Community Engagement and Research Core** published an article in the journal "Vaccines" on the CTSC’s COVID-19 Vaccine program in underserved communities and the CTSC’s collaboration with community partners.


**Du Cheng, a CTSC Community Awardee**, Eye2Eye paper has been accepted for publication in the journal Cureus. Du and his team's novel 3D-printed mobile retinal camera was tested in the CTSC community clinic Heart-to-Heart Program which screened underserved populations at-risk for hypertension and diabetes related eye diseases. [https://pubmed.ncbi.nlm.nih.gov/35990564/](https://pubmed.ncbi.nlm.nih.gov/35990564/)
STAFF SPOTLIGHT

Jeff Zhu received the Excellence in Medical Education Award from the Weill Cornell Office of Medical Education on June 22, 2022 for his work with the medical students on the CTSC COVID-19 Vaccination Program and the Heart to Heart Program, which brings the Clinic to the Community. Jeff is the CTSC Community Engagement and Research Managing Director.

Alarmed by the growing disparities in vaccination of minorities, Reverend Patrick O’Connor of First Presbyterian Church in Jamaica Queens contacted CTSC Founding Director Dr. Julianne Imperato-McGinley for help with addressing the issue of vaccination hesitancy in the underserved communities. Following this conversation, Dr. Imperato appointed Jeff Zhu to lead the CTSC vaccination program in partnership with the medical students from the WCM Office of Medical Education and nursing students from the Hunter College School of Nursing. He collaboration also included the Community Healthcare Network (CHN), with FEMA and the NYS and NYC DOH. Together this coalition operated vaccination sites at faith-based institutions across NYC in minority communities. By the end of 2021, Jeff and team helped administer nearly 31,000 COVID-19 vaccinations at 47 sites and pop-up clinics in underserved communities across NYC.
Human Performance Hackathon 2022

Hosted June 10-12 by the CTSC, the Human Hackathon brought together a multitude of professions – including doctors, entrepreneurs, medical students, engineers, computer scientists, and many others – from across the US and internationally. The three day event comprised of 18 teams and was mentored by almost 30 professionals. With over 75 participants attending, it allowed an environment to create authentic and meaningful connections amongst teams and mentors. All came together with one goal in mind, to imagine the future of human performance and creating ways to enhance and improve it. The key takeaways from the event were 1) strategies and tools for improving human performance 2) learning to scale cognitive bandwidth without burnout, and 3) increased self-awareness. The Hackathon event provided workshops, lightning talks, and sessions built to help expand their tool set.

Six teams were in the final round, with two teams awarded the grand prize. The first grand prize went to Team Pill Bill/Breath Buddy whose project focused on increasing the correct usage of inhalers among asthmatic youth. The second grand prize won by Team Habitech which focused on an app that would be used to help set reminders to develop and maintain users’ healthy habits. This year was very unique in the fact that this was the first time the CTSC has resumed this event in person since February of 2020. The major focus was on the impact of COVID19 on mental health and how to specifically cope with loneliness and depression.
UPCOMING EVENTS IN THE FALL

CTSC Translational Science Seminar Series
These seminars are designed for physicians, clinical staff, administrative staff and researchers.

Nose Spray Could Prevent And Treat Covid-19
Wednesday, October 19 (via Zoom)
Hector Aguilar-Carreno, PhD
Professor
Multi-Director, Cornell PACE and Rising Stars Programs
Department of Microbiology and Immunology
College of Veterinary Medicine
Cornell University

Drug Resistance In Companion Animals
Wednesday, November 16 (via Zoom)
Casey Cazer, DVM, PhD
Assistant Professor, College of Veterinary Medicine, Cornell University
and
Laura Goodman, PhD
Assistant Professor, Department of Public & Ecosystem Health
Cornell University

Precision Engineered Ultrasmall Particle Treatment Tools for Clinical Cancer Care
Wednesday, December 14 (via Zoom)
Michelle Bradbury MD, PhD
Co-Director, MSK-Cornell Center for Translation of Cancer Nanomedicines
& Director, Intraoperative Imaging Program
Member, Molecular Pharmacology Program
Professor and Attending,
Gerstner Sloan Kettering Graduate School of Biomedical Sciences
Memorial Sloan Kettering Institute &
Weill Medical College of Cornell University

The Faculty Advancement & Research Mentorship Program (FARM) for Junior Faculty
September 29, 2022 and October 11, 2022

Offered for the eighth year, the FARM program was established as an official partnership with Harvard’s GRASP. It is designed to mentor junior faculty without an R01 or equivalent grant through the submission process. FARM’s NIH funding success rate is 63% for junior investigators compared with 19% national average. Each FARM cycle starts with this two-day workshop that covers topics on grantsmanship. It continues with longitudinal support provided by a committee of faculty mentors, Drs. Giannakakou, Scandura, and Anandasabapathy, with biweekly meetings where individual proposals are reviewed. FARM is offered under the auspices of Dean Augustine M. K. Choi, Senior Associate Dean for Research Hugh C. Hemmings and CTSC Director, Julianne Imperato-McGinley.
To apply, please email spm2003@med.cornell.edu

Research In Progress Series
Conducting Mentored Clinical and Translational Research from the Perspective of Trainees and Scholars
Friday, September 23rd, 2022 from 12:00PM - 1:00PM

Aging in Systemic Lupus Erythematosus
Sarah Lieber, MD, MS
CTSC KL2 Scholar
Rheumatology
Hospital for Special Surgery

Convolutional Neural Networks and Machine Learning in the Identification of Ultrasonographic Features of Ovarian Morphology
Jeffrey Pea, BS
CTSC TL1 Trainee
Reproductive Physiology
Cornell University - Ithaca

HOW CAN WE HELP?

If you are planning a research project and need help, ask the CTSC. The CTSC offers a wide variety of resources and services to assist investigators throughout the protocol lifecycle, from the creation of interdisciplinary research teams, to protocol design and development, through implementation, compliance, and publication of results.