# CCIV NEWSLETTER

CENTER FOR CHILDHOOD INFECTIONS AND VACCINES

2023 Year in Review


## Our Vision

The Center for Childhood Infections and Vaccines (CCIV), a joint venture of Emory School of Medicine's Department of Pediatrics and Children's Healthcare of Atlanta, is to eliminate the threat of global infectious diseases. To that end, the Center supports our members by growing collaborative science by synergizing research expertise within the Center and across other institutional organizations with similar research missions. CCIV leverages the strengths of its investigators and our collaborators in Atlanta and around the world to enhance understanding of infectious diseases, basic immunologic processes, and the development of vaccines and treatments against childhood pathogens. Center programs and collaborations serve as the platform for sustainable research projects, new grant opportunities and important discoveries that will lead to achieving the primary goal of impacting child health on a global scale.

## In This Issue


# Center Highlights

- ATTUNE Project funded by the NIH
- Emory selected as an Adolescent Medicine Trials Network Trial Network (ATN) Consortium
- Emory Children's selected as CDC-Clinical Immunization Safety Assessment Project site

# At a Glance

22 Primary CCIV Investigators/Members

$15.6 Million awarded in Fiscal Year 2023

111 publications, 32.43% with impact factor of 10 or higher

5 CCIV investigators listed as world's top 2% scientists

## Congratulations, Suthar Lab!

The Suthar Lab has received a Gold Certification from The Green Labs at Emory Program for integrating sustainable practices into their laboratory operations. This recognition highlights the lab's dedication to environmental stewardship and their contributions to the broader scientific community.

# 2023 CCIV SYMPOSIUM

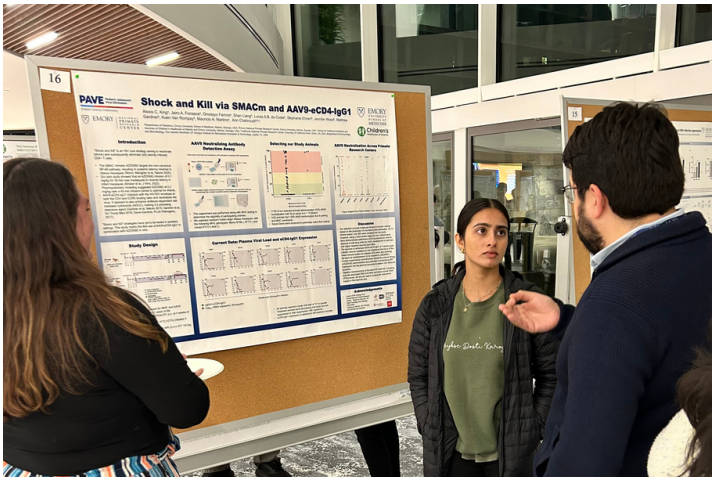
The Annual Center for Childhood Infections and Vaccines Symposium held on December 4, 2023 at HSRB-II, was a resounding success, attended by over 80 faculty, trainees, staff, and students.

The symposium featured a lineup of renowned speakers, including two keynote speakers: Dr. Theresa Alenghat, a faculty microbiologist from Cincinnati Children's Hospital, presented on the regulation of the host-microbiota relationship, and Dr. Paul G. Thomas, a scientist from St. Jude Children's Research Hospital, impressed the audience with his work on predicting influenza protection and pathology from baseline immune profiles.

The symposium also showcased the work of two esteemed Emory University faculty members: Dr. Cynthia Whitney, who presented on the Child Health and Mortality Prevention Surveillance (CHAMPS) study, and Dr. Natalie Dean, who talked about her work with the Emory Alliance for Vaccine Epidemiology (EAVE). The speakers were chosen to encourage collaboration between CCIV and CHAMPS/EAVE investigators. Attendees were also treated to three oral abstract presentations. Dr. Devyani Joshi, a postdoctoral fellow in the Wrammert Lab, presented her research on antibody responses after SARS-CoV-2 infections in infants and young children. Dr. Mark Griffiths, an associate professor of pediatrics and emergency medicine, gave a talk on the impact of implementing opt-out HIV screening in the pediatric emergency department. Lastly, Dr. David Prikryl, a postdoctoral fellow in the Melikian Lab, presented on how cyclosporine influences viral entry into cells.

The day concluded with a poster session featuring 24 studies conducted by CCIV faculty, trainees, staff, and students. Overall, the symposium was a great success, allowing attendees to learn about the latest research in childhood infections and vaccines.

This year's CCIV Symposium Planning Committee were Drs. Ann Chahroudi, Jens Wrammert, Cassie Grimsley Ackerley, and Clovis Sarmiento.



# ATTUNE Project Receives $5 Million from the NIH

The ATTUNE project (1UG1MD019435) led by Dr. Brian Zanoni aims to evaluate the effectiveness of long-acting injectable ART and adolescent-friendly clinics to improve outcomes for adolescents with HIV in South Africa. The study will use peer navigators and long-acting injectable antiretroviral therapy in addition to baseline adolescent-friendly services in a randomized clinical trial.

Dr. Brian Zanoni, Associate Professor of Medicine and Pediatric Infectious Diseases, was awarded a $5 million grant from the NIH to conduct a 5-year multisite study in South Africa. The study, "Evaluation of Long-Acting Injectable antiretroviral therapy and teen clubs in adolescents in South Africa," aims to evaluate the effectiveness and implementation of long-acting injectable ART and adolescent-friendly clinics to improve outcomes for adolescents with HIV.

The study is the first of its kind to use adolescent-friendly services and peer navigation to optimize behavioral interventions before investigating long-acting injectable antiretroviral therapy for adolescents living with HIV in sub-Saharan Africa. The hypothesis is that long-acting injectable antiretroviral therapy provides for more sustained retention in care and viral suppression compared to oral daily antiretroviral therapy, but has higher costs and complex adoption procedures.

Dr. Brian Zanoni has been working in adolescent HIV in South Africa since 2006 and has received NIH funding through various grants to develop transition readiness assessments and interventions to improve adolescent HIV care. Co-investigators include Moherndran Archary, an expert in pediatric and adolescent HIV in South Africa, Maryam Shahmanesh, an expert in clinical trials among youth in rural KwaZulu-Natal, South Africa, Lee Fairlie, an expert in pediatric clinical trials and implementation science, and Kathy Baisley, a senior statistician with expertise in clinical trials.

# Emory Atlanta Adolescent Consortium (EAAC) to join ATN as New Site

Emory's EAAC was among three out of thirteen applications awarded to join the prestigious ATN HIV research network, focusing on teens and young adults.

Emory was competitively selected to join the NIH/NICHD-sponsored Adolescent Medicine Trials Network (ATN) Network as a new Site Consortium. The Emory Atlanta Adolescent Consortium (EAAC) was among three out of thirteen applications selected with an average overall high impact score of 2. Emory received a core budget of $1.5 million with additional funding coming with each trial conducted. ATN is the only multicenter research network in the United States devoted to the health and well-being of adolescents and young adults living with or at risk for HIV. The network's primary mission is to conduct both independent and collaborative research that explores promising behavioral, microbicidal, prophylactic, therapeutic, and vaccine modalities in adolescents, ages 13 years through 24 years, living with or at risk for HIV.

Atlanta is a major HIV hotspot in the US. It has four priority counties designated by the US strategy to end the HIV epidemic.

ATN ADOLESCENT MEDICINE TRIALS NETWORK FOR HIV/AIDS INTERVENTIONS

At the end of 2021, 61,518 people were living with HIV in Atlanta with 2,412 new HIV diagnoses. Young people account for a significant portion of new HIV infections in Georgia. The state has a low rate of access to HIV pre-exposure prophylaxis (PrEP) among high-risk populations. Improving retention and viral suppression rates among young people living with HIV is crucial to achieving the goal of reducing new infections. The EAAC is the largest pediatric and adolescent HIV clinic in the US and can be a valuable resource for the ATN.

The EAAC has a horizontal leadership structure in which clinical, research, and community partners work together. From the Research standpoint, we have the HIV Pediatric and Adolescent Clinical Trials unit, housed at Grady Ponce clinic with the participation of multiple investigators including Dr. Andres Camacho-Gonzalez, Dr. Sophia Hussen, Dr. Maddie Goldstein and Dr. Brian Zanoni and a team of coordinators and regulatory personnel lead by LaTeshia Thomas-Seaton. Clinical partners include the Grady Ponce Clinic and Children's Healthcare of Atlanta, and community partners include "This is your moment (TIYM)", "Thrive SS", "Here's to Life" and Georgia Department of Public Health.

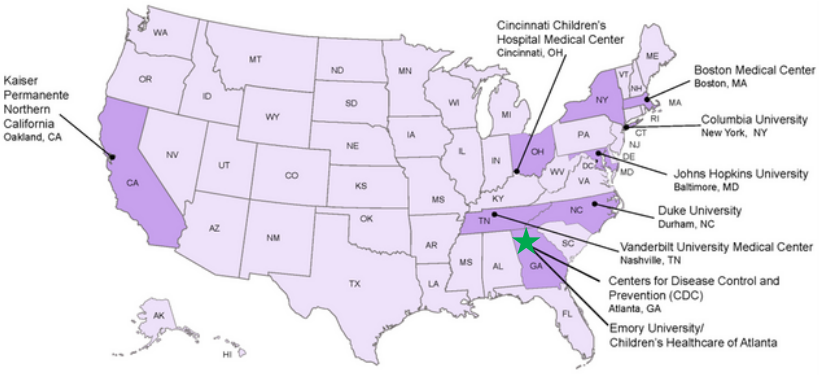
# Emory/Children's is a New Site for CDC's Clinical Immunization Safety Assessment (CISA) Project

Dr. Satoshi Kamidani leads the newly awarded CDC contract at Emory & Children's for the CISA Project.

Established by the CDC in 2001, CISA is a national collaborative network composed of vaccine safety experts from the CDC's Immunization Safety Office, eight medical academic centers, and other partners (figure). The initiative aims to enhance the understanding of adverse events following immunization at the individual patient level. CISA offers consultations to U.S. healthcare providers who encounter complex vaccine safety questions regarding their patients and conducts clinical research on vaccine safety, including randomized controlled trials.

The COVID-19 pandemic underscored the need for immediate and reliable guidance from experts on vaccine recommendations. During the pandemic, CISA investigated cases reported to the CDC, including those involving thrombosis with thrombocytopenia syndrome, myocarditis, and multisystem inflammatory syndrome. The findings from these investigations significantly shaped the CDC's interim clinical considerations for the use of authorized COVID-19 vaccines, ensuring timely and effective responses.

Building on decades of commitment to vaccine safety, development, and testing, the Emory & Children's CISA site leverages extensive clinical trial experience and the collaboration of clinical subject matter experts in research investigations. The Emory & Children's CISA team led by Dr. Satoshi Kamidani, a collaborative ensemble of experts from the Departments of Pediatrics, Medicine, Obstetrics and Gynecology, and the Rollins School of Public Health, is uniquely poised to offer state-of-the-art clinical expert consultations, and innovative clinical trial design and implementation to address current and future vaccine safety concerns, ensuring the safety of vaccines, and fostering public confidence in the U.S. immunization program.



# Edara, Melikian, Shane, Suthar, and Wrammert in World's Top 2% Scientist List

Stanford University has released an updated version of its ranking that lists the top two percent of the most-cited scientists in various disciplines. The report was prepared by a team of experts led by the distinguished Professor John Ioannidis, renowned for his contributions to evidence-based medicine, clinical research, and meta-research.

The updated database, also known as version 6, provides standardized information on citations, h-index, co-authorship-adjusted hm-index, citations to papers in different authorship positions, and a composite indicator. The time node of the statistical data of this list spans from 1960 to 2022 and is divided into two separate rankings: the "Lifetime Scientific Influence Ranking" and the "2022 Annual Scientific Influence Ranking."

The "Lifetime Scientific Influence Ranking" evaluates the comprehensive influence performance of scientists throughout their careers, while the "2022 Annual Influence Ranking" highlights the academic influence of scientists in the previous year. This ranking is considered to be the most prestigious worldwide and is based on the bibliometric information contained in the Scopus database. It includes more than 200,000 researchers from the more than 10 million scientists considered to be active worldwide, with 22 scientific fields and 176 subfields taken into account.

Five CCIV scientists have made the top of this prestigious list, a remarkable feat among 200,000 researchers. This not only highlights their brilliance but also underscores CCIV's unwavering dedication to pioneering research and innovation. Their groundbreaking work is a source of immense pride for Emory University and Children's Healthcare of Atlanta and a true inspiration to the scientific community. Congratulations to these exceptional scientists for their outstanding contributions to their respective fields!

# Awards and Accomplishments

In fiscal year 2023 (September 2022 – August 2023), CCIV primary researchers submitted over $29.3 million in proposals and brought in a total of $15.6 million in funded awards, including 5 of the 22 PIs (Drs. Ann Chahroudi, Greg Melikian, Evan Anderson, Mehul Suthar, and Brian Zanoni) bringing in over $1 million each.

Dr. Ann Chahroudi was awarded an R38 (R38HL167243) for her work in access to research in residency and a P01 (P01HD112217) to study the Immune determinants of pediatric HIV/SIV reservoir establishment and maintenance. She recently gave the 22nd Annual J. Neal and Lois Middelkamp Lecture at Washington University School of Medicine.

Dr. Lisa Marie Cranmer received a Pediatric Research Alliance 2023 Pilot Grant for her work on pediatric tuberculosis.

Dr. Cassie Grimsley-Ackerley's study on Sex, Gender, and HIV Transmission was awarded a K23 from the NIH (K23AI177081).

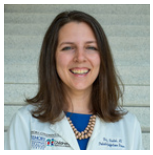
Dr. Samantha Hill was featured on the Consultant360 Podcast on her work, "HIV Prevention and Management Among Adolescents."

Dr. Preeti Jaggi received the Best Quality Improvement Publication Award 2023 for the Department of Pediatrics.

Dr. Satoshi Kamidani received Clinical Trial Funding from PPD® for his study of cytomegalovirus vaccine. Dr. Kamidani was also the recipient of the Junior Faculty Research Award 2023 in the Department of Pediatrics.

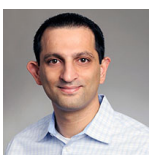
Dr. Latania Logan received an R21 (R21AI173471) for her project "Households as Reservoirs of Community-Acquired Extended-Spectrum Beta-Lactamase-producing Enterobacterales."

Dr. Maud Mavigner was named Project 2 leader of P01HD112217 (PI Chahroudi) working to understand how HIV reservoirs form and persist in children with HIV, and will use this knowledge to develop new and targeted cure strategies.



Dr. Christina Rostad was awarded funding from Moderna (SARS-CoV-2), Pfizer (Pneumococcal), and Leidos Biomedical (Mpox) for vaccine clinical trials.

Dr. Andi Shane named Atlanta Magazine Top Doctors in 2023. Dr. Shane was also featured in JAMA Pediatrics Viewpoint, 11 Alive News, and Atlanta News First.



Dr. Mehul Suthar was recognized among world's most influential researchers by the Institute for Scientific Information (ISI). This past year, Dr. Suthar was awarded the Marshall, Gerstein, and Borun Funding for the CureVAC study.

# Research Highlights

Our weekly seminars strengthen our dedication to fostering collaborative research in the field of infectious diseases and beyond. CCIV continues it's tradition of important, novel, and field advancing research with over 30% of the center's 2023 publications in journals with an impact factor of 10 or higher including Dr. Chahroudi's group in Nature Medicine, impact factor of 82.9.

Throughout the year, the center hosted various events, including weekly seminars, special presentations, and an annual symposium, featuring 39 speakers from diverse institutions and organizations. The events drew an enthusiastic audience of an average of 35 participants per presentation, providing an opportunity to learn from one another, discuss new ideas, and collaborate on research projects. Overall, the center's commitment to advancing the field of infectious diseases through collaboration and knowledge sharing has been reflected in the quality and diversity of the speakers and topics presented throughout the year.

In 2023, CCIV primary researchers have 111 publications. These publications continue CCIV's tradition of important, novel, and field-advancing research, with 32.43% of the center's 2023 publications occurring in journals with an impact factor of 10 or higher.

Last August, Dr. Chahroudi's group published a manuscript in Nature Medicine (impact factor 82.9) titled "AZD5582 plus SIV-specific antibodies reduce lymph node viral reservoirs in antiretroviral therapy-suppressed macaques,"

From Dr. Chahroudi: "*This paper reflects the culmination of a true labor of love by many people in the lab as well as collaborators.*

*The first author is a former post-doc now working at Sanofi and the next 8 (!) authors are all former research technicians who are now in training in various graduate and medical schools around the country. We have been working on this project since prior to the pandemic, and the ability to continue our work during the dark days with the support of Kira was absolutely integral to generating these results. Thank you for supporting us to conduct research safely and continuously. And thank you to the EPC for the high level of care for these monkeys even in very difficult conditions.*

*I am very proud of my team. With every completed study we are getting closer to HIV cure.*"

# Center Events

## Pediatric Grand Rounds

CCIV Research Grand Rounds will be on **Wednesday, April 17th, 2024** at 8 am. This year's speaker is Dr. Stephanie A. Fritz, MD, Professor of Pediatrics and Co-Director of the Pediatric Infectious Diseases Fellowship Program at Washington University in St. Louis and St. Louis Children's Hospital. Dr. Fritz will present on her groundbreaking working in the area of methicillin-resistant Staphylococcus aureus (MRSA) in pediatrics. *Registration coming soon.*

## Weekly Seminars

CCIV Weekly Seminars resumed on January 22nd, 2024. Weekly seminars are held every Monday from 1 pm to 2 pm . View the full Spring 2024 schedule **here**.

# Resources

## CCIV and Children's Publication Citation

Remember to cite CCIV and Children's Healthcare of Atlanta in your publications. This is vital to ensure recognition of our work by both Emory and Children's. This requirement applies to all center members, whether lab-based or non-lab based. Children's has been a significant supporter of the research operations that make all of our work possible and should be acknowledged.

The proper affiliation citation is: **Center for Childhood Infections and Vaccines (CCIV) of Children's Healthcare of Atlanta and Emory University Department of Pediatrics, Atlanta, GA USA.**

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