



CCTSI CU-CSU Summit Agenda
Research Innovations in Health AI

Donald M. Elliman Conference Center in the Anschutz Health Sciences Building (AHSB)
1890 N. Revere Ct.
University of Colorado Anschutz Medical Campus
Tuesday, August 13, 2024

7:50 a.m.

Breakfast

8:15 – 8:25 a.m.

Introductions and Goals

Ronald Sokol, MD, FAASLD
Director, Colorado Clinical and Translational Sciences Institute (CCTSI)
Chief Scientific Officer, Child Health
CU Distinguished Professor in Pediatric GI, Hepatology and Nutrition
University of Colorado Anschutz Medical Campus

8:25 – 8:35 a.m.

Welcome

John H. Sampson, MD, PhD, MHSc, MBA
Dean, University of Colorado School of Medicine
University of Colorado Anschutz Medical Campus

Thomas Flaig, MD
Vice Chancellor for Research
University of Colorado Anschutz Medical Campus

I: Keynote Presentations

Moderator: Ron Sokol, MD

8:35 – 9:20 a.m.

Medical AI in the Era of Large Language Models

Matthew Lungren, MD, MPH
Chief Data Science Officer
Microsoft Health and Life Sciences

9:20 – 9:30 a.m.

Q&A

9:30 – 10:00 a.m. *Ethics and the Responsible Use of AI in Research*
Matthew DeCamp, MD, PhD
Associate Professor, Center for Bioethics and Humanities & Division of
General Internal Medicine
Director of CCTSI Research Ethics
University of Colorado Anschutz Medical Campus

10:00 – 10:10 a.m. Q&A

10:10 – 10:30 a.m. Coffee Break with *Networking and Poster Viewing*

II: Research Innovations in AI — Highlights from Each Campus

Moderator: Chris DeSouza, PhD

10:30 – 10:45 a.m. *Tapping into the Power of Veterinary EMR Data*
Tracy Webb, DVM, PhD
Associate Professor
College of Veterinary Medicine and Biological Sciences
Colorado State University

10:45 – 11:00 a.m. *AI, ML, and Pediatric Sepsis*
Tell Bennett, MD, MS
Vice Chair of Clinical Informatics, Department of Biomedical
Informatics
University of Colorado Anschutz Medical Campus

11:00 – 11:15 a.m. *Space Domain Awareness and Decision-Making*
Marcus J. Holzinger, PhD
Professor, J. Negler Endowed Professor
Ann & H. J. Smead Aerospace Engineering Department
University of Colorado Boulder

11:15 – 11:30 a.m. Q&A and Panel Discussion

III: Lightning Talks

Moderator: Wendy Kohrt, PhD

- 11:30 – 11:35 a.m. Jade Young, Pre-Doctoral Trainee
CellPhenoX: An eXplainable Cell-specific machine learning method to predict clinical Phenotypes using single-cell multi-omics
Department of Biomedical Informatics
University of Colorado Anschutz Medical Campus
- 11:35 am – 11:40 a.m. Discussion
- 11:40 am – 11:45 a.m. Jaewon Kang, PhD
Enhancing Independence: AI Voice Assistants and Smart Home Technology for Older Adults with Long-Term Mobility Disabilities
Department of Occupational Therapy
Colorado State University
- 11:45 – 11:50 a.m. Discussion
- 11:50 – 11:55 a.m. Yuto Suzuki, Pre-Doctoral Trainee
Advancing Drug Discovery with AI: An Integrated Fragment-Based Generative Model
Department of Computer Science
University of Colorado Denver
- 11:55 – 12:00 noon Discussion
- 12:00 – 12:05 p.m. Hope Townsend, Pre-Doctoral Trainee
Single-cell based integrative analysis of transcriptomics and genetics reveals robust associations and complexities for inflammatory diseases
Department of Molecular Cellular Developmental Biology & Computer Science
University of Colorado Boulder
- 12:05 – 12:10 p.m. Discussion
- 12:10 – 12:15 p.m. Sarah Nickles, BAsC
Development of a Mobile-Application-Based Diagnostic Test for Post-Traumatic Stress Disorder
Department of Psychiatry
University of Colorado Anschutz Medical Campus
- 12:15 – 12:20 p.m. Discussion

12:20 – 1:20 p.m.

Lunch/Poster Session/Networking

IV: Generative AI in Science — Live Demonstration

Moderator: Jayashree Kalpathy-Cramer, PhD

Objective: Live demonstration using a generative AI platform to answer a research question

1:20 – 1:50 p.m.

Demonstration and Discussion

V: Research AI Applications

Moderator: Janine Higgins, PhD

1:50 – 2:10 p.m.

Using AI to Personalize and Optimize the Treatment of Craniosynostosis

Antonio Porras, PhD, MSc

Assistant Professor

Department of Biostatistics and Informatics

University of Colorado Anschutz Medical Campus

2:10 – 2:30 p.m.

Research, AI, and Patient Care

Jayashree Kalpathy-Cramer, PhD

Chief of Artificial Medical Intelligence in Ophthalmology

Director of CCTSI's Health Informatics

University of Colorado Anschutz Medical Campus

2:30 – 2:40 p.m.

Q&A and Discussion

2:40 – 2:45 p.m.

Closing Remarks – Ronald Sokol, MD