Innovative Big Data Approaches to Address Diverse Health Issues Facing Colorado

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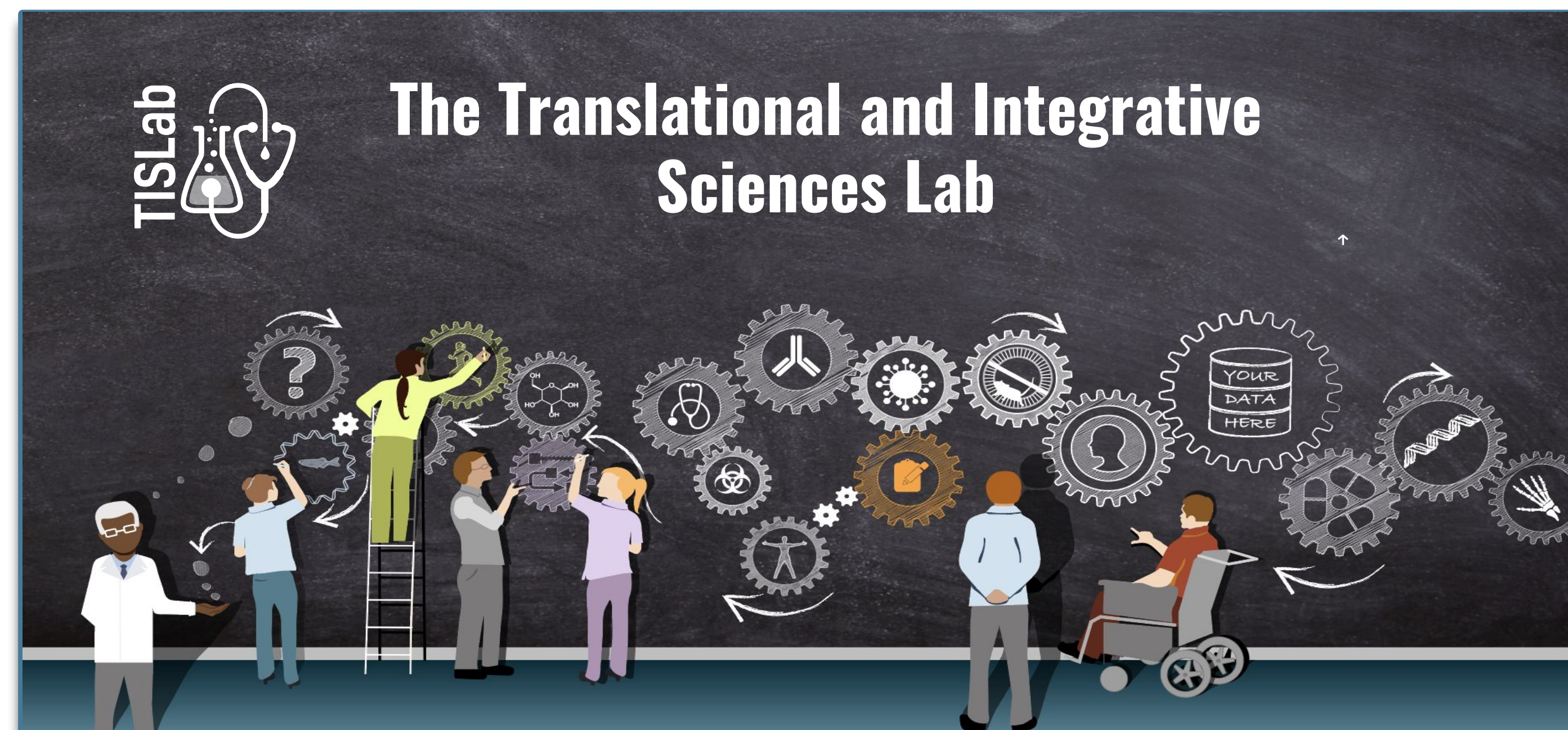University of Colorado
Anschutz Medical Campus

National COVID Cohort Collaborative: Uniting COVID19 data & facilitating cross-discipline team science nationwide

- >210 Data Contributing Hospitals
- 17.3 million Persons
- 6,814,573 COVID+ Cases
- 21.1 billion Data Rows
- 1.8 billion Clinical Observations
- 10.0 billion Laboratory Results
- 3.3 billion Medication Records
- 1.0 billion Procedures
- 1.1 billion Hospital/Clinic Visits

This work enables **collaboration by more than 5,000 researchers worldwide**
Principal Investigator Dr. Haendel

Learn more at covid.cd2h.org

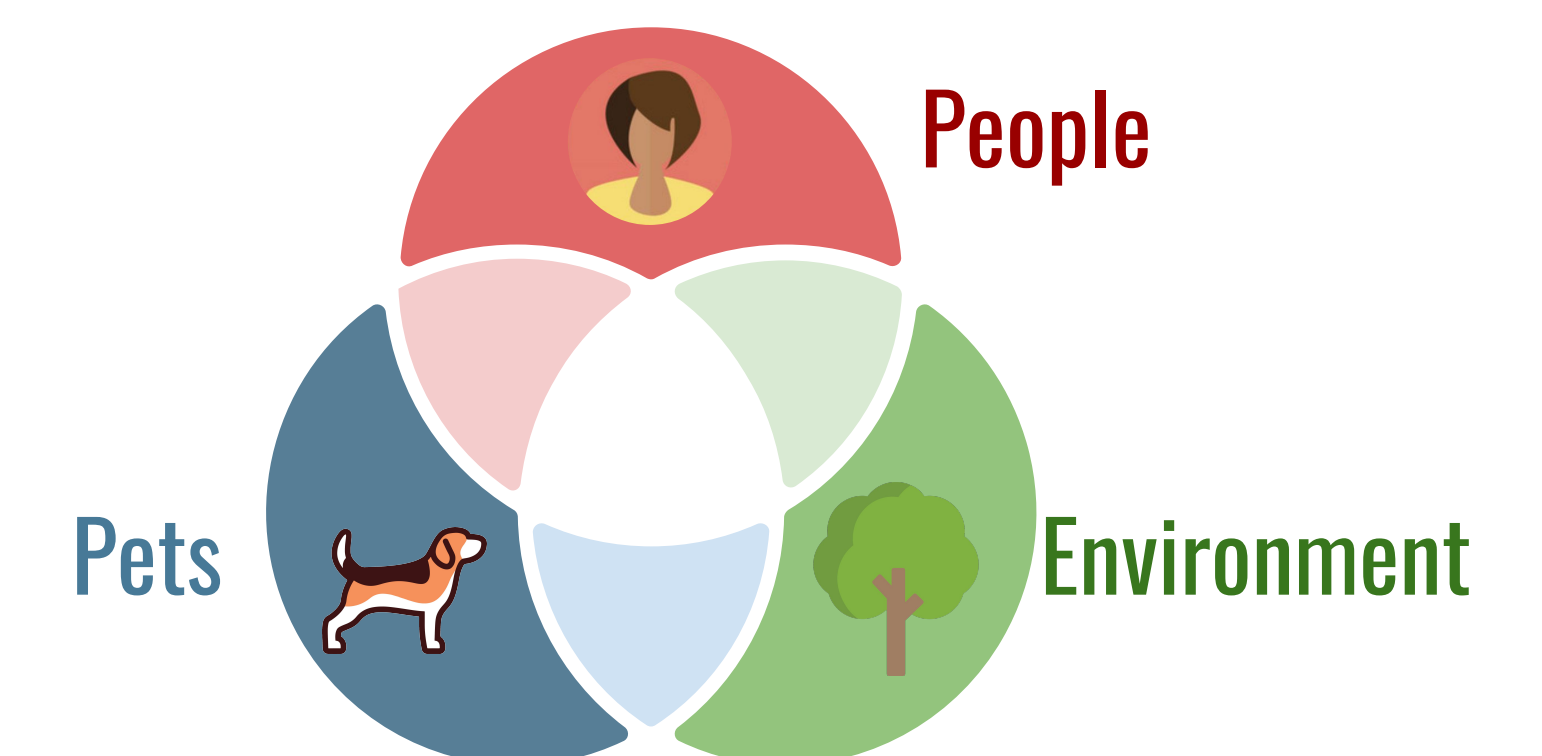## Bridge to Artificial Intelligence: Developing AI-ready datasets & teams

Bridge2AI will Improve, Expand, & Accelerate the Generation of AI-ready Data for Biomedical & Behavioral Research

Tools & Data
- Findable
- Accessible
- Interoperable
- Reusable

Ethics
- Reliable
- Transparent
- Ethically-sourced

People
- Diversity
- Inclusion
- Equity

Principal Investigator Dr. Munoz-Torres

Learn more at bridge2ai.org

The Translational and Integrative Sciences Lab

There is a need to harness the power of Big Data, and the art of scientific collaboration, focusing on Social Determinants of Health, Rare Disease, Cancer, and other conditions.

This poster highlights four of our lab's key projects bringing innovation to Colorado communities and beyond.

- The TISLab joined CU Anschutz in 2020 and is in the new Department of Biomedical Informatics.
- Our goal is to support the translation of insights from data across a variety of species into implemented solutions.
  - We embody an interdisciplinary, distributed collaboration model of science.
- We believe that shared, open science is the best way to solve problems and advance society.
  - We support and encourage diversity and equity of research teams.

We are hosting *Rare Disease Day* on February 28, 2023!

Colorado boasts some of the nation's best rare disease research and care. We are organizing an event to bring these communities together to tackle shared challenges.

Register at bit.ly/cu-rare-2023

The Monarch Initiative: Advancing disease discovery & diagnosis

Observable traits
Genes
Environment

The human genome is sequenced, and yet, there is still so much we do not know about the interplay between genes, traits (phenotypes) and environment. **The Monarch Initiative bridges basic and applied research**. Our goal is to **accelerate and improve disease diagnosis and discovery**.

Principal Investigator Dr. Haendel

Learn more at monarchinitiative.org

Advancing Health for People, Pets & the Planet

People
Pets
Environment

The mission of the Clinical and Translational Science Award One Health Alliance (COHA) is to **advance understanding of diseases shared by humans and animals**. Comparative veterinary medicine contributes a critical role to the translational science spectrum.

Learn more at ctsaonehealthalliance.org

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www.tislab.org