



# **Overview of CCTSI Activities and Colorado State University**

**Ronald J. Sokol, MD**

**Director and P.I. of CCTSI**

**Assistant Vice Chancellor of Clinical and Translational Science  
University of Colorado – Anschutz Medical Campus**



# CTSA Program

- An NIH-funded national consortium of biomedical research institutions collaborating to transform how clinical and translational science is conducted nationwide
- Currently, 60 funded Hubs, many of which include multiple universities and hospitals.
- CTSA provide many local resources, facilities, research personnel, pilot funding, regulatory and informatics support, research units and education & training programs
- Grants originate from NCATS at NIH

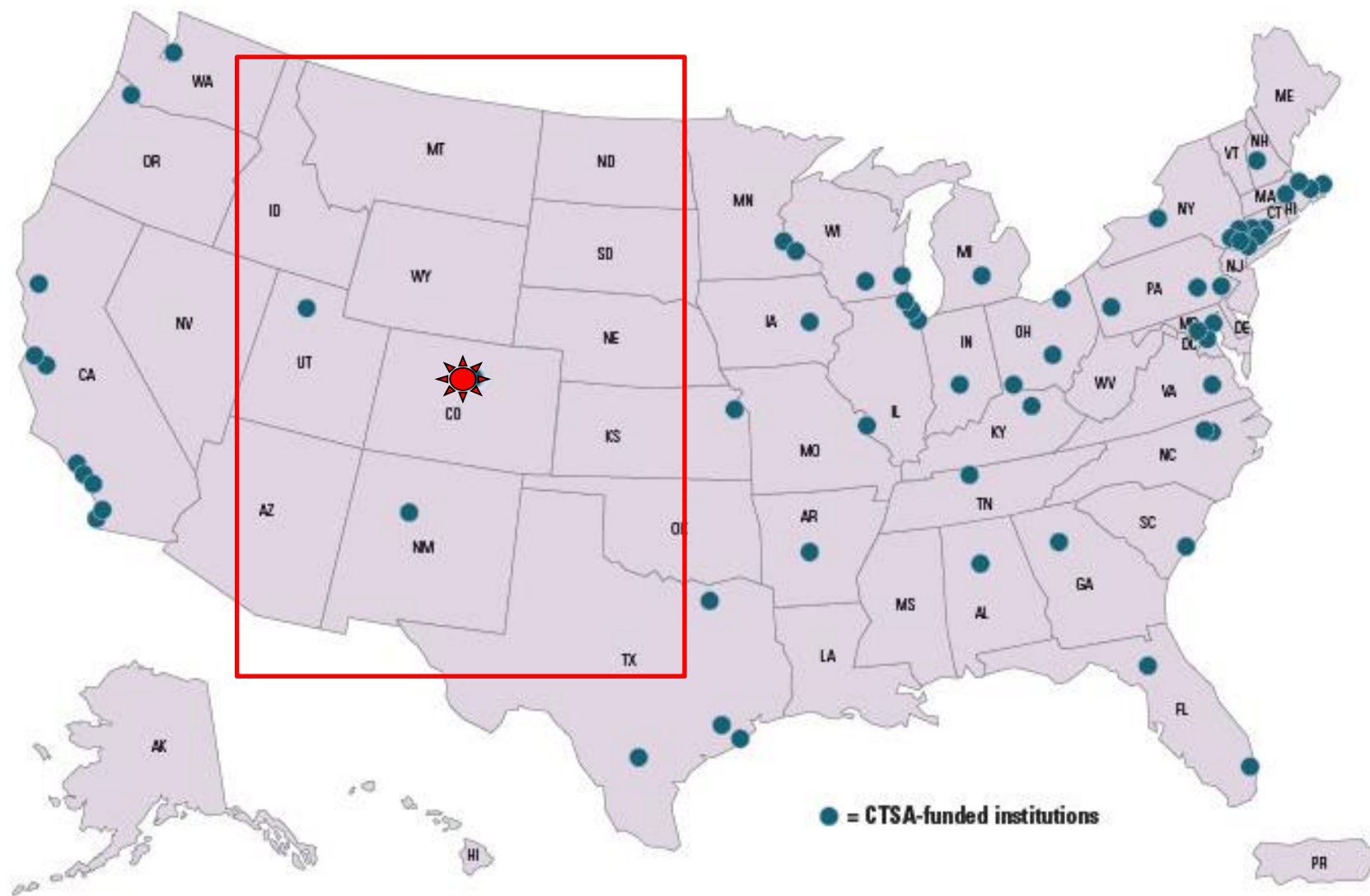


# NCATS Goals for CTSA Program

- Train and cultivate the translational science workforce
- Engage patients and communities in every phase of the translational process
- Promote the integration of special and underserved populations in translational research across the human lifespan
- Innovate processes to increase the quality and efficiency of translational research, particularly of multisite trials
- Advance the use of cutting-edge informatics



# CTSA Funded Institutions



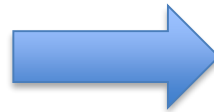
# Colorado Clinical & Translational Sciences Institute

- CCTSI is the Colorado CTSA Hub
- Created in 2008 and funded for 5 years by **\$76 million** NIH grant
- Substantial institutional support (funding)
- Supports all faculty, post-docs, trainees involved in clinical or translational research at 3 universities and 6 hospital partners
- “Disease – agnostic”
- Refunded in 2013 - **\$52 million** and in 2018 for **\$47 million**

# NCATS Definitions

- **Translation:**

the process of turning observations in the laboratory, clinic and community into interventions that improve the health of individuals and the public – from diagnostics and therapeutics to medical procedures and behavioral changes



# NCATS Definitions

- **Translational research:**

the endeavor to traverse a particular step of the translational process for a particular target or disease.



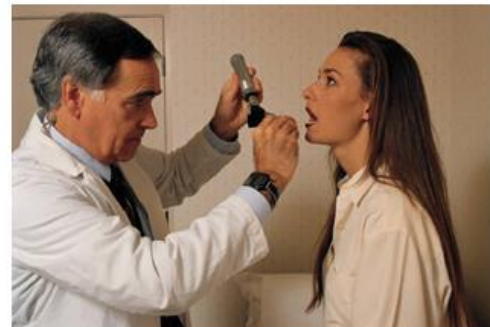
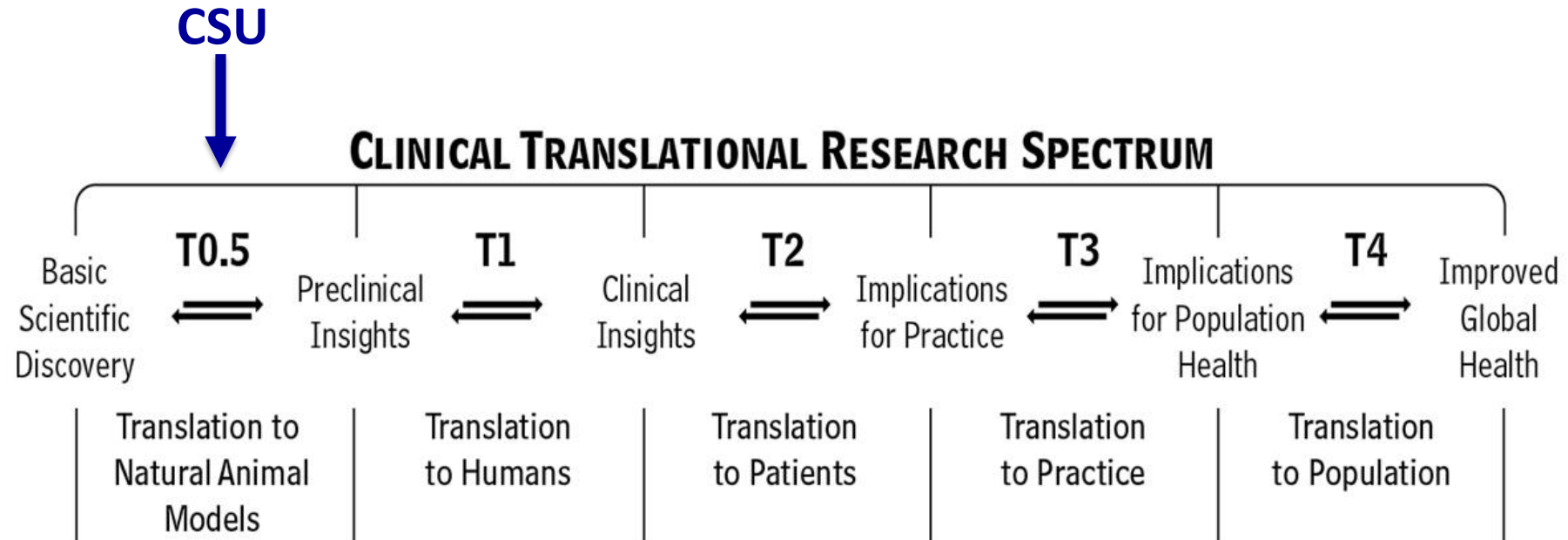
- **Translational science:**

the field of investigation focused on understanding the scientific and operational principles underlying each step of the translational process.





# Spectrum of Translational Research





# CCTSI Vision



Accelerate and catalyze the translation of innovative science into improved health and patient care

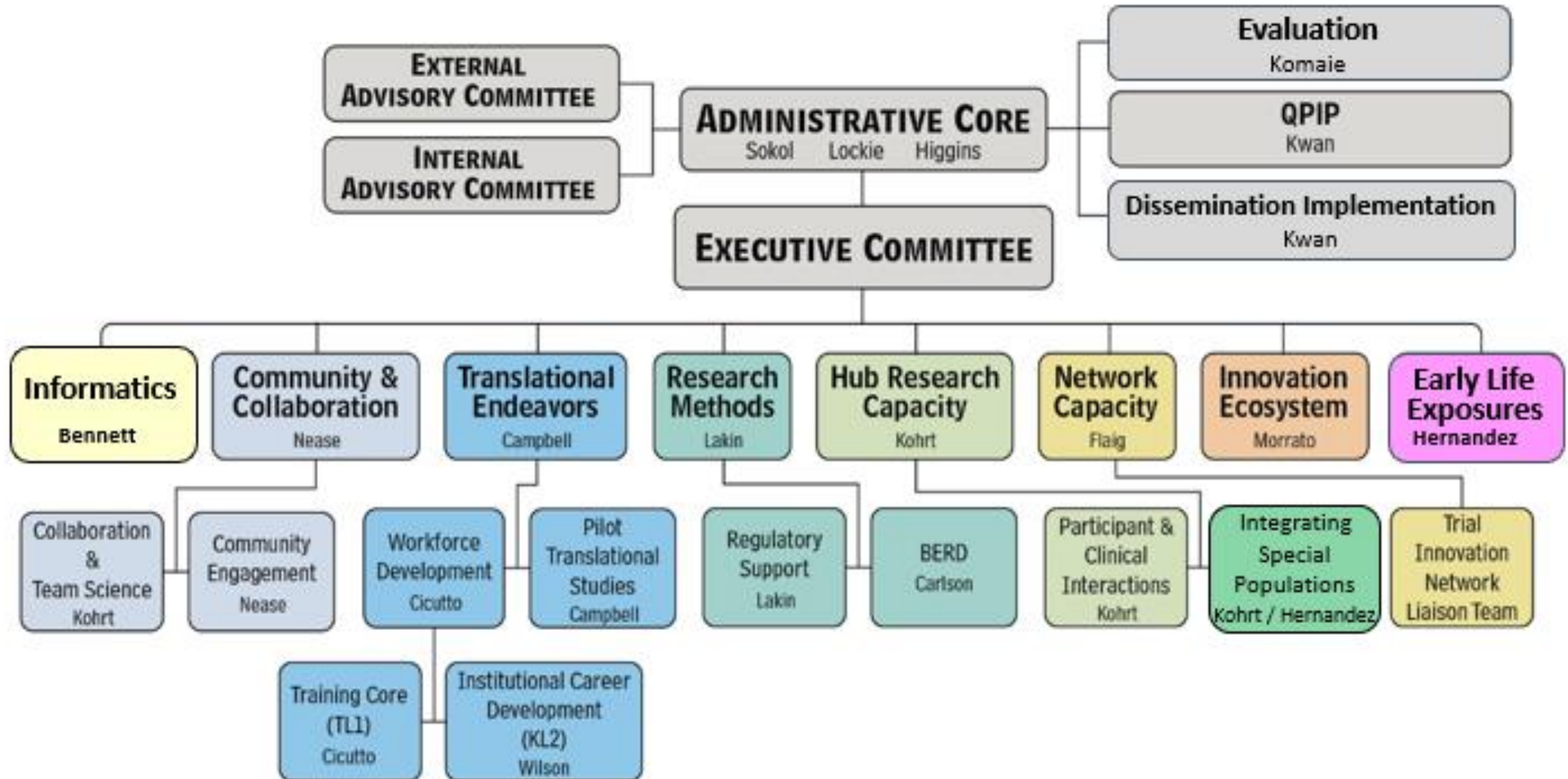


# CCTSI 3.0 Mission



- Catalyze and enhance scientific discovery, innovation, dissemination and translation across the lifespan
- Educate and sustain a resilient, innovative and diverse translational science workforce
- Promote and ensure an efficient, safe, collaborative and integrated research environment
- Engage stakeholders and communities across the entire translational spectrum

# CCTSI Organizational Structure



# CCTSI Leadership

**Director:** Ronald Sokol, MD     **DFA:** Tim Lockie, MS, MBA

**Director of Operations:** Janine Higgins, PhD

**Associate Directors:**



## CSU Contacts:

Susan VandeWoude, DVM, PhD

Jeni Cross, PhD

Aimee Oke, MBA

Staci Folot, MBA



# CCTSI Partner Institutions

- *Three Universities*

UC Denver (UCD)

- CU-Anschutz Medical Campus:  
6 health profession schools/colleges

- Downtown Denver

CU Boulder (CU-B)                      (UCCS)

Colorado State University (CSU)



- *Six Affiliated Hospitals and Health Care Organizations\**

UCH (UCHealth), CHCO, **DHH**, NJH, RMVAMC, KP

*\*Each is a separate legal entity, none owned by Univ. of Colorado*



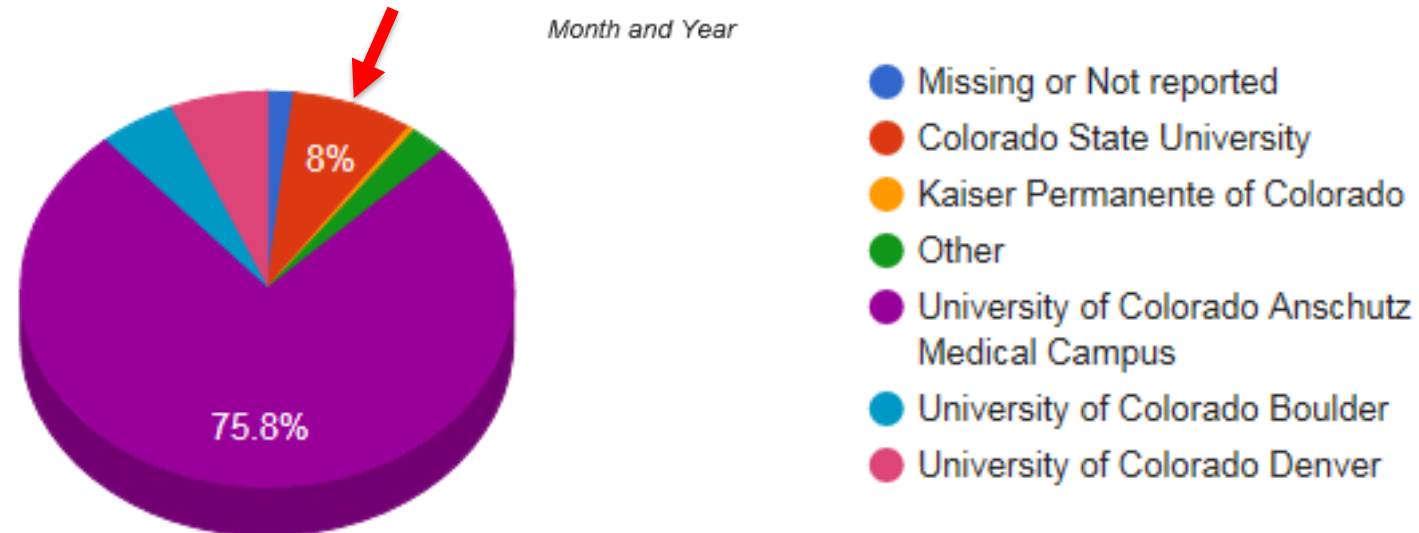
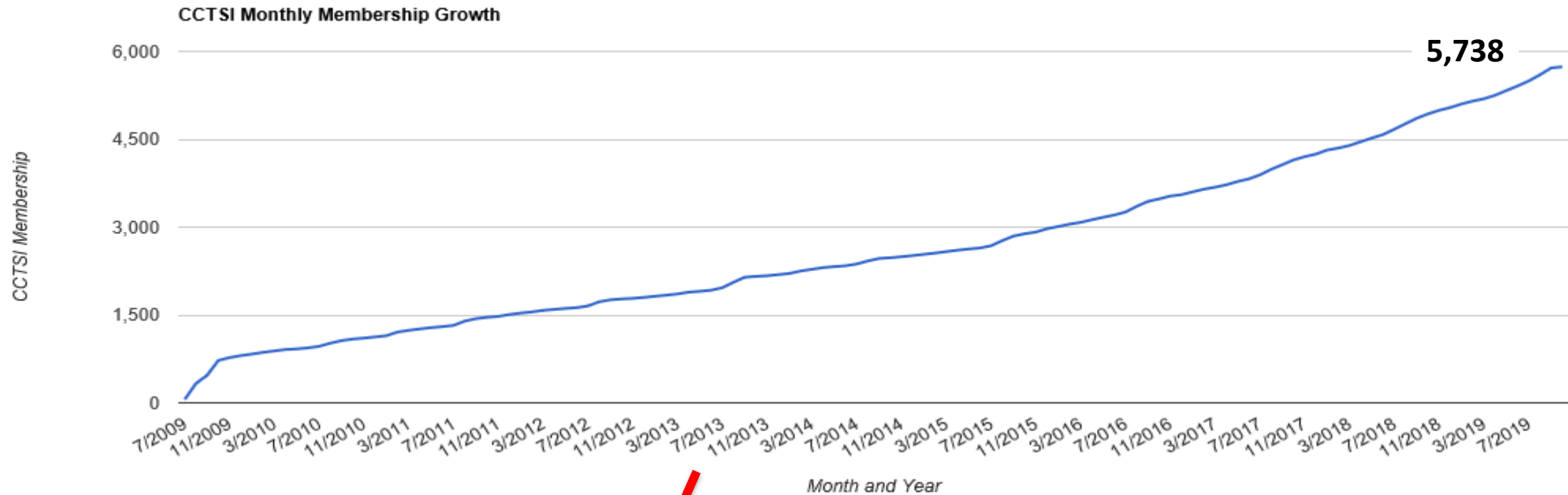
# CCTSI Community Partners



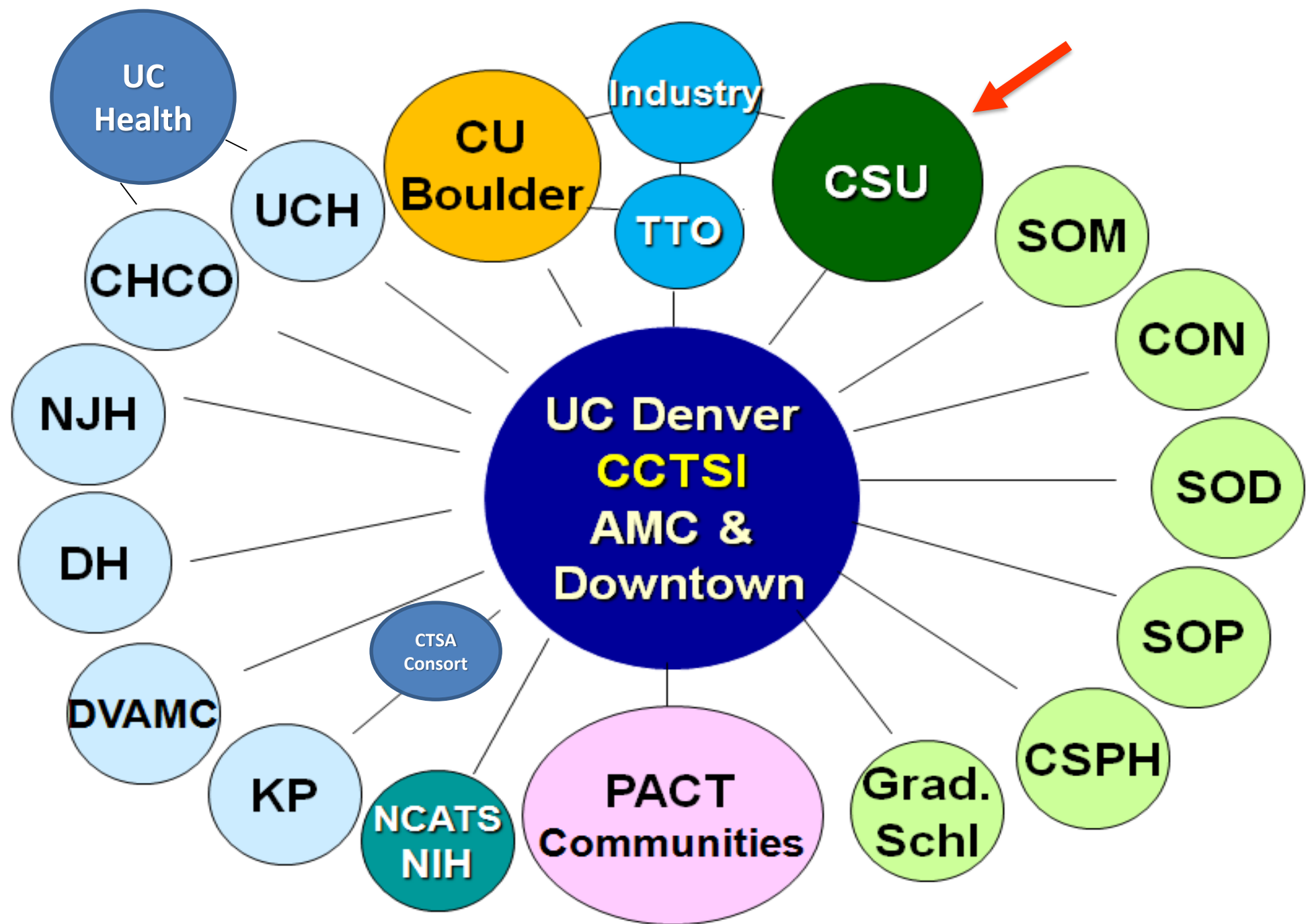
- **>20 Community-Academic partnerships** throughout the state, including multiple PBRNs
  - **Populations:**
    - Native Americans, Latinos, African-Americans, Rural populations, Nursing partnerships, Catholic churches, Ranching, LGBT, etc.
  - **PACT Focus Groups:**
    - San Luis Valley, Stapleton 2040, American Indian/ Alaskan Native Programs, High Plains Research Network, Kaiser Patient/provider, LUCRAR



# CCTSI Monthly Membership Growth



# CCTSI Hub & Spokes



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### ACCELERATING RESEARCH TO IMPROVE HEALTH

The CCTSI helps build research teams of the future, speed the development of new treatments and improve human health





## Resources and Services

CCTSI supports translational research by providing resources, integrating facilities and services, developing innovative research tools and catalyzing interdisciplinary research programs.



## Funding

Each year, the CCTSI awards more than \$2 million in pilot grants, microgrants, and pre-doctoral and post-doctoral research scholar awards. You can find more information on each grant and how to apply



## Education, Training and Career Development

The Education, Training and Career Development (ETCD) program provides clinical-translational scientists and trainees with knowledge, training and career skills



## Clinical Translational Research Centers

The CTRC provides infrastructure, resources and dedicated space to conduct clinical research.

**Cite our grant**

**Become a member**

Join the CCTSI for free

**Find a researcher**

Colorado PROFILES



**Found In Translation**  
*News from around the CCTSI*



## Mapping Our Molecules »

Jun 25, 2019, 12:00 AM by Wendy Meyer

Why know that exercise is good for us. Professor Wendy Kohrt aims to find out why. She is leading an exercise study called MoTrPAC to develop a so-called molecular map of tissue-specific and circulating signals produced by physical activity.

[Full story »](#)



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# 13 CCTSI Major Functions

- Translational Workforce Development (13 programs)
- Clinical Research Units (CTRCs)
- Community Engagement & Research
- Biostatistics, Data Science & Informatics
- Translational Innovation Corps (I-Corps™) Training
- Research Bioengineering Trial Innovation Network Hub Liaison Team
- Regulatory Knowledge & Expertise
- Pilot Grants and Study One-Stop Support (SOS)
- Pragmatic Trials Science of Team Science
- Research Incubation
- Innovation EcoSystem
- Early Life Exposures
- Evaluation & Tracking and QPIP



# Clinical Translational Research Centers (CTRCs)



- **UCH, CHCO, NJH, CU-B and Perinatal**
  - Inpatient and outpatient facilities
  - Research **Nursing** – inpatient, outpatient, mobile teams (NICU, PICU, ED, etc.)
  - Bio-nutrition, metabolic kitchen, whole room calorimeter and body composition
  - Vascular Ultrasonography and ECHO
  - Core laboratories & specimen processing
  - **Microgrants** to Jr. Investigators (\$10,000/yr. x 3)
  - SARC review of all protocols
  - **200** unique PI's conduct research on > **500 CTRC** Protocols each year (10,000- 15,000 visits/yr)



# Pilot Grant Awards

- **5 Pilot Grant programs** – CO-Pilot, CMH, Community Engagement, New Methods, **CU-CSU Collaboration Award**
- **\$900,000 available**
- **\$20,000, 30,000, \$60,000 levels**
  - Letter of Intent in August
  - Deadline September (end)
  - Peer Review in November- December
  - Start-up in January-April



# Translational Workforce Development



1. Summer Undergraduate Minority Mentoring in Science (SUMMiT) (n=14)
2. **TL1 (T32) Pre- and Post-doctoral PhD training program**
3. Clinical Sciences Graduate Program (PhD, Masters)
4. KL2 (K12) Research Scholar program - up to 3 yrs. of support
5. K-Club and Nuts and Bolts
6. Support for Clinical Faculty Scholars Program
7. Clinical Research Education Forum for Investigators and Study Coordinators

# Translational Workforce Development

8. **Leadership in Innovative Team Science (LITeS),  
Emerging LITeS, LITeS Junior, LITeS Team**
9. Colorado Mentor (CO-Mentor) Training Program
10. **K-to-R Transition Grant Review**
11. **Pre-K Award Assistance and Grant Review**
12. Research Studios
13. Innovation Corps @ CCTSI



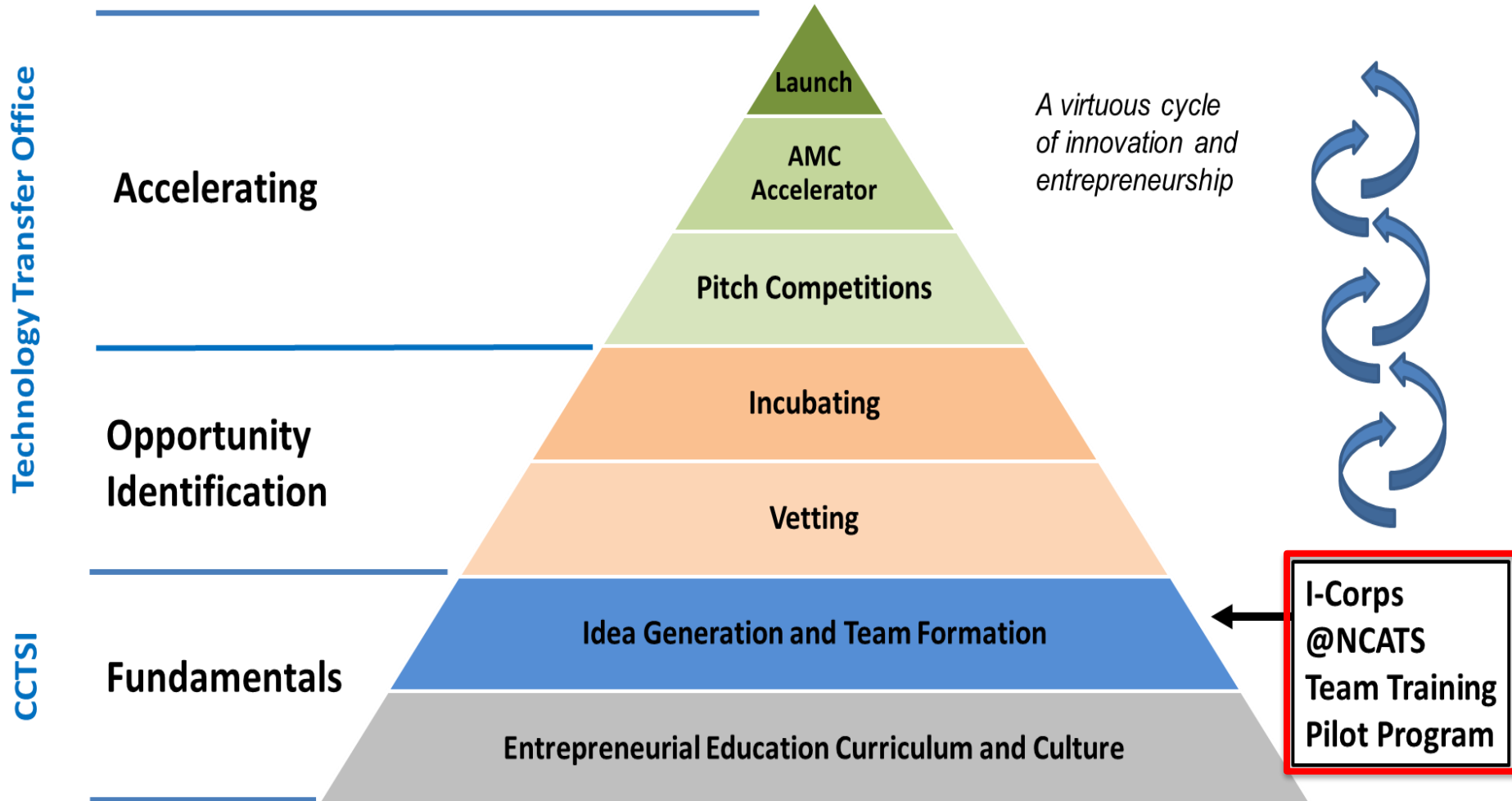
# Community Engagement & Research Programs

- Community Research Liaison (CRL) program
- Colorado Immersion Training in Community Engagement (CIT)
- Research Readiness Certification for Community Based Organizations
- Community Consults
- CE Pilot Grant Program
- Boot Camp Translation for Patient-Centered Outcomes: Facilitator Training
- Introduction to CBPR for Community-Academic Partnerships





# Innovation & Entrepreneurship Ecosystem at AMC



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# ACCELERATING SCIENCE. IMPROVING CARE.

The Colorado Clinical & Translational Sciences Institute (CCTSI) is the academic home to help transform the clinical and translational research and training efforts at the University of Colorado Anschutz Medical Campus and affiliated institutions, including Colorado State University. The CCTSI was created in 2008 with funding from the Clinical & Translational Science Award (CTSA) initiative of the National Institutes of Health. Colorado State University joined the CCTSI during the grant renewal in 2013 and continues to be funded through an institutional subaward.

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Join the CCTSI for Free

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**CCTSI WEBSITE**

CU Anschutz



# CCTSI - CSU Steering Committee



**Sue VandeWoude,**  
Professor, MIP; Subaward Director



**Christa Johnson,**  
Associate VP for Research; VPR  
Representative



**Melissa Reynolds,**  
Research Assoc Dean, College of  
Natural Sciences; CNS  
Representative



**Matt Hickey,**  
Interim Research Assoc Dean,  
College of Health and Human  
Sciences; CHHS Representative



**Zhijie Wang,**  
Asst Prof, Dept of Mechanical  
Engineering; Engineering  
Representative



**Jenn Cross,**  
Prof of Sociology  
Science of Team Science



**Hannah Love,**  
Postdoctoral Fellow  
Science of Team Science



**Terry Oppenorth,**  
CSU Ventures; iCorps



**Steve Albers,**  
CSU Ventures; iCorps



**Lindsey Linke,**  
Research Scientist,  
iCorps



**Mark Stenglein,**  
Asst Prof, MIP; Informatics Consult



**Sangeeta Rao,**  
Asst Prof, Clin Sci; Biostatistics  
Consult



**Lauren Shomaker,**  
Assoc Professor, HDPS  
Pre-K Asst Director



**Tracy Webb,**  
Research Scientist  
Natural Animal Models



**Joe Strecker,**  
IT Manager; Veterinary EMR  
(Technical)



**Colleen Duncan,**  
Assoc Professor, Clin Sci; Veterinary  
EMR (Governance)



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▶ [NATURAL ANIMAL MODELS](#)

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# | Programs & Services

## ▲ BIOSTATISTICS

The Biostatistics core at CSU is a part of BERD (Biostatistics, Epidemiology, Research Design). It was developed to help academic researchers with study design, data analyses tools and methodologies for their projects. It involves research consultation(s) on study design, sampling methodologies, sample size calculations, analyses recommendations, wording of analytical method sections for grant applications, recommendations for data entry tools, basic and advanced statistical analysis, interpretation of statistical analysis and presentation of results for reports. **Request a consultation**

Contact: ✉ **Sangeeta Rao**

## ▲ BIOINFORMATICS

Available services include consultation on laboratory and sample preparations for next generation sequencing libraries, genome assembly, RNA transcript assembly, read alignment, metagenomics analysis, tailored software development, bioinformatics training and mentoring, and interpretation of results. **Request a consultation**

Contact: ✉ **Mark Stenglein**





# Clinical and Translational Science Award One Health Alliance

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## ONE HEALTH

One Health is the integrative effort of multiple disciplines working together locally, nationally, and globally to attain optimal health for people, animals, and the shared environment.

## OUR MISSION

The Clinical and Translational Science Award One Health Alliance (COHA) is comprised of veterinary schools partnered with medical and other colleagues through a National Institutes of Health Clinical Translational Science Award (CTSA). COHA's mission is to advance our understanding of diseases shared by humans and animals. The alliance leverages the expertise of physicians, research scientists, veterinarians, and other professionals to find solutions for medical problems and to address the well-being of humans, animals, and the environment. This approach will capitalize on One Health





# Anschutz Health Sciences Building



# Anschutz Health Sciences Building

- Planned occupancy Fall-2021
- CCTSI Leprino 3<sup>rd</sup> Floor operations to 6<sup>th</sup> floor
- CTRC, Infusions, Core Lab, Bionutrition, Exercise Facility, Offices
- Two large procedure rooms (~300 sf) to accommodate some activity that must currently be performed IP
- Two negative pressure rooms
- Five chair infusion suite
- Building will have a dedicated research pharmacy
- Metabolic Kitchen to move into AHCW





**QUESTIONS?**

