



2023

State of  
**RESEARCH**  
Address

**Thomas Flaig, MD**

Vice Chancellor for Research

University of Colorado Anschutz Medical Campus

December 12, 2023

# 2023 STATE OF RESEARCH ADDRESS

## Agenda

- Research Landscape
- Funding Snapshot and Key Research Metrics
- Our Team: Your Partners in Science
- Campus Research Highlights
- Power of Partnerships
- Looking to the Future
- Q&A



## Trends and Headwinds

- Uncertainty in federal budgets; flat inflation-adjusted funding from NIH
- Opportunities with team-based, inter-campus/institutional research
- New funding opportunities (ARPA-H, EDA hubs)
- Adapting to post-COVID environment in research

## How CU Anschutz is Responding

- Enhancing multidisciplinary, inter-institutional research collaborations
- Providing new resources and guidance to help diversify our funding portfolio
- Supporting study recruitment
- Formalizing our strategic approach

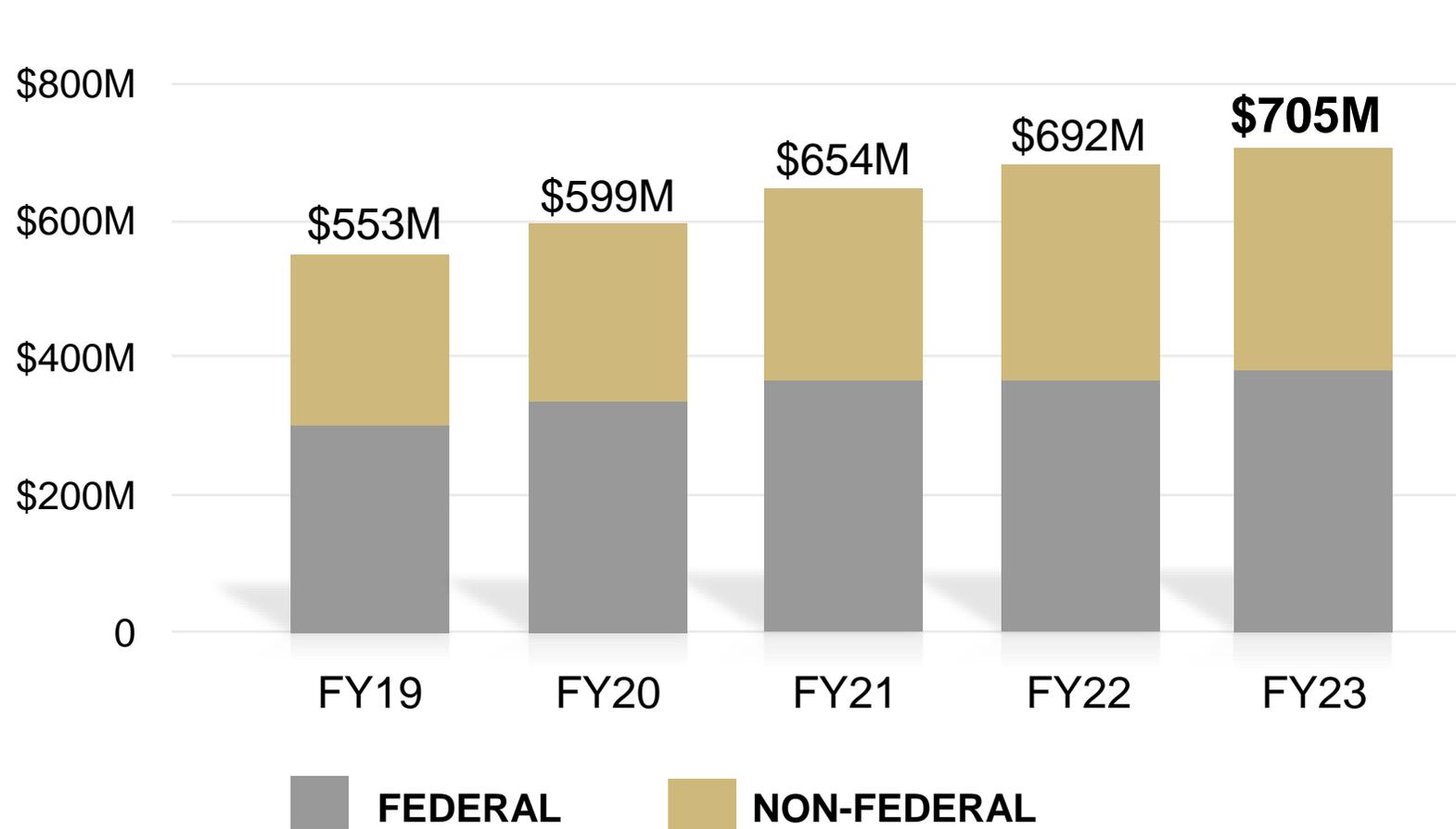




# KEY RESEARCH METRICS



# CU ANSCHUTZ SPONSORED RESEARCH FUNDING



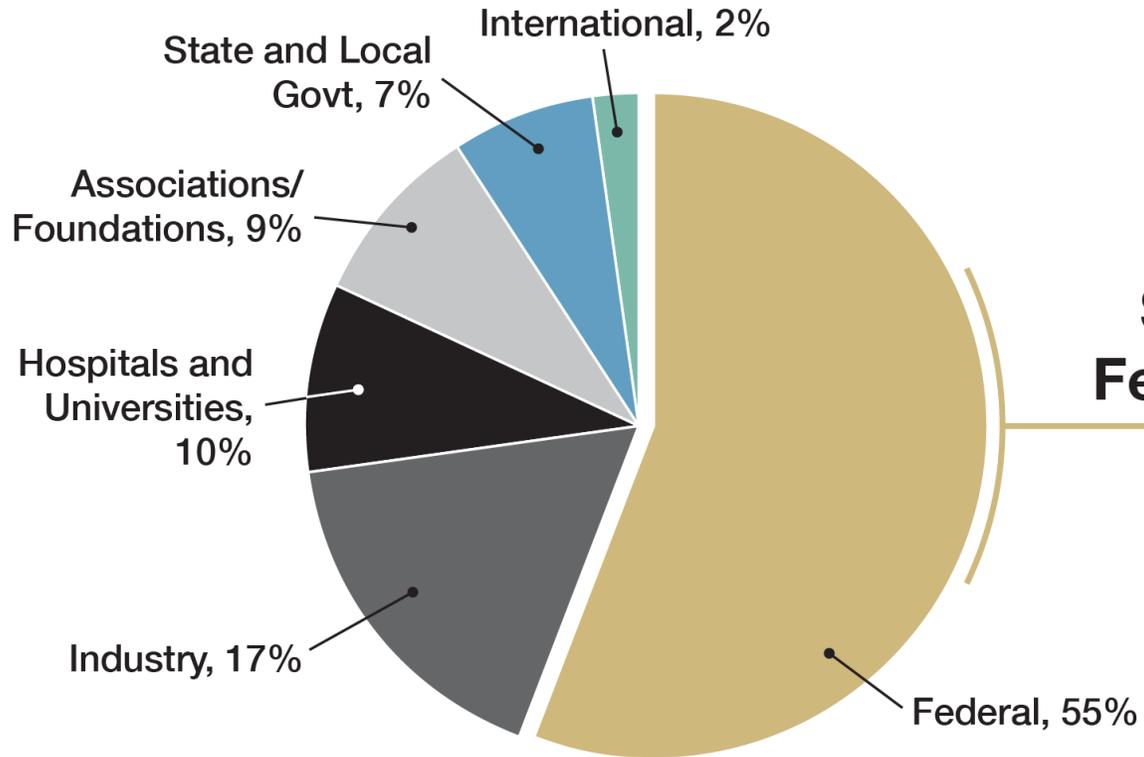
**27%**  
increase  
since  
FY19





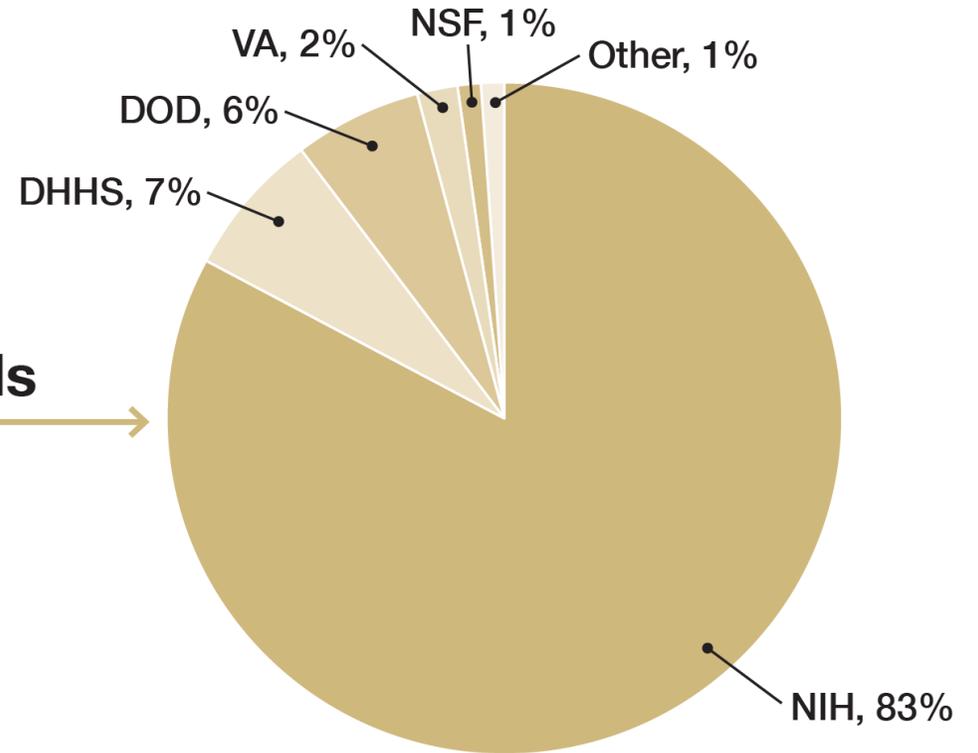
# FY23 SPONSORED AWARDS BY TYPE

**\$704.8M Total**



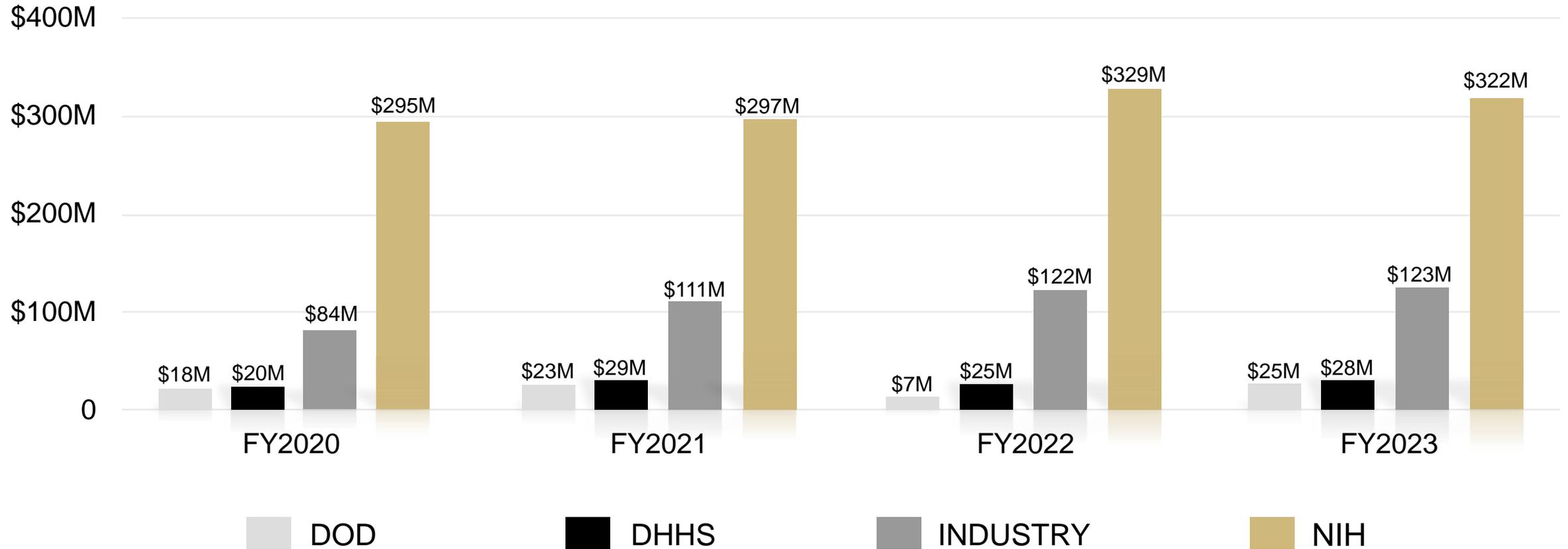
**\$390.6M in Federal Funds**

**FY23 Federal Fund Breakdown**



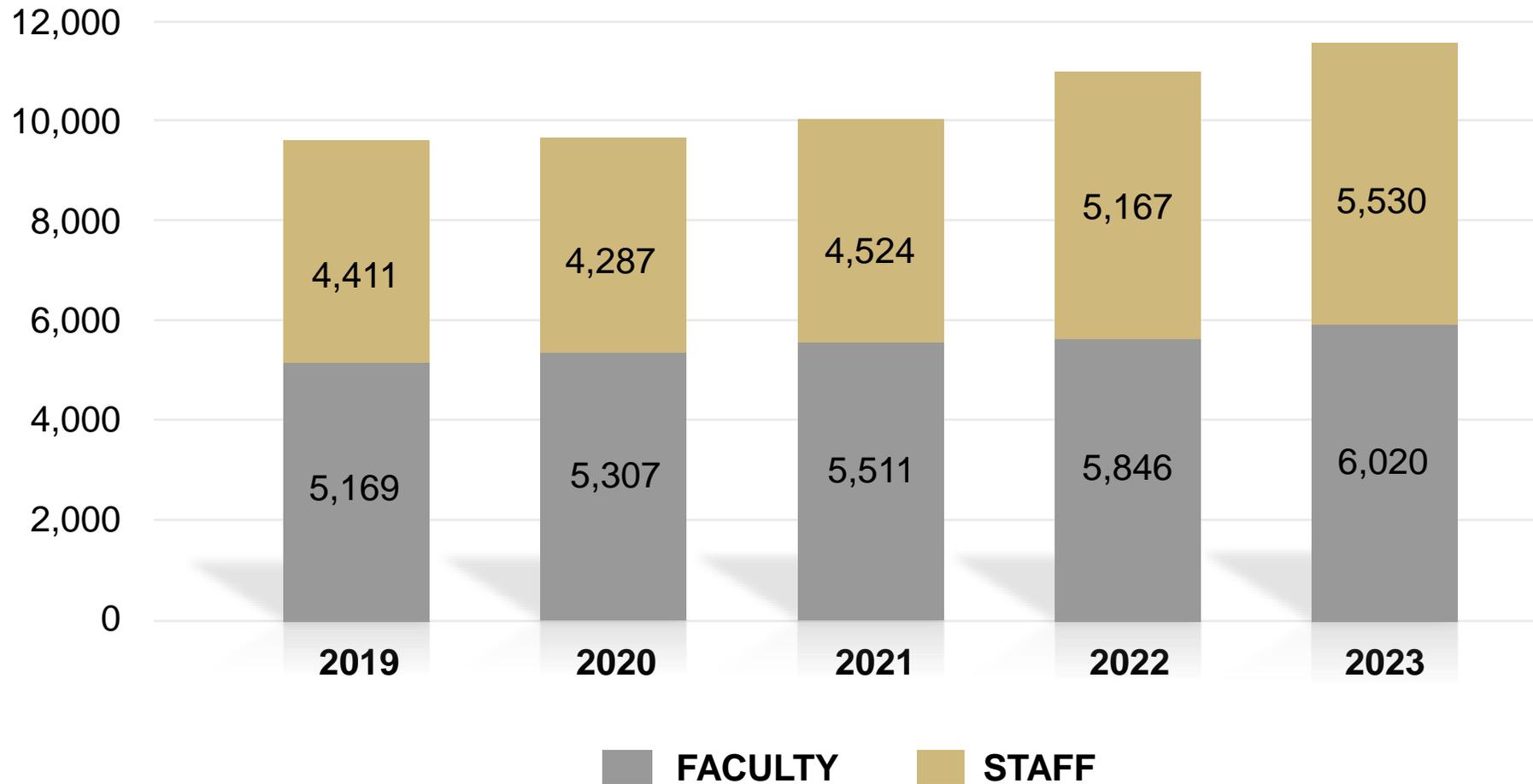


# DIVERSIFYING OUR FUNDING PORTFOLIO





# FACULTY AND STAFF GROWTH



**25%**  
5-year staff increase

**16%**  
5-year faculty increase





# FY23 RESEARCH HIGHLIGHTS

**1.5K+**

**Principal  
Investigators  
on Campus**

**800K**

**Square Feet of  
Laboratory  
Space**

**14K+**

**People Enrolled  
in Research  
Studies in FY23**

**3.5K+**

**Active Clinical  
Trials**

**18%**

**Growth in  
Clinical Research  
Studies since FY20**





# OFFICE OF THE VICE CHANCELLOR FOR RESEARCH

Your Partners in Scientific Discovery



# OFFICE OF THE VICE CHANCELLOR FOR RESEARCH

## MISSION STATEMENT

### *Our reason to be*

Committed to a **diverse, team-based culture**, we engage and collaborate with the research community to provide **expertise, support and guidance** for the advancement of science.

## VISION STATEMENT

### *Where we want to go*

**Together**, we make tomorrow's research happen.





# LEADERSHIP TEAM

**Thomas Flaig, MD**  
Vice Chancellor for Research  
*CU Anschutz Medical Campus*



**Terri Carrothers**  
Executive Vice Chancellor for  
Administration and Finance | CFO  
CU Anschutz



**Lori Sussel, PhD**  
Associate Vice Chancellor  
*Basic Science*



**Jori Leszczynski, DVM**  
Assistant Vice Chancellor  
*Laboratory Animal Resources*



**Ben Echaliier, MS, MBA, CCRP**  
Assistant Vice Chancellor  
*Clinical Research Operations*



**Laura Buccini, DrPH, MPH, MA**  
Assistant Vice Chancellor  
*Research Development and Strategy*



**Ron Sokol, MD**  
Assistant Vice Chancellor  
*CCTSI*



**Alison Lakin, PhD**  
Associate Vice Chancellor  
*Regulatory Compliance*



**Amy Gannon**  
Associate Vice Chancellor  
*Grants and Contracts/  
Fiscal Compliance*





# REGULATORY COMPLIANCE

***Helping investigators to conduct, safe, successful, compliant research***

**5577** Active human subject research protocols

**795** Confidentiality Disclosure Agreements (CDAs) completed

**487** Clinical Trial Agreements (CTAs) completed in FY23

**37.7** Tons of chemical waste safely disposed of in 2023 (to date)



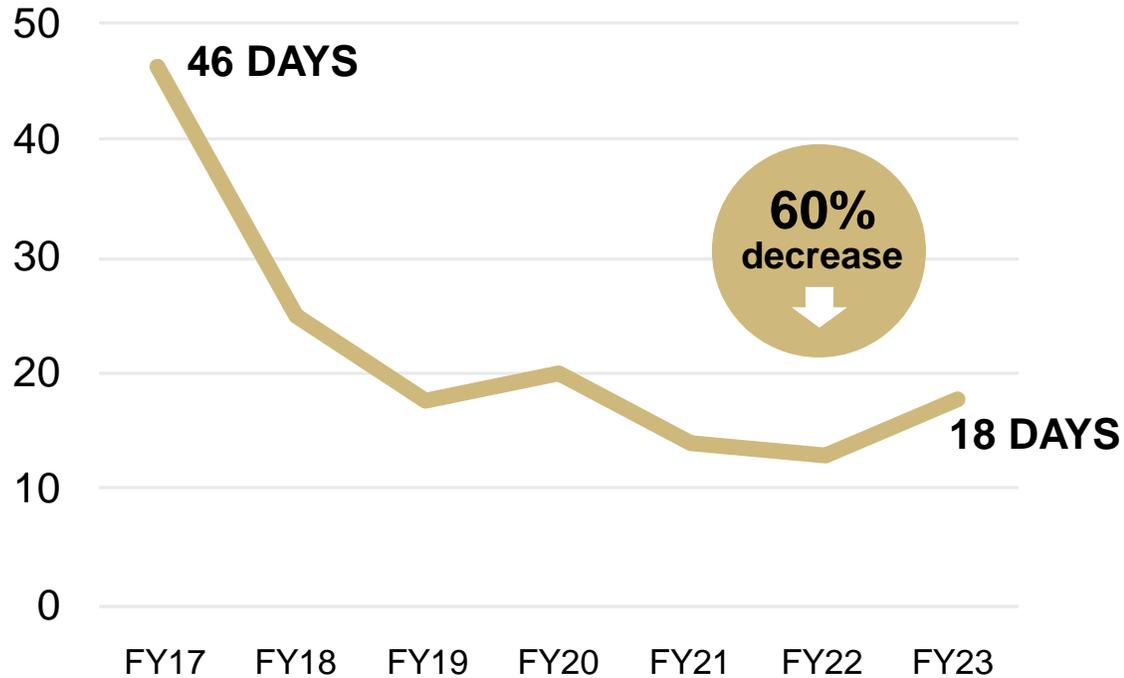
**Alison Lakin, RN, LLB, LLM, PhD**  
Associate Vice Chancellor  
*Office of Regulatory Compliance*



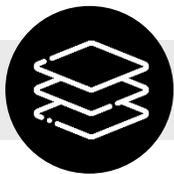
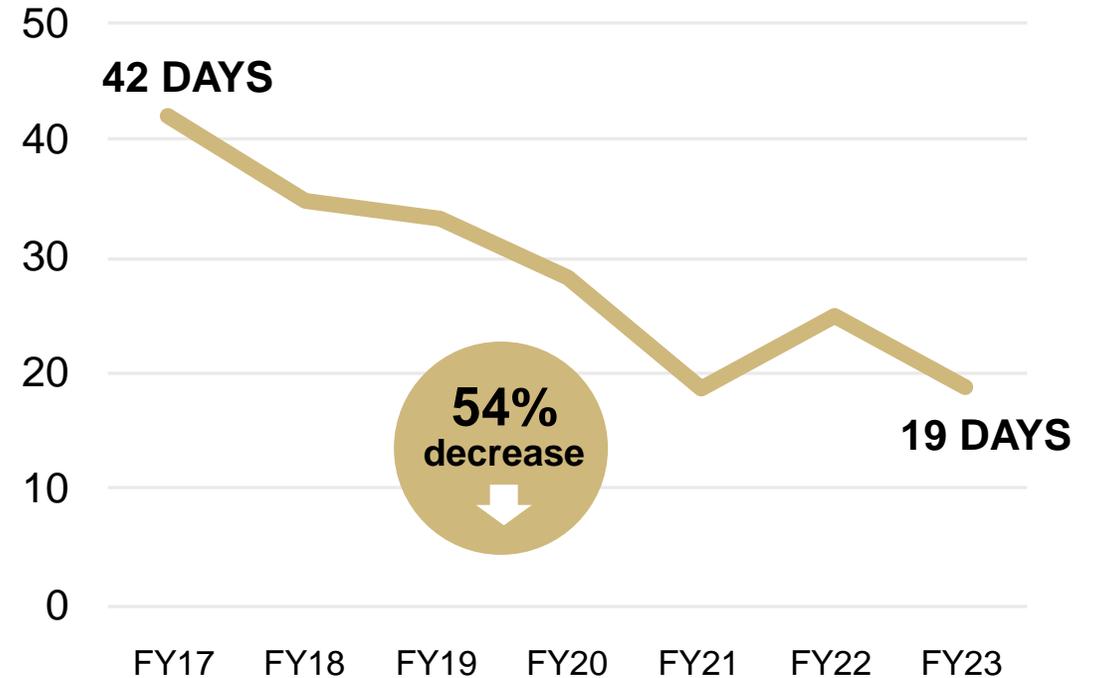


# COMIRB: A TALE OF SHORTENED TIMELINES

## Expedited Median Days to Approval



## Full Board Median Days to Approval



**COMIRB application to be shortened from 76 to 20 pages**





# RESEARCHER SPOTLIGHT

“

There are many unique compliance issues associated with acute care research, so I feel really fortunate to work with our IRB and Regulatory Compliance teams. They are creative problem-solvers who go above and beyond to help us to answer important research questions while maintaining the highest ethical standards.”

– DR. GINDE



**Adit Ginde, MD, MPH**

Professor, Vice Chair for Research  
Department of Emergency Medicine  
*Principal Investigator, ATLAS Research Program*







# OFFICE OF LABORATORY ANIMAL RESOURCES

## EXPANDED FACILITIES

**200%+**

housing capacity increase  
in ABSL2+/ABSL3

**450%**

test/behavior room  
capacity increase

**1/4**

colonies moved to optimize  
access to resources

## DEDICATED TEAM

**6**

veterinarians  
on staff

**100+**

team members

**479**

IACUC-approved  
research projects



**Jori Leszczynski, DVM**

Assistant Vice Chancellor  
*Office of Laboratory Animal Resources*





# RESEARCHER SPOTLIGHT

“

Investments into the campus vivarium have allowed for critical updates and a much-needed expansion of the zebrafish facility. This has more than doubled my team's capacity for experiments and allowed our growing community of investigators to be more far more productive and efficient in our scientific endeavors.”

– DR. APPEL



**Bruce Appel, PhD**

Professor, Section of Developmental Biology  
Department of Pediatrics  
*CU School of Medicine*





# GRANTS & CONTRACTS HIGHLIGHTS

**Assisting faculty to manage external support for their research activities including contracting, pre/post-award management, and processing of funds**

**2,642** Grants submitted in FY23

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**3,116** Individual awards in FY23

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**34%** Grant success rate last year



**Amy Gannon**  
Associate Vice Chancellor  
*Office of Grants and Contracts*





# CLINICAL RESEARCH OPERATIONS AND SERVICES

## Clinical Research Support Team (CReST)

330+

Research projects supported

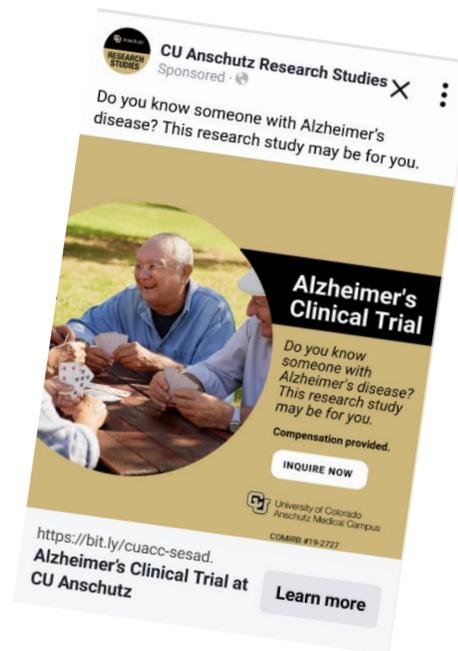
37

Departments represented across 4 schools

\$14M+

Total research funding negotiated by CReST

## NEW: Clinical Research Recruitment Program and Workforce Development Program



**Ben Echaliier, MS, MBA**  
Assistant Vice Chancellor  
*Clinical Research Operations and Services*





## *Supporting new advances in human health*

- Advances researchers' innovations and novel health solutions through expertise, support and collaboration
- Manages administrative, regulatory and safety elements of the product development lifecycle.

**2023**

Year the IND/IDE  
Office was founded at  
CU Anschutz

**138**

INDs/IDEs submitted to  
the FDA over the past  
three years



**Heike Newman, MS, EMBA, CCRP**  
IDE/IDE Office Program Director  
*Office of the Vice Chancellor for Research*





# RESEARCHER SPOTLIGHT

“

Submitting an investigational new drug application is an intricate process, and it can be intimidating. The IND office was extremely knowledgeable and took care of everything, so I could focus on my research. I could never have launched a psilocybin trial without them.”

– DR. NOVICK



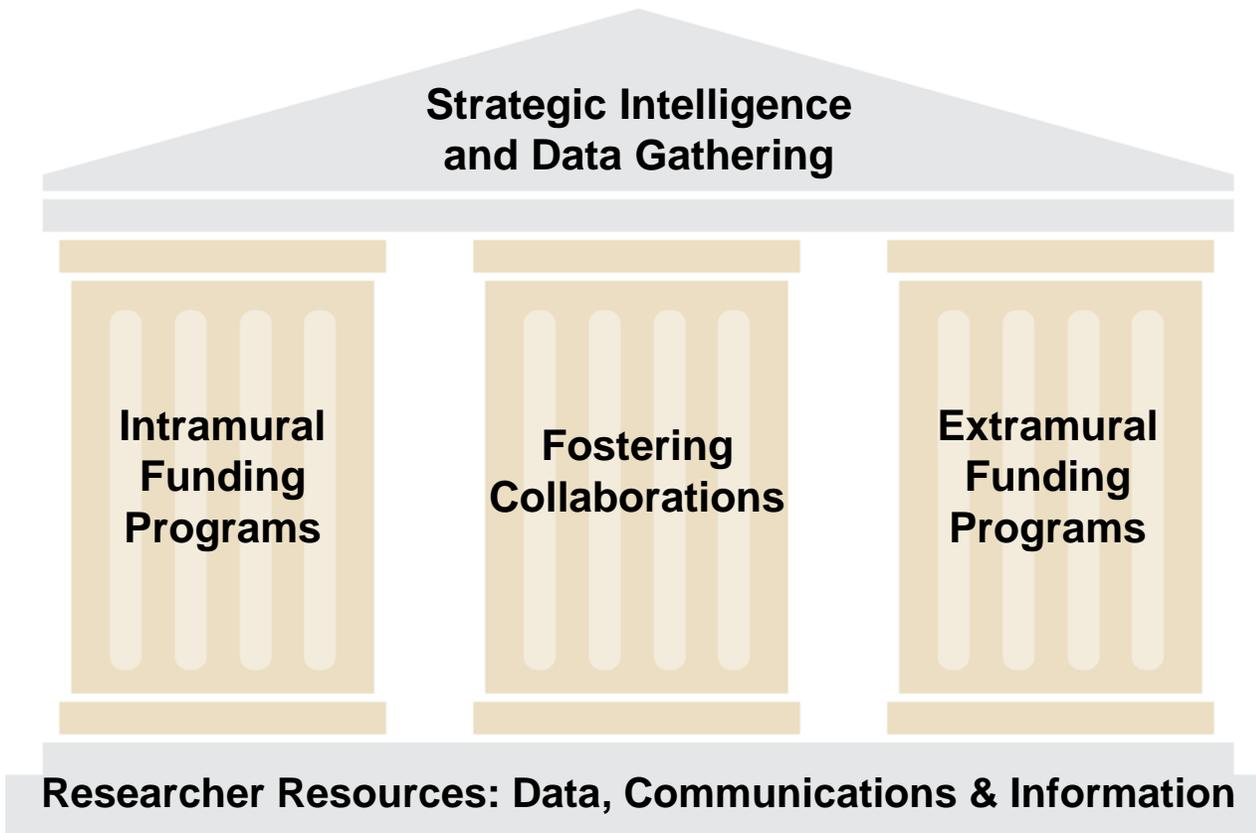
**Andy Novick, MD, PhD**  
Assistant Professor of Psychiatry  
*CU School of Medicine*





# NEW: OFFICE OF RESEARCH DEVELOPMENT AND STRATEGY

***Building an ecosystem to elevate and accelerate our campus research funding portfolio***



**Laura Buccini, DrPH, MPH**  
Assistant Vice Chancellor  
*Office of Research Development and Strategy*





# OFFICE OF RESEARCH DEVELOPMENT AND STRATEGY

## ABNEXUS



**\$3.5M**

grant funds distributed to  
48 research teams

**\$22M+**

external funds garnered by  
awardees to date

## ARPA-H



## QUANTUM TECH HUB



## LIMITED SUBMISSION OPPORTUNITIES



**82**

internal proposals  
submitted in 2023

**39%**

increase in submissions  
over last year





**AB** N▶ EXUS



# SUPPORTING DIVERSITY IN RESEARCH

**3** Clinical Research Recruitment Workshops Hosted in 2023

**200+** Total Attendees

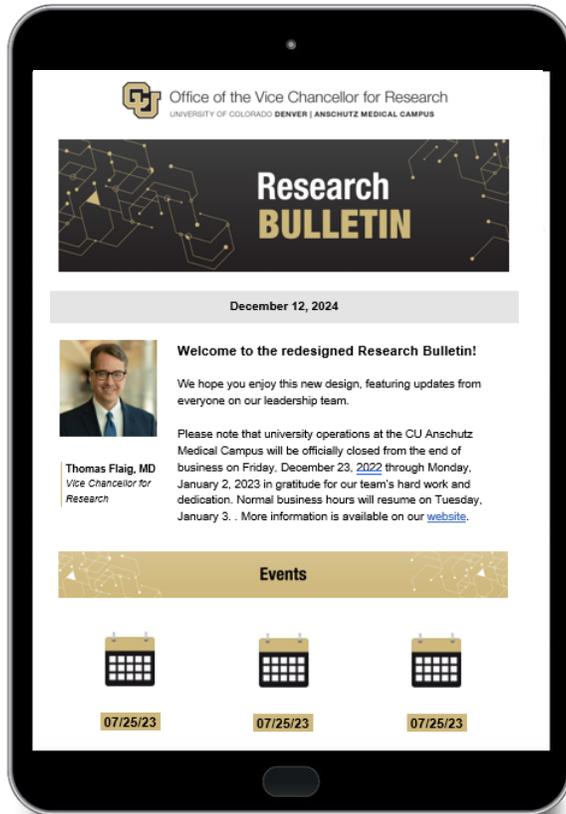




# STAYING CONNECTED: RESEARCH COMMUNICATIONS

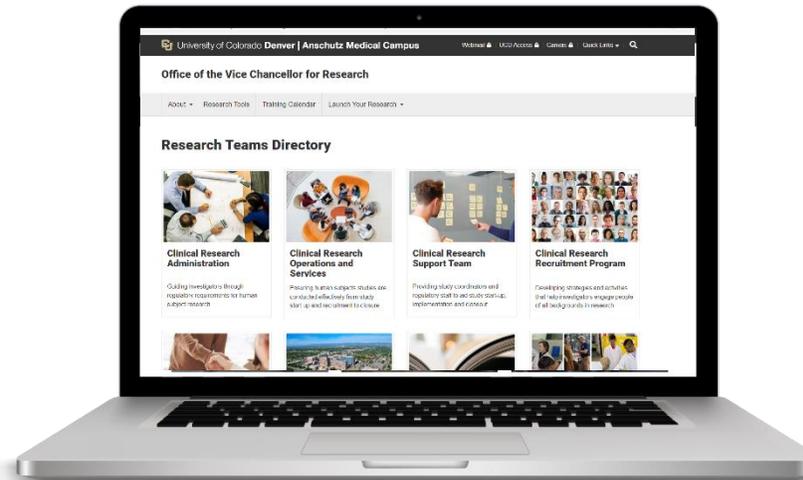
## Research Bulletin Enews

Office News, Events & Updates  
*Monthly on 2<sup>nd</sup> Tuesday*



## Office of the Vice Chancellor for Research Website

*Your one-stop shop for campus  
research resources*

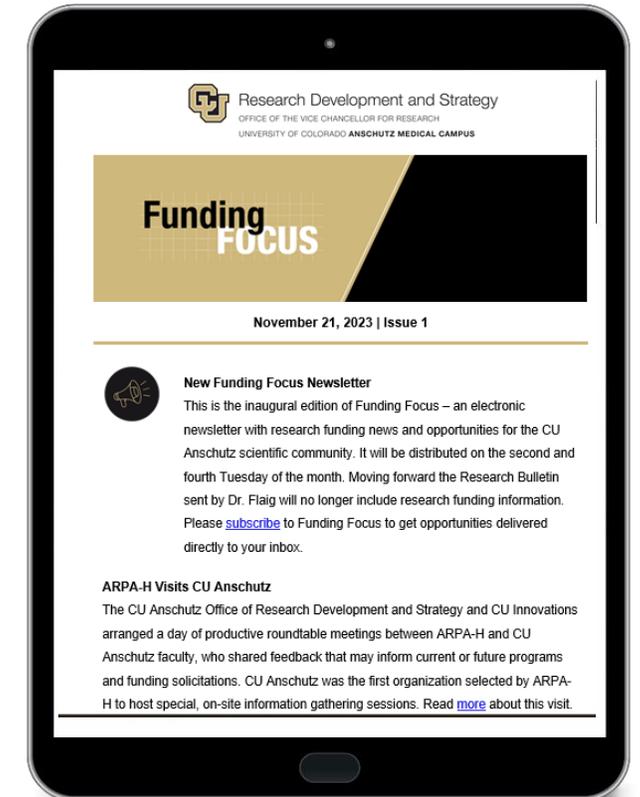


[research.cuanschutz.edu](https://research.cuanschutz.edu)



## Funding Focus Enews

Funding Opportunities & News  
*Bimonthly on 1<sup>st</sup>/3<sup>rd</sup> Tuesday*





# EXTERNAL RESEARCH COMMUNICATIONS

## Sharing our research successes and building the CU Anschutz brand

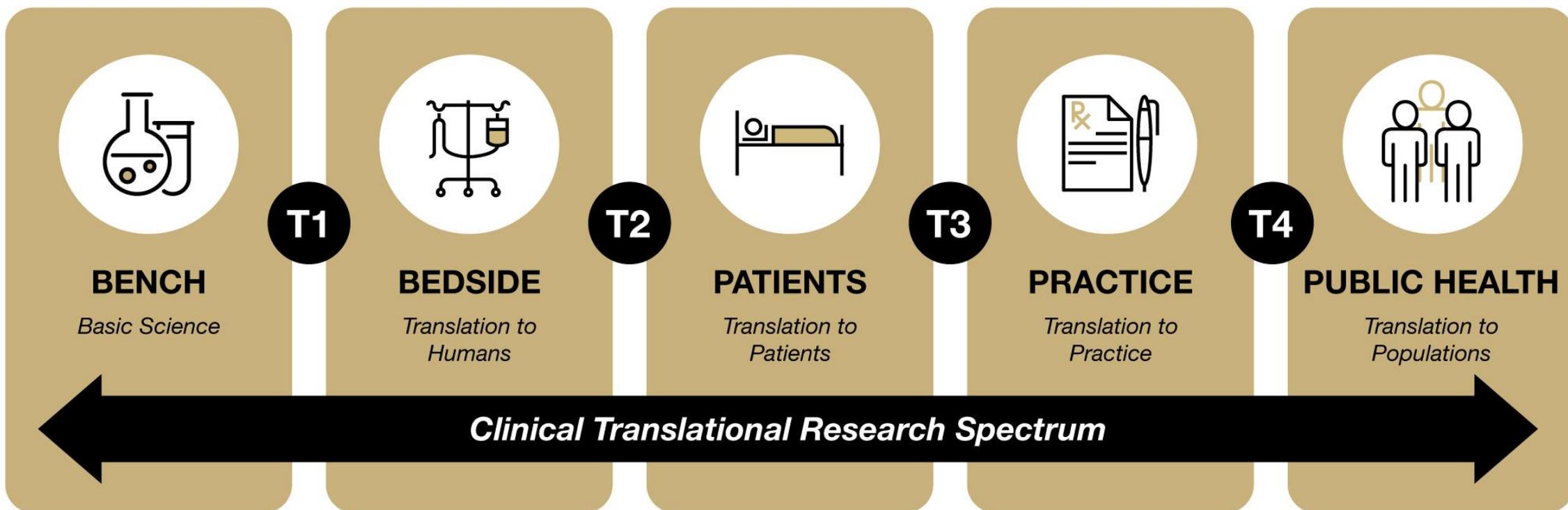




# A THRIVING RESEARCH COMMUNITY



# BENCH TO BEDSIDE AND BEYOND





# RESEARCH IMPACT

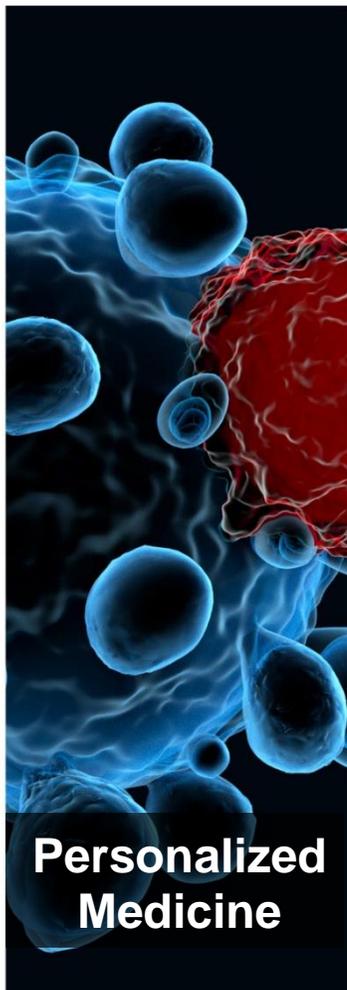
*Pioneering groundbreaking new discoveries across fields and disciplines*



**Diabetes**



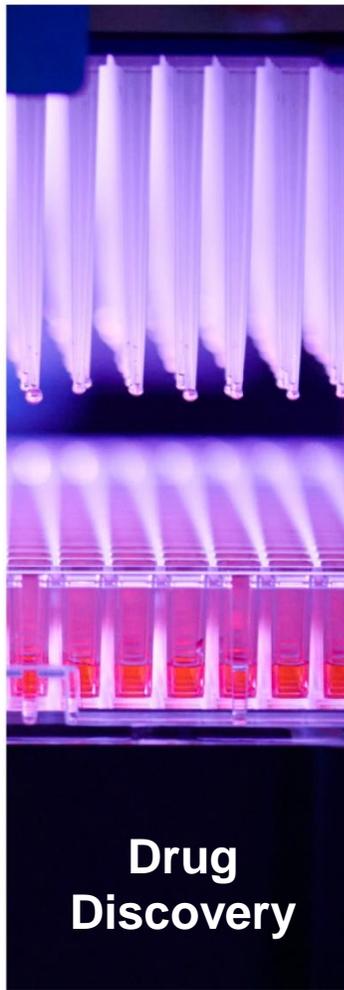
**Down Syndrome**



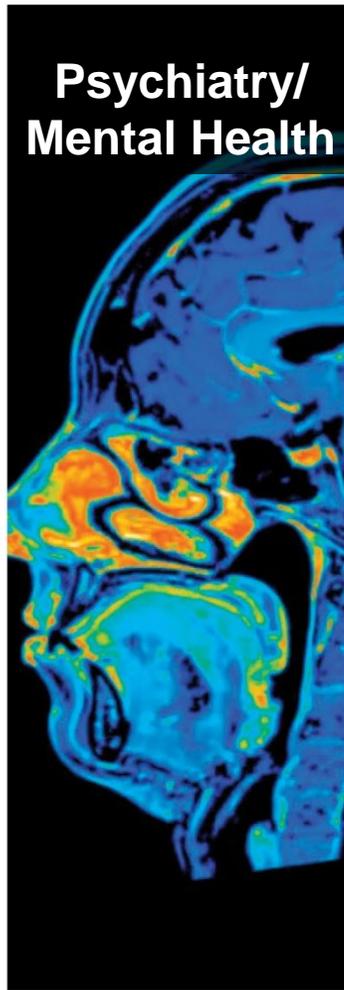
**Personalized Medicine**



**Health Equity**



**Drug Discovery**



**Psychiatry/  
Mental Health**



**Bioinformatics**





# CU CANCER CENTER HIGHLIGHTS

650

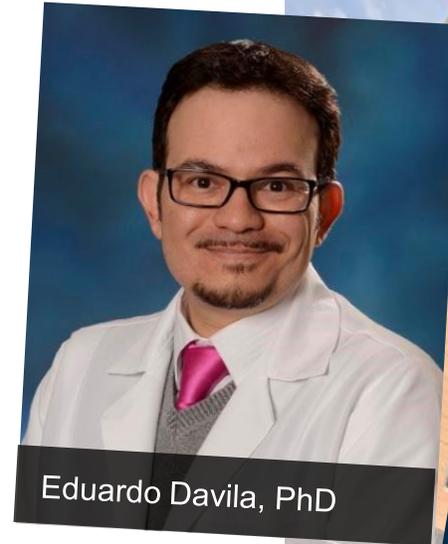
Grants and contracts awarded to Cancer Center members in 2023, totaling **\$74.8M**

\$20M

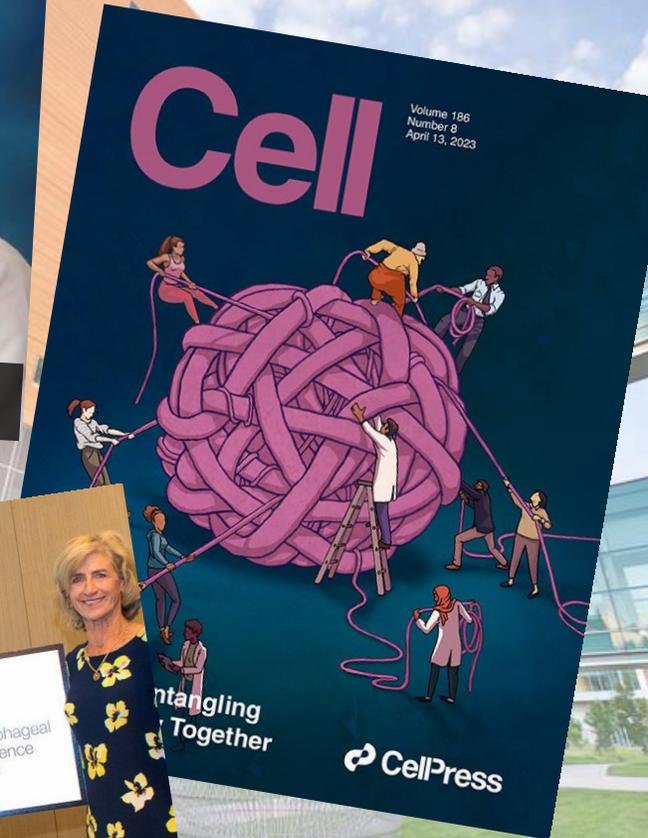
Philanthropic gift established the new Katy O. and Paul M. Rady Esophageal and Gastric Center of Excellence

637

Cancer-focused publications produced by members last year



Eduardo Davila, PhD





# NEW APPLICATIONS OF AI

“

There is a lot you can learn from looking at the eyes. They can tell us about neurological or cardiovascular conditions. Today, AI technologies are helping us to use data from patients' eyes to get a sense of overall health, so we can predict certain diseases sooner.”

**DR. KALPATHY-CRAMER**



**Jayashree Kalpathy-Cramer, PhD**

Professor of Ophthalmology  
*CU School of Medicine*





## *Taking cellular therapy and precision medicine to new heights*



**2020** Human clinical trials launched using CAR T-cells developed at CU Anschutz



**2022** Historic \$200M philanthropic commitment established the Gates Institute with Terry Fry, MD at helm



**2023** Gates Institute celebrates official launch at Transforming Healthcare event





**Cathy Bradley, PhD**  
Professor, Dean  
*Colorado School of Public Health*

**\$61M** sponsored research funding in FY23

**23%** funding increase over FY22

**600+** published research studies last year



**Ranked among top NIH-funded public health schools nationwide**





# BUILDING RELATIONSHIPS WITH FEDERAL PARTNERS



**U.S. Senator John Hickenlooper and  
FDA Commissioner Robert Califf, MD**



**Philippe Étienne,  
French Ambassador  
to the United States**

**Admiral Rachel  
Levine, MD  
U.S. Asst Secretary  
for Health at DHHS**



**Lester Martínez-López, MD, MPH,  
U.S. Asst Secretary of Defense for Health Affairs**





# THE POWER OF PARTNERSHIPS

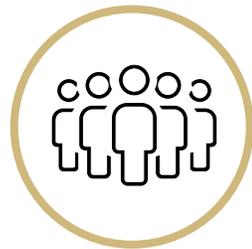


**NIH grant was renewed in 2023, funding CCTSI's resources, services and infrastructure for another seven years!**



**\$3M**

Pilot grants/training awards distributed annually



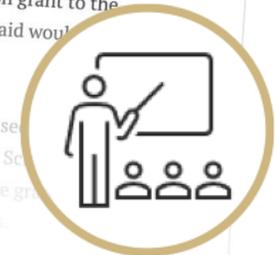
**179**

T32 & K12 Career Development Awardees supported since 2008



**>250**

Principal Investigators leading protocols at CU Anschutz Clinical Translational Research Center



**100+**

Researchers attended the 2023 CU-CSU Summit on Dissemination & Implementation Science





# UCHEALTH: ELECTRONIC TOOLS TO SUPPORT RESEARCH

## MY HEALTH CONNECTION

**500K** UCHealth patients invited to join 58 research studies

## RESEARCH PREFERENCES

**18K** patients indicated a research area of interest

**8,000+** potential participants have been identified for 47 studies

## TREATMENT RELATIONSHIP REPORTS

**7,800** potential participants identified for 25 studies

## EPIC

**21** clinical research studies implemented remote paperless e-consent directly within Epic

**61** studies utilizing e-Case report forms (e-CRFs) within Epic



**Tom Campbell, MD**  
Chief Clinical Research Officer  
*Professor, CU Anschutz*



**Laurie Blumberg-Romero, MA**  
Senior Director  
*Research Administration UCHealth*





# CHILDREN'S HOSPITAL COLORADO

***Child Health Research Enterprise is the centralized administrative, operational and scientific home for child health research at Children's Hospital Colorado and CU Anschutz.***

**150+**

Team members at Children's Colorado

**1,100**

Active clinical research studies supported

**\$69M**

Philanthropy raised in support of child health research since 2018

**#8**

Ranking for NIH funding\*  
*\*Dept of Pediatrics and Children's Colorado combined*



**Ronald Sokol, MD**  
Chief Scientific Officer,  
Child Health



**Jenae Neiman, RN, BSN**  
Vice President,  
CHCO Research Operations





# ACCORDS ANNUAL HIGHLIGHTS

## ***A centralized resource for T3-T4 research at CU Anschutz***

**100**

Junior faculty supported with career development proposals and awards

**1,200+**

Attendees joined ACCORDS educational seminars and workshops

**7**

Strong methodological cores led by national experts, including two new offerings this year:

- *Learning Health Systems*
- *Pragmatic Research and Trials*



**Jerica Berge, PhD, MPH**

New Director of ACCORDS  
*Starting in January 2024*



ACCORDS

ADULT AND CHILD CENTER FOR OUTCOMES  
RESEARCH AND DELIVERY SCIENCE



Office of the Vice Chancellor for Research  
UNIVERSITY OF COLORADO DENVER | ANSCHUTZ MEDICAL CAMPUS

State of  
**RESEARCH**



## ANNUAL HIGHLIGHTS

**189**

Patents filed last year

**145**

New inventions by faculty

**41**

New licensing deals

**\$35M**

Gross revenue to campus



*Ranked a **Top 5 Innovation Hub** by the NIH and **No. 4 Leading Academic Institution** by Nature's Innovation Index.*



CU Innovation's Women-Led Innovation Event, April 2023





# LEAD CENTER

## AT A GLANCE

91

Team members

> 8,500

Research participants

> \$26M

total funding  
since 2015

> 450

Publications  
since 2015

## Research Accomplishments



**ECHO Consortium:** Studying the effects of environmental exposures on child health and development:



**ENRICH Consortium:** Improving cardiovascular health of mothers and offspring



**Diabetes Research:** Studying predictors of diabetes in indigenous youth and the relationship between diabetes and Alzheimer's



**Mentorship:** Supporting students, post-doc/medical fellows, and junior faculty

**Lifecourse Epidemiology of  
Adiposity & Diabetes (LEAD) Center**  
colorado school of public health





# RESEARCH INFORMATICS OFFICE

***Health Data Compass: A research data warehouse that's changing how data flows across campus***

## **DATA DELIVERY TEAM** ***2023 Highlights***

- Cut the project queue in half and reduced turnaround times twofold
- Averaging one data delivery per day
- New service tiers to cater to specific data needs: Self-Service, Standard and Curated Data Delivery

***Learn more at [healthdatacompass.org](https://healthdatacompass.org)***

## **SUPPORTING NATIONALLY RECOGNIZED RESEARCH PROJECTS**

**PATHWEIGH™**

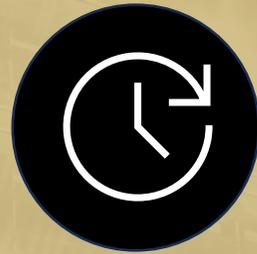
*Pragmatic weight management in  
primary care*



**MENDS**

MULTI-STATE EHR-BASED NETWORK  
FOR DISEASE SURVEILLANCE





# LOOKING TO THE FUTURE



# WHAT'S NEXT

***Our campus research community is strong, growing and has a collaborative spirit.***

- Focusing on strategic development in research
- Diversifying our research portfolio
- Stewardship of campus research infrastructure and resources
- Optimizing our communications
- Strengthening and expanding our research partnerships





THANK YOU



Office of the Vice Chancellor for Research  
UNIVERSITY OF COLORADO DENVER | ANSCHUTZ MEDICAL CAMPUS



**Q&A WITH THE LEADERSHIP TEAM**