2024 FACTS AND FIGURES

School of Medicine

UNIVERSITY OF COLORADO
ANSCHUTZ MEDICAL CAMPUS

CELEBRATING 141 YEARS 1883-2024

TABLE OF CONTENTS

Mission Statement

Approved by the Executive Committee and Faculty Senate in October 2021.

The mission of the University of Colorado School of Medicine is to provide Colorado, the nation and the world with programs of excellence in:

- Education - through the design, implementation and evaluation of educational programs for medical students, allied health students, graduate students, residents and fellows, practicing health professionals and the public-at-large

- Research - through the development of new knowledge in the basic and clinical sciences, as well as in public and community health, health policy and health sciences education;

- Patient Care - through state-of-the-art clinical programs which reflect the unique educational and scholarly environment of the University, as well as the needs of the patients and communities it serves; and

- Community Collaborations - by forming partnerships with the broader community, learning from the experiences of community members and sharing the School's expertise and knowledge, in order to promote healthier and more resilient communities, address the social, environmental and economic determinants of health, and advocate for health equity.

Values Statement

Approved by the Executive Committee (October 2008) and Faculty Senate (November 2008)

The University of Colorado School of Medicine works actively to:

- Advance science through research on the biological mechanisms that underlie illness.
- Improve both the medical care and science of the uniquely human components of health and disease.
- Provide specialized and personalized medical care in an efficient environment.
- Support positive wellness and clinical prevention programs that promote health across the lifespan and lower early mortality.
- Transmit a high level of primary and specialty clinical expertise to the coming generations of health professionals.
- Provide a welcoming, challenging, and diverse atmosphere of growth for those who answer the call to careers in health science and service.
- Develop a diverse funding portfolio that provides the means to develop, attract, and retain nationally competitive research faculty members.
- Advance competitive medical research productivity through increased external support for innovative research ideas.
- Enhance the cooperative relationships with affiliate hospitals toward common goals in education, research, and clinical care.
- Develop a common infrastructure with the affiliate institutions on the new Anschutz Medical Campus to improve the efficient use of joint resources.
- Expand scholarly collaborations across disciplines within the School of Medicine that stimulate research innovation and increase competitive research funding.
- Support productive faculty and institutional collaborations with its sister Schools within the University of Colorado Denver to maximize bioscience research potential.
- Expand productive working relationships with local communities outside the University but within the state and region, whether for clinical, teaching, or research efforts.
- Pursue entrepreneurial development both in education and in research through collaborations with the private business communities in Colorado and the western region.
- Further improve working relationships with State and federal government entities to provide direct investment and support for research and education.
- Build collaborative relationships with medical schools and universities around the globe to enhance mutual growth in medical expertise, scholarship and stature.

HOW WE ARE ORGANIZED

CU School of Medicine
ADMINISTRATION
JULY 1, 2024

Dean, School of Medicine
Vice Chancellor for Health Affairs
John H. Sampson, MD, PhD, MBA

Administration
Chief of Staff
Associate Dean
of Public Relations
Mark Couch

Senior Associate Dean for Research Affairs
Peter Buttrick, MD

- **Anschutz Health and Wellness Center**
  Director
  Daniel Bessesen, MD
- **CU Research Imaging Center**
  Interim Director
  Michael Silosky, MS
- **Research Core Infrastructure**
  Multiple Directors
- **Advisory Committees**
  - **Research Advisory Committee**
    Chair
    Eric Clambey, PhD
  - **Strategic Investment in Research Committee**
    Chair
    Cristin Welle, PhD
  - **Bridge Funding Committee**
    Chair
    Raphael Nemenoff, PhD
- **Clinical Research**
  Associate Dean
  Thomas Campbell, MD
- **Child Health Research**
  Associate Dean
  Ronald Sokol, MD
- **Space and Facilities**
  Director
  Suzann Staal

Senior Associate Dean for Administration and Finance
Brian T. Smith, MHA

- **Administration and Finance**
  Associate Dean
  John Moore
  - **Business Affairs**
    Director
    Adam Kanallakan, MHA
  - **Human Resources**
    Director
    Olawunmi Ogunwo, JD
  - **Information Technology**
    Acting Director
    Michelle Dedin
- **University of Colorado Medicine**
  Executive Director
  Brian T. Smith, MHA

Senior Associate Dean for Clinical Affairs
Anne Fuhlbrigge, MD, MS

- **University of Colorado Medicine Affiliated Hospital Relations**
- **Clinical Affairs, Adult Health**
  (University of Colorado Hospital)
  Associate Dean
  Scott Laker, MD
- **Clinical Affairs, Child Health**
  (Children's Hospital Colorado)
  Associate Dean
  Shikha Sundaram, MD
- **Clinical Outreach**
  (University of Colorado Hospital and School of Medicine)
  Associate Dean
  Karen Chacko, MD
- **Quality Safety and Education**
  Associate Dean
  Jeffrey Glasheen, MD
- **Clinical Affairs**
  Assistant Dean
  Peter Chabot Smith, MD
- **Associate Deans for Health Affairs**
  - **Children's Hospital Colorado**
    Michael Narkewicz, MD
  - **University of Colorado Hospital**
    Jean Kutner, MD, MPH
  - **National Jewish**
    Gregory Downey, MD
  - **Denver Health**
    Connie Price, MD
- **Institute for Healthcare Quality, Safety and Efficiency**
  Director
  Jeffrey Glasheen, MD
- **Clinical Leadership Council**
  Vice Chairs for
  Clinical Affairs and Quality
  Associate Center Directors for
  Clinical Affairs and Quality

Senior Associate Dean for Education
Shanta M. Zimmer, MD

- **Finance and Administration**
  Assistant Dean
  Lucinda Allen, MS
- **Rural Health**
  Associate Dean
  Mark Deutchman, MD
- **Office of Student Life**
  Associate Dean
  Brian Dwinnell, MD
  Assistant Dean
  Nida Awadallah, MD
  Elizabeth Gundersen, MD
  Maurice Scott, MD
  Deborah Seymour, PsyD
  Jeffrey SooHoo, MD, MBA
  Admissions
  Assistant Dean
  Jeffrey SooHoo, MD, MBA
- **Child Health Associate Physician Assistant Program**
  Associate Dean
  Jonathan Bowser, MS, PA-C
- **Colorado Springs Branch**
  Associate Dean
  Jaime Baker, MD
- **Continuing Medical Education and Professional Development**
  Associate Dean
  Bradford T. Winslow, MD
- **Fort Collins Branch**
  Associate Dean
  Suzanne Brandenburg, MD
  Assistant Dean
  Christina Reimer, MD
- **Graduate Medical Education**
  Associate Dean and Designated Institutional Official
  Geoffrey Connors, MD
- **Genetics Counseling Program**
  Director
  Carol Walton, MS
- **Modern Human Anatomy**
  Executive Director
  Maureen Stabio, PhD
- **MD Curriculum**
  Assistant Deans
  Jennifer Adams, MD
  David Ecker, MD
  Chad Stickrath, MD
- **Assessment, Evaluations, and Outcomes**
  Assistant Dean
  Tai Lockspeiser, MD, MHPE
- **Student Advocate**
  Associate Dean
  John Repine, MD
- **Research Education**
  Associate Dean
  Angie Ribera, PhD
  Assistant Dean
  Andy Bradford, PhD
- **Education Technology**
  Director
  Heather Tobin, EdD
- **Physical Therapy Program**
  Associate Dean
  Michael Harris-Love, PT, MPT, DSc
- **Anesthesiologist Assistant Program**
  Medical Director
  Jaime Daly, MD
- **Medical Scientist Training Program**
  Director
  Cara Wilson, MD
- **Center for Advancing Professional Excellence**
  Director
  Elshimaa Basha, MPH
- **Diversity, Equity and Inclusion**
  Associate Dean
  Amira Del Pino-Jones, MD
  UME Director of DEI
  Maurice Scott, MD
  GME Director
  Jacqueline Ward Gaines, MD

Senior Associate Dean Thrive: Office for the Faculty Experience
Liselotte Dyrbye, MD, MHPE, FACP

- **Office for Faculty Affairs**
  Associate Dean
  Steven Lowenstein, MD, MPH
  Assistant Dean
  Miriam Post, MD
  Director
  Cheryl Welch, MPA
- **Office for Faculty Relations**
  Assistant Dean
  Abigail Lara, MD
- **Office for Faculty Development**
  Associate Dean
  Aimee Gardner, PhD
  - **Academy of Medical Educators**
    Director
    Aimee Gardner, PhD
  - **Teaching Scholars Program**
    Co-Directors
    Helen Macfarlane, MA
    Chad Stickrath, MD
  - **Residents and Fellows as Educators**
    Director
    Nicolle Fernandez Dyess, MD, MEd
- **Women in Medicine and Science**
  Director
  Judith Regensteiner, PhD
- **Faculty Work and Culture Optimization Collaborative**
  Assistant Dean
  Jennifer Reese, MD, FAAP

CU School of Medicine
BASIC SCIENCE AND CLINICAL DEPARTMENT CHAIRS
CENTER AND INSTITUTE DIRECTORS
Updated: July 1, 2024

Dean, School of Medicine
Vice Chancellor for Health Affairs
John H. Sampson, MD, PhD, MBA

Clinical Departments

- **Anesthesiology**
  Vesna Jevtovic-Todorovic, MD, PhD, MBA
- **Dermatology**
  Maryam M. Asgari, MD, MPH
- **Emergency Medicine**
  Richard Zane, MD
- **Family Medicine**
  Myra Muramoto, MD, MPH
- **Medicine**
  Vineet Chopra, MD, MSc
- **Neurology**
  Kenneth Tyler, MD
- **Neurosurgery**
  Kevin Lillehei, MD
- **Obstetrics and Gynecology**
  Nanette Santoro, MD
- **Ophthalmology**
  Naresh Mandava, MD
- **Orthopedics**
  Evalina Burger, MD
- **Otolaryngology – Head and Neck Surgery**
  Yuri Agrawal, MD, MPH
- **Pathology**
  Ann Thor, MD
- **Pediatrics**
  Stephen Daniels, MD, PhD
- **Physical Medicine and Rehabilitation**
  Venu Akuthota, MD
- **Psychiatry**
  C. Neill Epperson, MD
- **Radiation Oncology**
  Brian Kavanagh, MD, MPH
- **Radiology**
  Ihab Kamal, MD, PhD
- **Surgery**
  Richard Schulick, MD, MBA

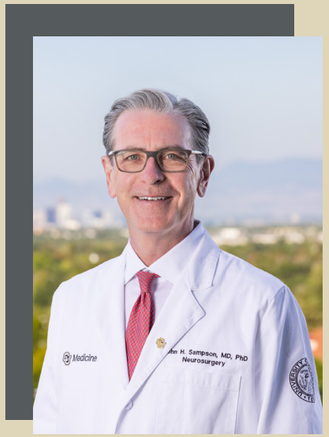
Basic Science Departments

- **Biochemistry and Molecular Genetics**
  Julia Promisel Cooper, PhD
- **Biomedical Informatics**
  Casey Greene, PhD
- **Cell and Developmental Biology**
  Wendy Macklin, PhD
- **Immunology and Microbiology**
  Leslie Berg, PhD
- **Pharmacology**
  Heide Ford, PhD
- **Physiology and Biophysics**
  David DiGregorio, PhD

Centers, Institutes
(Partial Listing)

- **Alzheimer's and Cognition Center**
  Huntington Potter, PhD
- **Anschutz Health and Wellness Center**
  Daniel Bessesen, MD
- **Barbara Davis Center for Diabetes**
  Marian Rewers, MD, PhD
- **Cardiovascular Institute**
  Leslie Leinwand, PhD
  Peter Buttrick, MD
- **Center for Advancing Professional Excellence**
  Elshimaa Basha, MPH
- **Altitude Research Center**
  Robert Roach, PhD
- **Center for Children's Surgery**
  Duncan Wilcox, MD
- **CU Cancer Center**
  Richard Schulick, MD, MBA
- **Neurotechnology Center**
  Mark Dell'Acqua, PhD
- **Ludeman Family Center for Women's Health Research**
  Judith Regensteiner, PhD
- **Adult and Child Center for Health Outcomes Research and Delivery Science**
  Jerica Berge, PhD, MPH, LMFT, CFLE
- **Gates Institute**
  Terry Fry, MD
- **Kempe Center for the Prevention and Treatment of Child Abuse and Neglect**
  Kathryn Wells, MD
- **Linda Crnic Institute for Down Syndrome**
  Joaquin Espinosa, PhD
- **Webb-Waring Center**
  John Repine, MD
- **Helen & Arthur E. Johnson Depression Center**
  C. Neill Epperson, MD

University of Colorado School of Medicine Leadership



John H. Sampson, MD, PhD, MBA, MHSc
Vice Chancellor for Health Affairs
Dean, School of Medicine
Professor of Neurosurgery

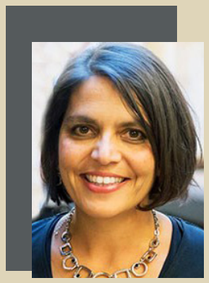
Peter Buttrick, MD
Senior Associate Dean for Research

Mark Couch Chief of Staff
and Associate Dean of
Public Relations

Lotte Dyrbye, MD, MHPE,
Senior Associate Dean of Faculty
and Chief Well-being Officer

Anne Fuhlbrigge, MD,
Senior Associate Dean for
Clinical Affairs

Brian T. Smith, MHA,
Senior Associate Dean for Adminis-
tration and Finance, and Executive
Director, CU Medicine



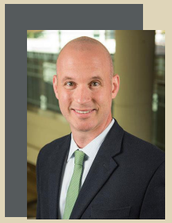
Shanta Zimmer, MD,
Senior Associate Dean for Education

School of Medicine Associate Deans

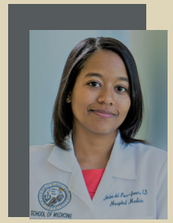
Jonathan Bowser, PA, MS
Physician Assistant Studies

Thomas Campbell, MD
Clinical Research

Karen Chacko, MD
Clinical Outreach



Geoffrey Connors, MD
Graduate Medical
Education



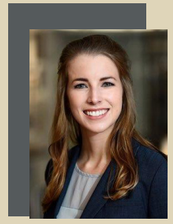
Amira del Pino-Jones, MD
Diversity, Equity and
Inclusion

Mark Deutchman, MD
Rural Health

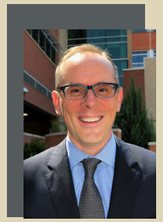
Greg Downey, MD
Health Affairs, National
Jewish Health

Brian Dwinnell, MD
Student Life

Christina Finlayson, MD,
Med Population Health

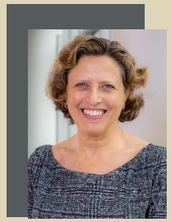


Aimee Gardner, PhD
Faculty Development



Jeffrey Glasheen, MD
Clinical Affairs – Quality and
Safety Education

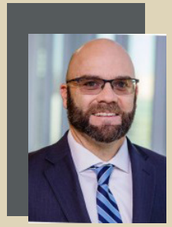
Michael Harris-Love,
PT, MPT, DSc
Physical Therapy



Jean Kutner, MD, MPH
Health Affairs, UCHealth
University of Colorado Hospital

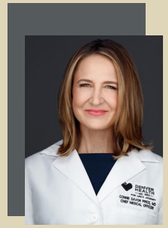
Scott Laker, MD
Clinical Affairs, Adult Health

Steven Lowenstein,
MD, MPH
Faculty Affairs

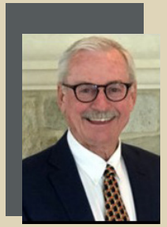


John Moore
Administration and Finance

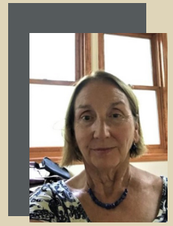
Michael Narkewicz, MD
Clinical Affairs, Child Health



Connie Savor Price, MD
Health Affairs, Denver
Health

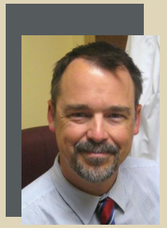


John Repine, MD
Student Advocacy



Angeles Ribera, PhD
Research Education

Ronald Sokol, MD
Child Health Research



Peter Smith, MD
Clinical Affairs,
Adult Health

Shikha Sundaram, MD,
MSCI Clinical Affairs,
Child Health

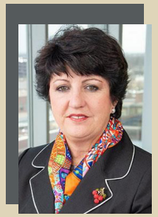
Mark Young, MBA,
Community Practice

School of Medicine
Clinical Department Chairs

Yuri Agrawal, MD, MPH
Otolaryngology– Head and Neck Surgery

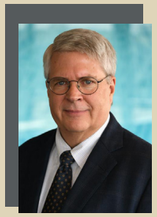
Venu Akuthota, MD, Physical Medicine and Rehabilitation

Maryam Asgari, MD, MPH
Dermatology



Evalina Burger-Van der Walt, MD, Orthopedics

Vineet Chopra, MD, MSc, Medicine



Stephen R. Daniels, MD, PhD, Pediatrics

C. Neill Epperson, MD, Psychiatry

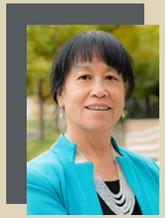
Vesna Jevtovic-Todorovic, MD, PhD, MBA, Anesthesiology

Ihab Kamel, MD, PhD
Radiology

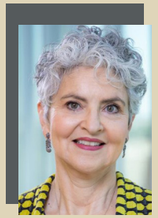
Brian D. Kavanagh, MD, MPH, Radiation Oncology

Kevin Lillehei, MD, Neurosurgery

Naresh Mandava, MD, Ophthalmology



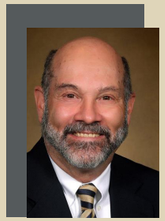
Myra Muramoto, MD, MPH, Family Medicine



Nanette Santoro, MD, Obstetrics and Gynecology

Richard Schulick, MD, MBA, Surgery

Ann Thor, MD, Pathology

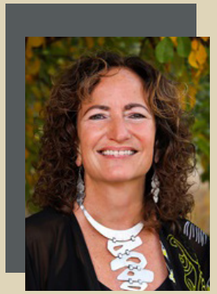


Kenneth Tyler, MD, Neurology

Richard Zane, MD, Emergency Mediciney

School of Medicine
Basic Science Department Chairs

Leslie Berg, PhD
Immunology and Microbiology

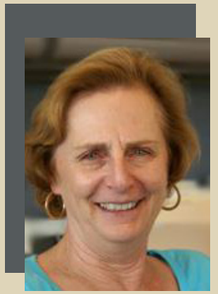


Julia Promisel Cooper, PhD, Biochemistry and Molecular Genetics

David DiGregorio, PhD, Physiology and Biophysics

Heide Ford, PhD
Pharmacology

Casey Green, PhD, Biomedical Informatics



Wendy Macklin, PhD, Cell and Developmental Biology

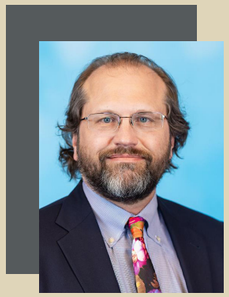
School of Medicine Center, Institute, and Program Directors

Jerica Berge, PhD, MPH
Adult and Child Center for Outcomes Research and Delivery Science

Brig Gen (Ret) Kathleen Flarity, DNP, PhD
Interim, Marcus Institute for Brain Health

Erika Freitas, PhD
CU Center for Interprofessional Practice and Education

Kristyn Masters, PhD
Center for Bioengineering



Paul Rozance, MD
Perinatal Research Center

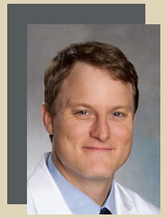
Richard Schulick, MD, MBA
University of Colorado Cancer Center

Duncan Wilcox, MD
Center for Children's Surgery

School of Medicine Center, Institute, and Program Directors

Elshimaa Basha, MPH,
Center for Advancing Professional Excellence

Daniel Bessesen, MD,
Anschutz Health and Wellness Center



Marc Bonaca, MD, MPH,
Colorado Prevention Center

Peter Buttrick, MD
Senior Associate Dean for Research

Mark Dell'Acqua, PhD,
NeuroTechnology Center

C. Neill Epperson, MD,
Helen and Arthur E. Johnson Depression Center

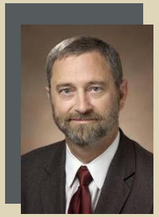
Joaquin Espinosa, PhD,
Linda Crnic Institute for Down Syndrome

Thomas Finger, PhD, Co-Director, Rocky Mountain Taste and Smell Center

Terry Fry, MD, Gates Institute

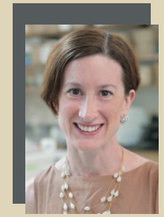
Casey Greene, PhD, Center for Health Artificial Intelligence

Kathryn Hassell, MD,
Colorado Sickle Cell Treatment and Research Center



James Kelly, MD, Marcus Institute for Brain Health

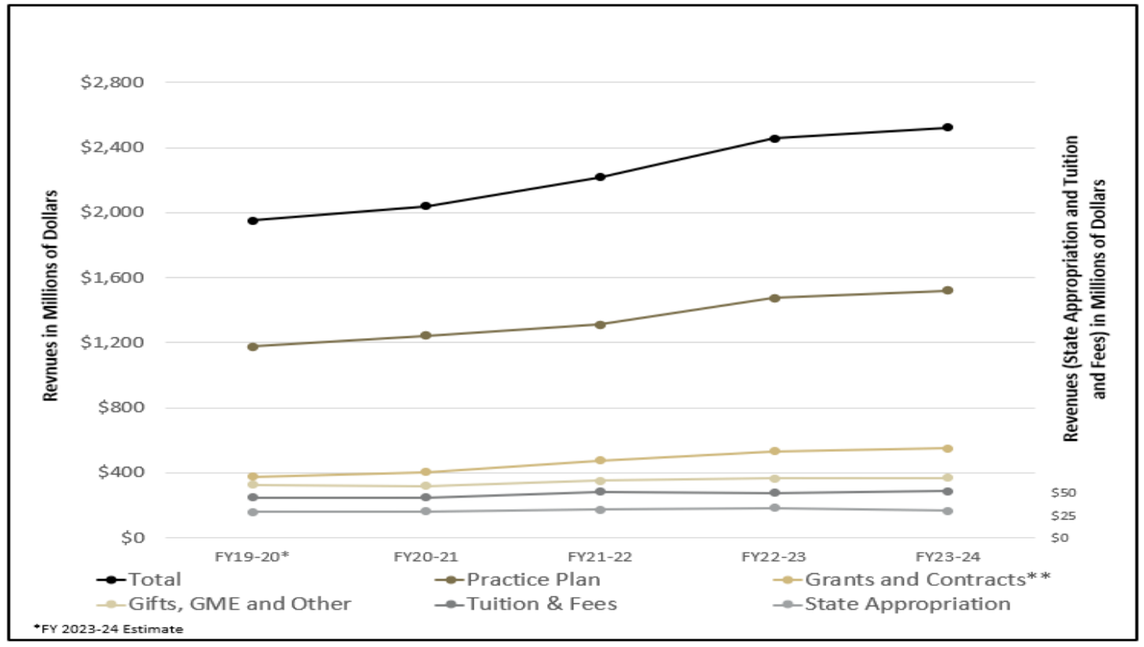
Allison Kempe, MD, MPH,
Adult and Child Center for Health Outcomes Research and Delivery Science



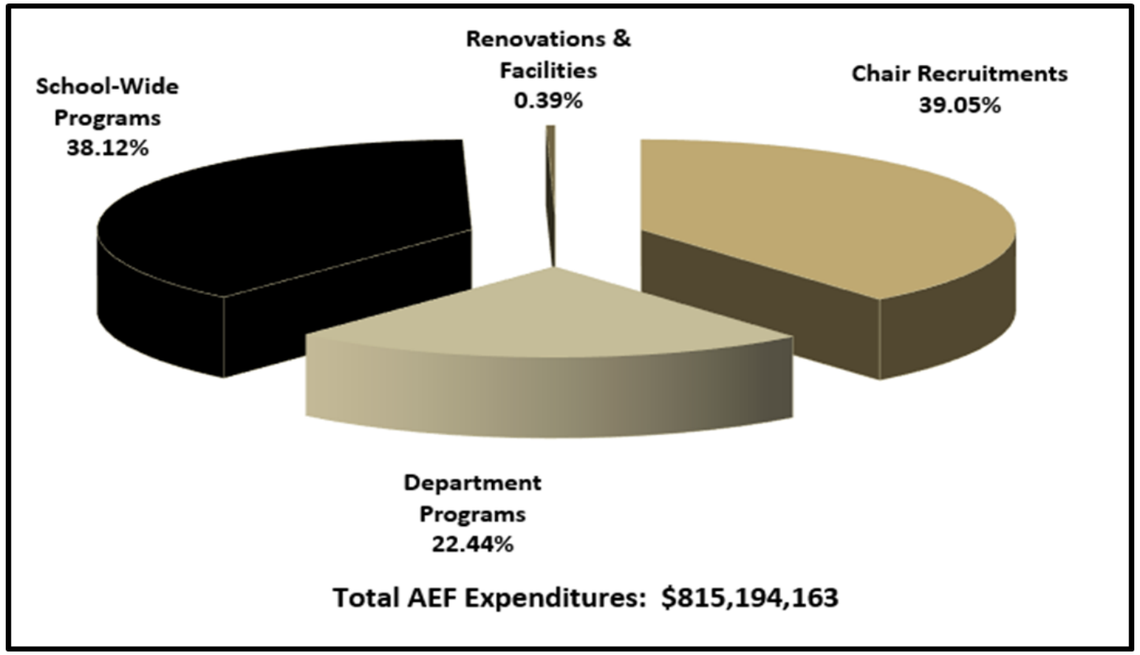
Kristyn Masters, PhD,
Center for Bioengineering

ADMINISTRATION AND BUSINESS AFFAIRS

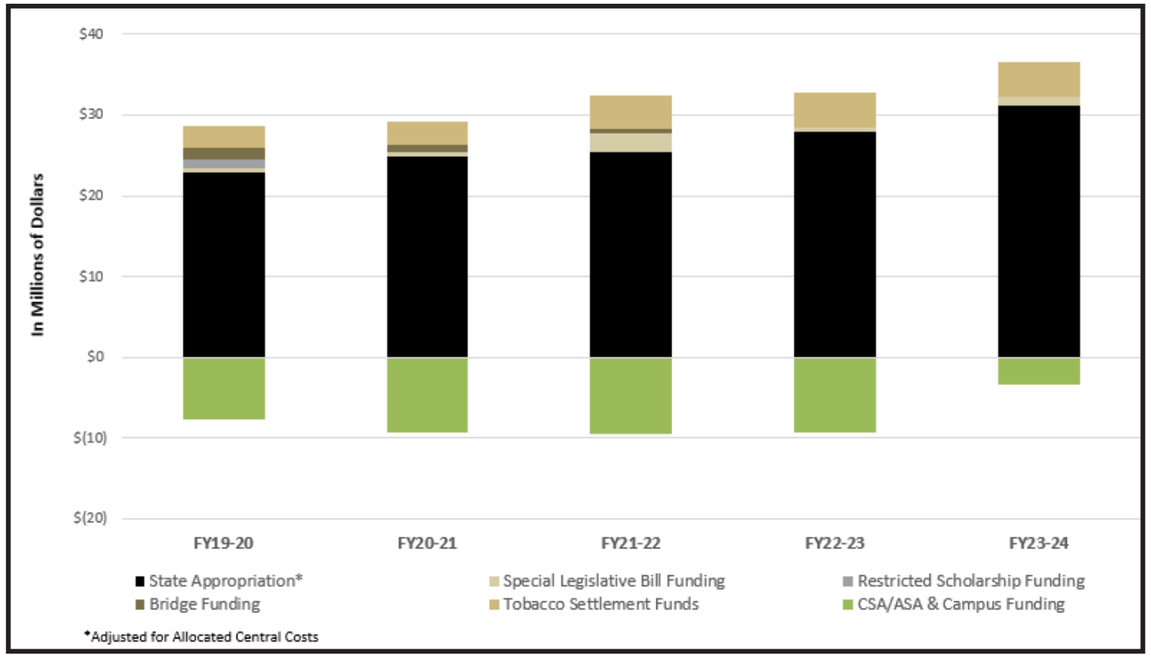
CU School of Medicine Trend in Revenue Source
Fiscal Years 2020 - 2024



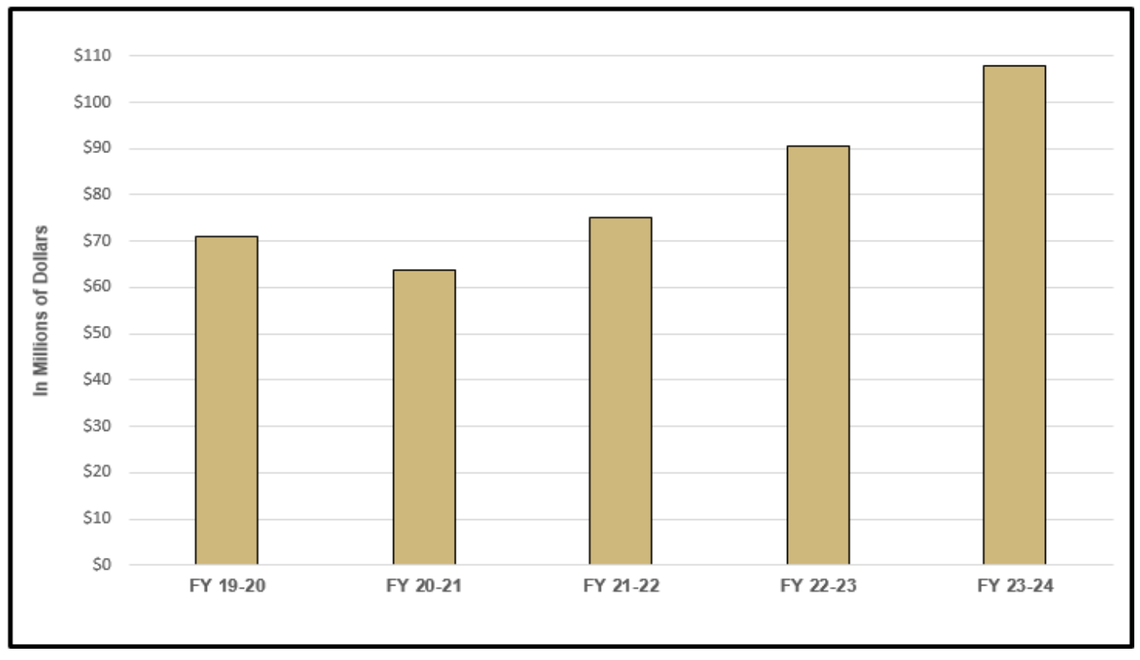
Academic Enrichment Fund Expenditures
Fiscal Years 1983 - 2024



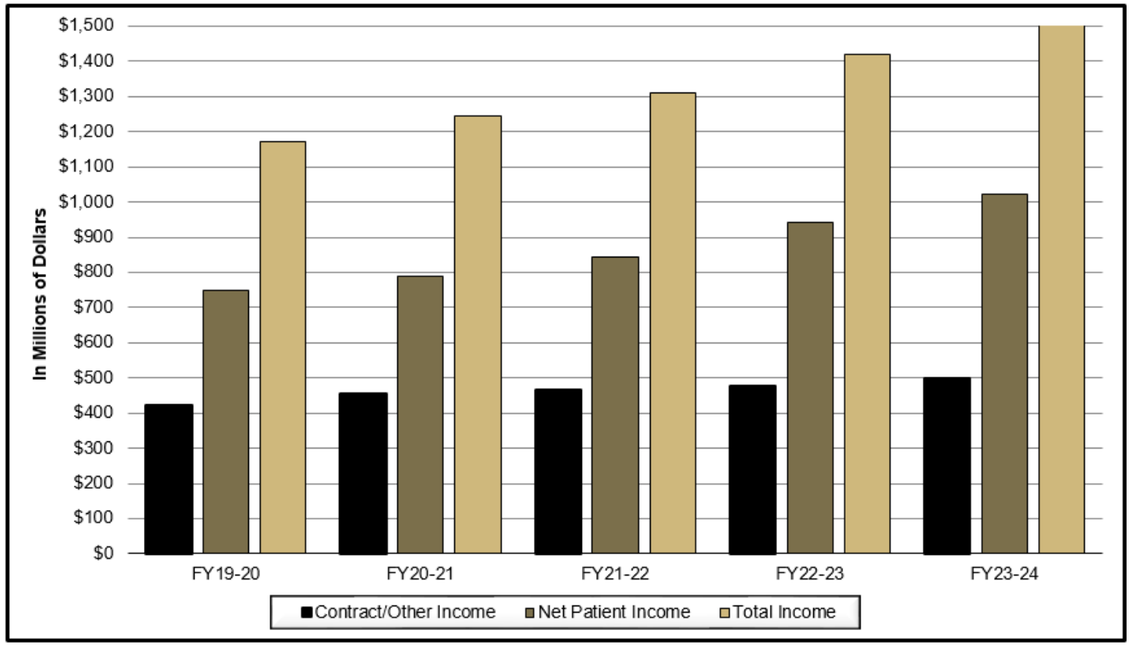
Trend in School of Medicine General Fund
Fiscal Years 2020 - 2024



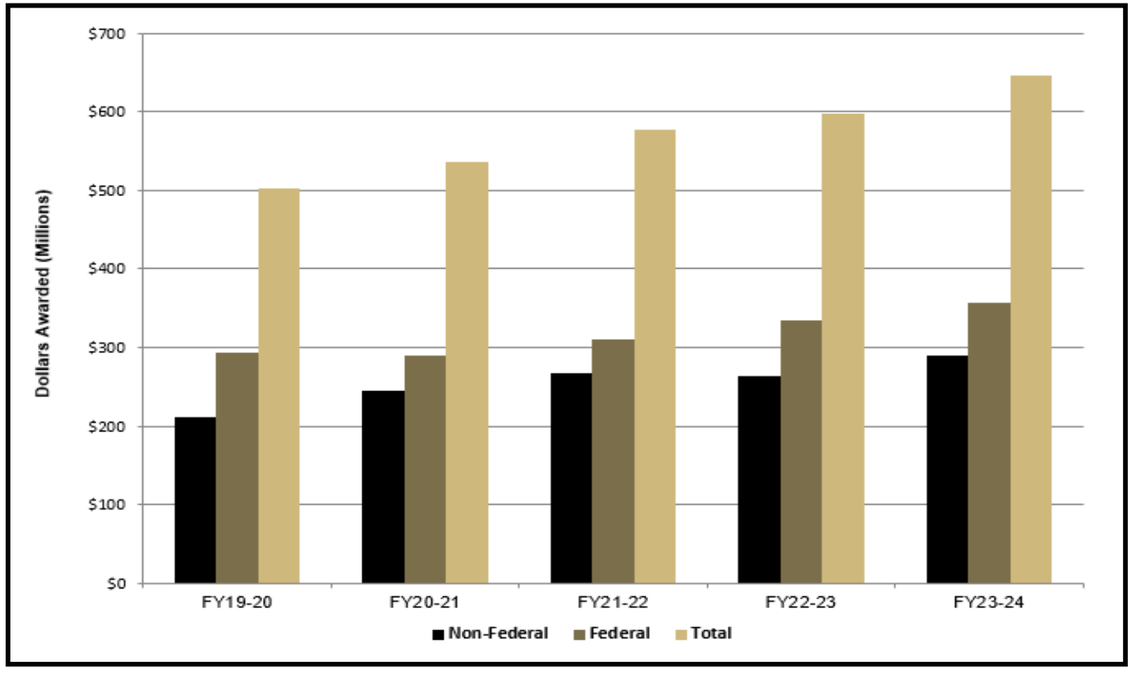
School of Medicine Commitment Expenditures
Fiscal Years 2020 - 2024



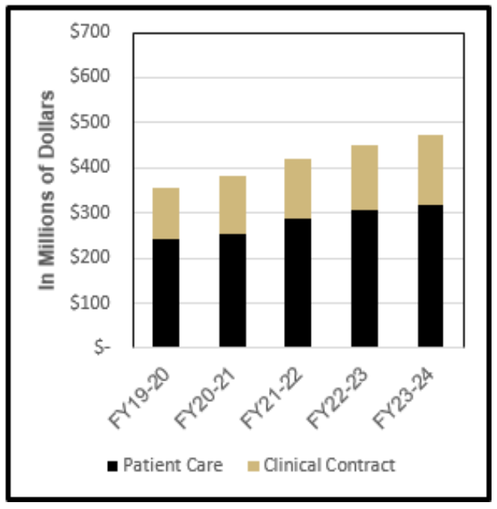
CU Medicine Patient and Contract Income
Fiscal Years 2020– 2024



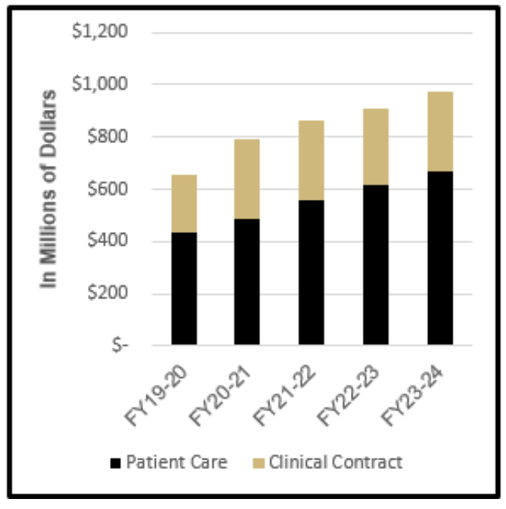
Sponsored Research Award Trend
Fiscal Years 2020 — 2024



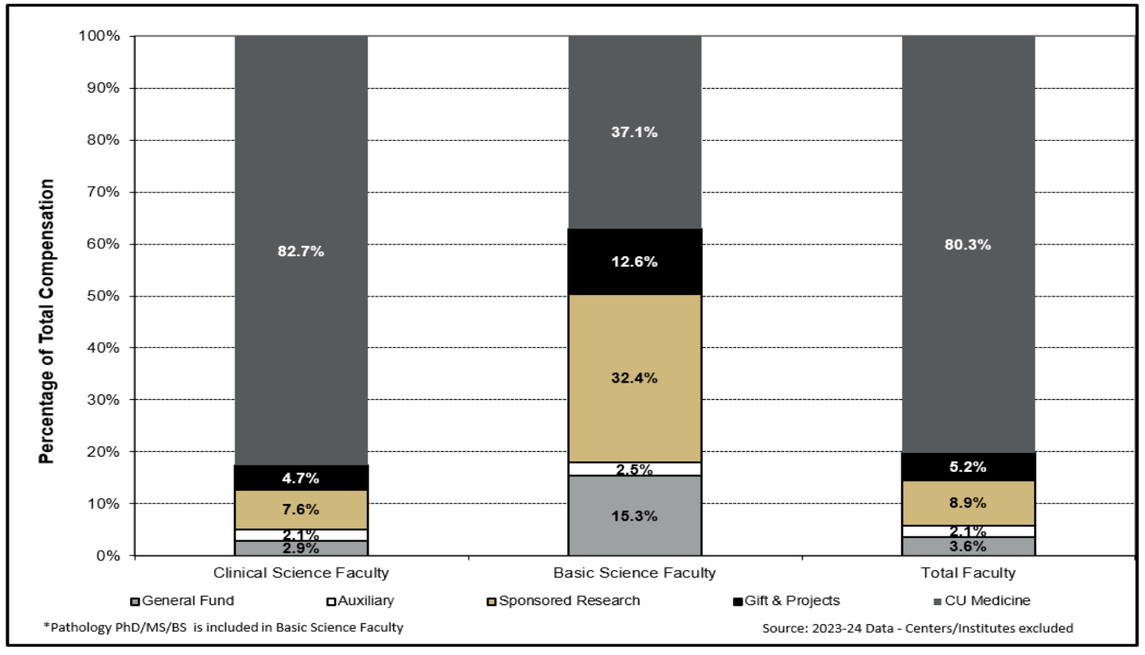
University of Colorado Medicine
Child Health Clinical and Contract Income
Fiscal Years 2020 — 2024



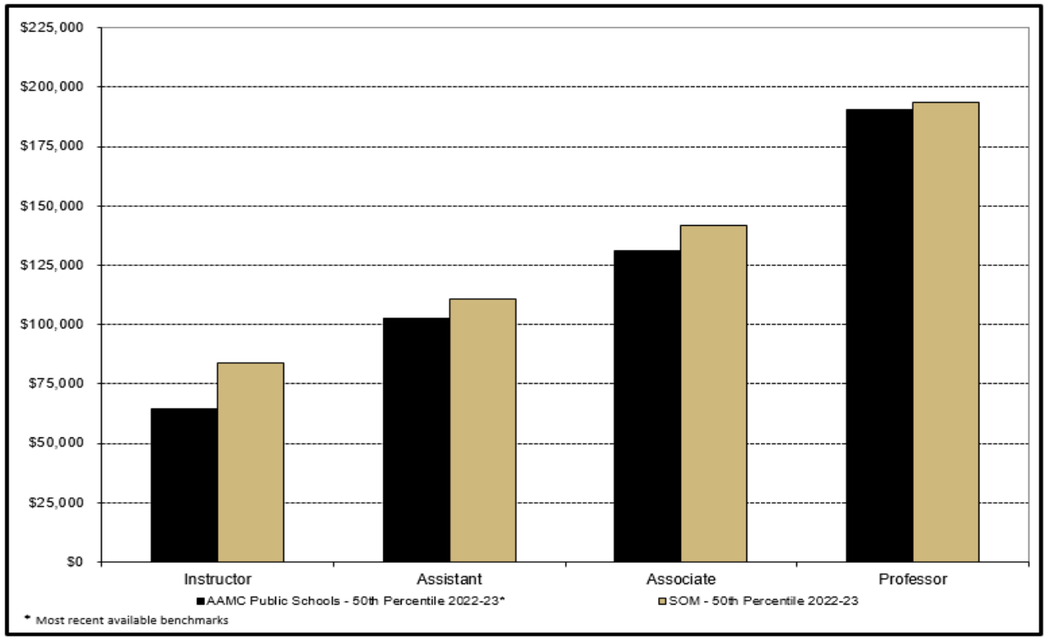
University of Colorado Medicine
Adult Health Clinical and Contract Income
Fiscal Years 2020 — 2024



Source of School of Medicine Faculty Compensation
Fiscal Year 2023— 2024

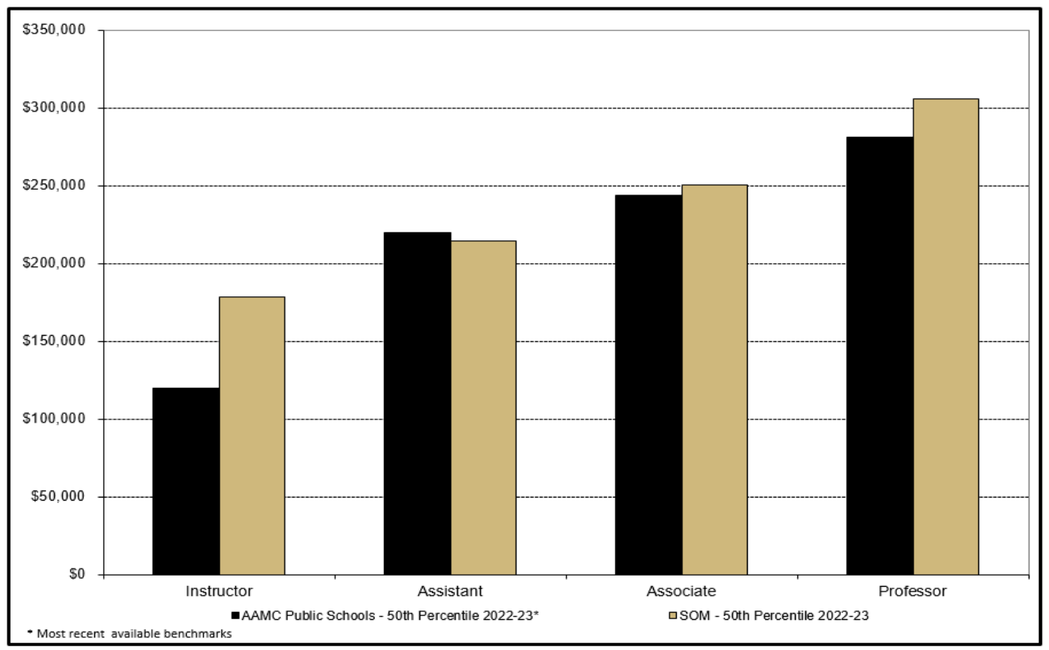


Comparison of Faculty Fixed Salaries to AAMC Benchmarks for Basic Science Departments



Source: AAMC Faculty Salary Survey 2022-23

Comparison of Faculty Salaries to AAMC Benchmarks for Clinical Science Departments



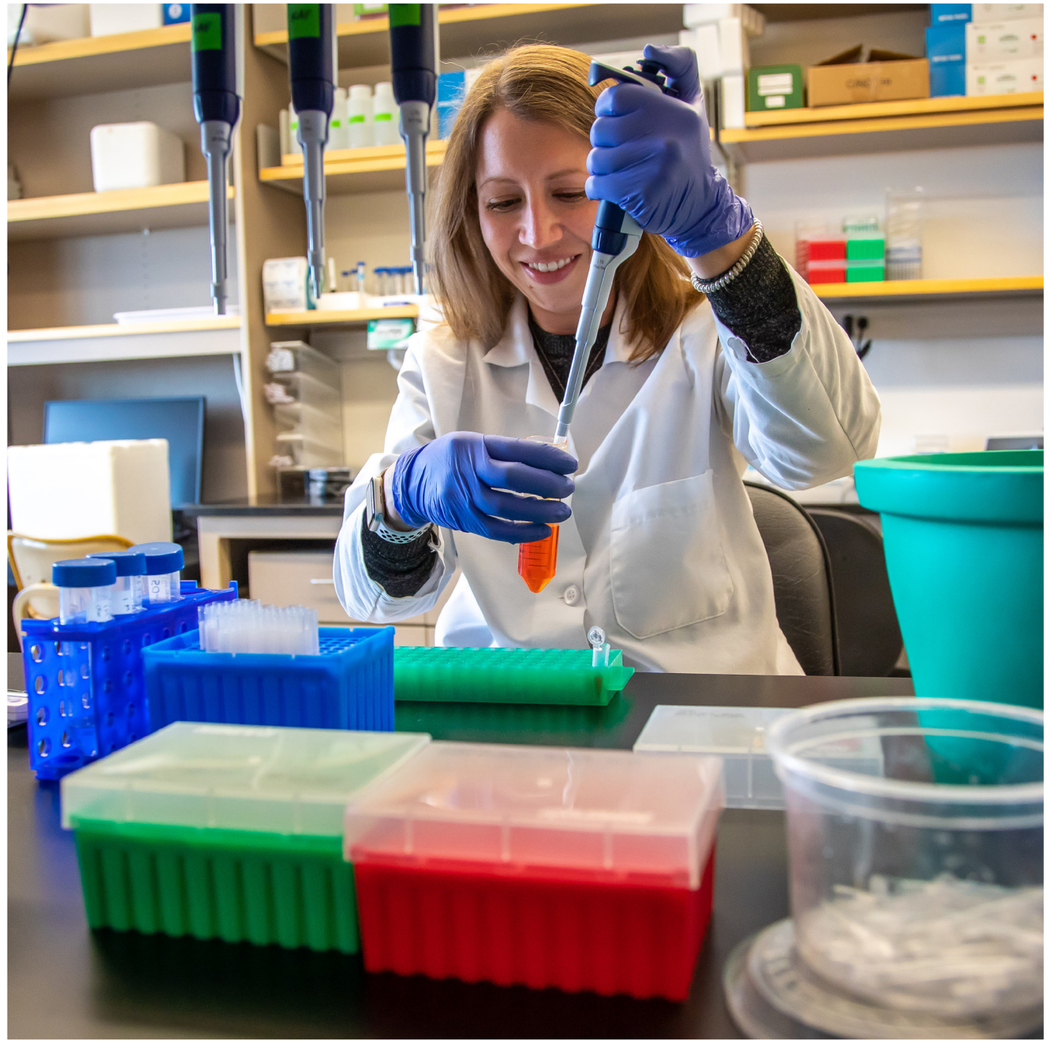
Source: AAMC Faculty Salary Survey 2022-23

CU School of Medicine Endowed Chairs

Department/Program	Total
Anschutz Health and Wellness Center	1
Barbara Davis Center for Diabetes	6
Ludeman Family Center for Women's Health Research	4
Charles C. Gates Center for Regenerative Medicine and Stem Cell	4
Colorado Prevention Center	1
Dean's Office	2
Linda Crnic Institute for Down Syndrome	1
University of Colorado Cancer Center	28
Webb-Waring Center	1
Department of Anesthesiology	3
Department of Biochemistry and Molecular Genetics	2
Department of Biomedical Informatics	2
Department of Dermatology	1
Department of Emergency Medicine	2
Department of Family Medicine	4
Department of Immunology and Microbiology	1
Department of Medicine	44
Department of Neurology	3
Department of Obstetrics and Gynecology	6
Department of Ophthalmology	8
Department of Orthopedics	3
Department of Pathology	1
Department of Pediatrics	4
Department of Pharmacology	1
Department of Physical Medicine and Rehabilitation	2
Department of Physiology and Biophysics	1
Department of Psychiatry	2
Department of Radiation Oncology	1
Department of Radiology	6
Department of Surgery	10
Total	**155**
Pediatrics Children's Hospital Colorado	58
University of Colorado Hospital	1

Source: Anschutz Medical Campus, Office of Advancement and Children's Hospital Colorado

CLINICAL AFFAIRS



Clinical Affairs

The Office of Clinical Affairs partners with clinical leaders to strengthen the clinical practice of the faculty in the CU School of Medicine. Program integration with the school's affiliated partners promotes our collective ability to improve access to faculty expertise and provide safer, patient-centered care at the lowest possible cost. Our affiliated partners include University of Colorado Hospital, the UCHealth system, Children's Hospital Colorado, Denver Health, Veterans Affairs Eastern Colorado Health Care System, and National Jewish Health.

Anne Fuhlbrigge, MD, MS, senior associate dean for clinical affairs, partners with associate deans Karen Chacko, MD, Christina Finlayson, MD, Jeffrey Glasheen, MD, Scott Laker, MD, and Assistant Dean Pete Smith, MD. The team was joined this year by Shikha Sundaram MD as the Associate Dean, Child Health, replacing Adel Younoszai, MD. Laker, Smith, and Sundaram serve in joint leadership roles with University of Colorado Medicine, which is the faculty practice plan. Laker is associate dean of adult health, medical director for community practice, and senior medical director for CU Medicine; Sundaram is the associate dean of child health and medical director child health for CU Medicine; and Smith is assistant dean of adult health and medical director for the hospital-based practice and medical director for primary care for CU Medicine. This year, the Clinical Affairs team welcomed Meredith Funke as our new project manager. Meredith will help operationalize projects important to provide high quality, safe, patient-centered care at the lowest possible cost.

Glasheen serves as a leader in quality and safety education for the University of Colorado through his role as director for the Institute for Healthcare Quality, Safety, and Efficiency. Chacko leads clinical outreach, including the CU Medicine-UCHMG collaborative task force and directs digital health initiatives and expansion across the practice in her role as medical director of digital health.

Finlayson continues as associate dean and CU Medicine medical director for population health with oversight of the Office of Value-Based Performance (OVPB) and Medicaid Supplemental Funding Program.

The Clinical Leadership Council (CLC), comprised of the School of Medicine vice chairs and associate center directors for clinical affairs, provides additional clinical leadership.

This year, we welcomed Mark Young, as the new associate dean, community practice, CU SOM/vice president, community practice, CU Medicine. Mark's breadth of experience and strong leadership, focused on improving processes for both patients and healthcare providers, will strengthen our Community Practice enterprise which continues to grow and thrive.

Paul Rohrer continues as the director of access for CU SOM focusing on adult health. Paul collaborates with the UCH Patient Access and Navigation (PAN Core) team and UCHealth CAST (Centralized Access Support Team), to identify opportunities that can improve access through operational efficiencies. Some highlights over the past year include the addition of 186 total daily visit opportunities. We continue to expand Message visit appointments, with 15,821 across the adult enterprise last year. Message visits allow conversion of patient initiated MyChart medical advice messages into billable visits, providing increased access for our patients in a timely, convenient yet safe and effective way. Providers continue to receive RVU credit to reflect these efforts. In addition, we continue to promote online scheduling for our patients which has successfully increased the number of adult appointments scheduled online from 292,422 (14.5% in FY23) vs. 365,965 (16.2% in FY24). We also continue to improve operational efficiencies and access within our free-standing community practices, improving fill rates by 2.12% and kept appointments volume by 11.9% (45,248). Importantly, effective July 1, 2024, eConsults will be counted as specialty access in adult health. This decision appropriately credits the work being done and recognizes the key role eConsults play in expanding specialty access across Denver metro and the state.

In the adult health practice, the number and variety of community-based practices continue to grow. We now offer services across 1,487 active Sites of Practice (SOP) including freestanding CUSOM clinics, clinic, or hospital-based outreach and telehealth locations, with 171 new sites of practice being established during the past year. While our practice is focused on Denver Metro and the State of Colorado, our non-telehealth SOP provides access across 14 states, with our telehealth presence encompassing states. We currently operate a total of 53 practices (6 new or relocated clinics in 2024) across 50+ specialties, employing 380 staff with 522 providers. These practices generated 650,000 visits last year bringing in 165million in revenue to the practice and clinical departments.

We now offer primary care services at seven community locations (Louisville (formerly Depot Hill), Cherry Creek, Centennial, Landmark, Park Meadows, Women's Integrated Services in Health (WISH) and the Aurora Wellness Community Health Center (AWCHC). Three of these primary care practices moved to new and larger locations this year, Landmark, Women's Integrated Services in Health (WISH) and Louisville, allowing further growth opportunities. Successful provider recruitment and advances in access and care-team innovation have enabled a 36% increase in volume over the prior fiscal year, while simultaneously improving our value-based performance. We are also excited to announce the opening of the AWCHC, located at South Potomac Street and Mississippi Avenue, which opened August 22, 2024.

Community specialty practice locations are available across Denver Metro, including Broomfield, Inverness, Aurora, and the south metro area. The Highlands Ranch Hospital (HRH), including a multispecialty medical office building, allows for a variety of services in that community. At HRH, several practices plan expansion in the coming year into the new medical office building and ambulatory surgery center that are under construction and

expected to open in 2025. These community-based practices bring access to care closer to where our patients live and work.

Over the past 10 years, the number of CU Advanced Practice Providers (APP) has more than doubled and now represents approximately one-third of the total faculty. Recognizing the needs of this important and growing part of the clinical faculty, the Clinical Affairs Office, collaboratively with our hospital partners have reorganized and expanded the Office of Advanced Practice (OAP) leadership structure. We welcomed Tatiana Emanuel DMSc, PA-C as the new adult health director and Denise C. Abdoo, PhD, CPNP AC/PC, as the new child health director for the OAP. Both Emanuel and Abdoo are building their respective teams to provide improved support and guidance for our growing number of advanced practice provider (APP) faculty. The OAP leadership is excited to advance and lead professional development, academic advancement, APP scope of practice and practice optimization.

The Office of Clinical Affairs works closely with the Office of Value-Based Performance (OVPB), led by Lisa Schilling, MD, Aaron Van Artsen, MLRHR, and Finlayson. The OVPB continues to support the School of Medicine faculty in providing the highest-quality medical care while controlling healthcare spending costs. This year we were recognized by Anthem as the top group practice in the state of Colorado for healthcare quality scores for 2023 performance in the Anthem commercial value-based program. Our focus on providing the highest-quality care has also resulted in decreased cost of care to patients.

The Medicaid Supplemental Funding Program, also known as UPL, is designed to expand access to care and improve outcomes for Health First Colorado (Colorado Medicaid) members. This program is funded by the Centers for Medicare & Medicaid Services (CMS) through the Colorado Department of Health Care Policy & Financing with priority areas of access to primary and specialty care for Medicaid patients, medical home care delivery model, behavioral health services, outreach to rural and frontier areas, transitions of care programs, and implementation of evidence-based programs that expand access and improve outcomes. In addition to supporting direct patient access, the more than 90 targeted investments reach broadly across adult and child health from local support of homeless services to state wide engagement through ECHO peer-mentored education, telemedicine to hospitals, clinics, and patient homes, and childhood asthma, diabetes, and celiac screening and intervention. A few highlighted programs include:

- The Women's Integrated Behavioral Health program is an interdepartmental collaboration that increases access to behavioral health care for women. Direct behavioral health services include individual psychotherapy and behavioral health interventions, medication management, and group therapy. These services are delivered using an integrated model in settings where women already receive care including Obstetrics and Gynecology, UCHealth Breast Center, and Internal Medicine, as well as a specialized outpatient psychiatry practice.

- Rural Track and Diversity Scholarships. Significant investments have been made in SFY 2022-23 for Rural and Diversity Scholarships for medical (MD) students. These scholarship dollars are crucial to recruiting the most talented students from diverse backgrounds. Since this program's inception, there have been more than ninety-two students granted full or partial tuition scholarships.
- The Colorado Pediatric Psychiatry Consultation & Access Program (CoPPCAP) increases access to child and adolescent mental health services across the State of Colorado by providing psychiatric specialist consultation to primary care providers and behavioral health staff who deliver basic mental health services to children and adolescents. This collaboration leads to earlier identification of mental/behavioral health care needs and treatment services. The core components of CoPPCAP are peer-to-peer consultation and practice support, education, care coordination and identification of local resources, and program evaluation.

Virtual/digital care continues to drive exciting clinical innovations as we strive to offer new and expanding options to meet our patients' health care needs. In partnership with UCHealth, Children's Hospital Colorado, and their virtual health teams, further advances in flexible services that have increased access and safety were implemented. Expanded digital front doors continue to be a driver, with our focus on guided options for access that increasingly put the patient in the driver's seat. Identifying work that can be asynchronously performed and valued is another high-priority area. Exciting current work and data includes:

- New triage protocols under review for DocLine calls will maximize asynchronous work where clinically appropriate.
- A new Virtual Primary Care center that will increase access, hours, and options for established patients in our clinics. An option to accept new patients later this year is under evaluation.
- eConsult volume continued to increase in both adult and child heath in FY 2024 with approximately 2,000 more consults this past year (7,165 combined adult and child FY 2023 to 9143 combined FY 2024
- Telehealth virtual visits also continued to increase this past year (247,000 in FY 2023 and nearly 263,000 in FY 2024) and remain steady at 9-10% of total visits for our combined child and adult practices.

The Peer Mentored Care Collaborative (PMCC) led by John F. "Fred" Thomas, PhD, continues to expand a health care delivery model that focuses on the primary-specialty care interface. The PMCC houses ECHO Colorado (Extension for Community Health Outcomes) and the eConsult Program. These programs support community-based providers across Colorado by creating a virtual, patient-centered medical neighborhood that enables primary care providers around the state to receive clinical support and guidance from specialists at the Anschutz Medical Campus. We welcomed our new medical director, David Saxon MD, associate professor in the Division of Endocrinology, Metabolism, and Diabetes, in November 2023. Prior to taking on this role he had been involved in the development and growth of the e-consult program on campus since its

inception and has run the endocrine ECHO program for several years. Devin Miller, MPH, also joined the PMCC team this year as the Director of Operations. Miller's background is in health care management, policy, and population health. She brings over five years of experience working at the Colorado Department of Health Care Policy and Financing.

Electronic consultation (eConsults) are asynchronous data-informed exchanges initiated by a primary care provider (PCP) to a CU School of Medicine specialist allowing the PCP to seek clinical guidance on a patient's care to maintain care continuity in the primary medical home through collaboration with the Anschutz Medical Campus. It allows increased access to specialty care at a lower cost by reducing unnecessary transfers, decreasing care fragmentation, and redundancy of testing. The PMCC operates an internal eConsult platform (eConsults from providers within our instance of Epic) for CU providers and was the first academy medical center in the nation to initiate an "external pivot" option (eConsults for providers at outside institutions and on non-Epic EMRs). The external pivot has provided essential access to specialty expertise for providers at federally qualified health centers, throughout the state. In FY24, there were 6,657 eConsults submitted, a 28% increase from the previous year. The program has completed 33,000+ (25,000+ adult and 8,000+ pediatric) since the beginning of the program and provides critical access to expertise in 28 adult specialty areas and 22 pediatric specialty areas.

ECHO Colorado allows the Anschutz Medical Campus to engage, train, and support a broad array of care providers, allied staff, and administrators in many clinical and public health topics that support providers from across the state (and the US) to incorporate best practices, aid in the adoption of new/innovative care models, and practice top of scope diagnostics and treatment approaches. During FY24, 29 unique ECHO series were offered (52 cohorts), which trained 2,462 providers. Of the participants, 51% were Medicaid providers and 20% were from rural and frontier counties. PMCC continues their cross-sector partnerships with the Colorado Department of Health Care Policy and Financing, Colorado Department of Public Health and the Environment, Colorado Department of Corrections, and the Governor's Office of eHealth Innovation. Series from this year include critical topics including Endocrinology, Newcomer Health, Developmental Pediatrics, Pediatric Suicide Prevention, Urology, and Gender-Affirming Care.

The child health practice continues to expand its presence in the Mountain West region. Partnering with Children's Hospital Colorado, the faculty support children who need specialized care in the Denver metro area, as well as along the Front Range. In addition to providing care on the Anschutz Medical Campus,child health specialty practice locations include Broomfield, Highlands Ranch, Parker, and Colorado Springs, as well as Children's Colorado regional clinics, which cover 2 states, 18 cities, 13 specialties, and 600+ days of ambulatory clinic through reginal outreach. Care alliances formed through our hospital partner also allow for specialty care to be routinely delivered in Montana, Wyoming, Nebraska, and New Mexico, allowing care close to home for patients and their families. Furthermore, child health specialists are working closely with the Pediatric Care Network, a clinically integrated network of thirty-five independent pediatric healthcare practices and Children's Colorado, designed to improve clinical outcomes in child health, while minimizing costs. The Pediatric Care Network strives to collaboratively develop care guidelines and best practices and co-manage care with child health specialists to deliver the best possible care for children.

A continued area of clinical focus remains the coordinated transition of patients as they age out of the Child Health practice. The Improving Pediatric to Adult Care Transition (ImPACT) Program provides structured support for these patients and their families during the transition process from pediatric to adult healthcare. The ImPACT Navigation Hub is a core element of this successful transition of care across campus and includes an RN Care Coordinator, Social Worker, and Family Health Navigator. The ImPACT Hub provides individual coaching, tools, and structure to clinical champions to support the transition/transfer process. The ImPACT hub has been critical in the transition of 200 complex patients to support their safe transition to adult care. In partnership with adult health leadership, a referral process to streamline transfer of care, allowing the right provider to see the right patient in a timely manner, is ongoing.

In partnership with CU Medicine, we are seeking to optimize cost transparency for the care provided by our child health faculty to allow patient families to make informed financial decisions as they ascertain where to seek care for their children. Furthermore, child health faculty continue to engage with CU Medicine to assure seamless integration and optimization of clinical workflow, documentation, billing, and coding to appropriately capture all the clinical work being performed in the inpatient and ambulatory arenas. We continue to develop our eConsult program. A total of 2,520 eConsults were conducted over FY24. The most frequently requested eConsults across Child Health were in dermatology, endocrinology, dermatology, and neurology. Beginning in July 2024, child health specialists began billing for these services.

The Institute for Healthcare Quality, Safety, and Efficiency (IHQSE) resides in the Office of Clinical Affairs and offers nine distinct training programs in quality, safety, and health system leadership. Since 2012, the IHQSE has trained nearly 3,500 doctors, nurses, and staff on the Anschutz Medical Campus. In 2022, the IHQSE began to offer its training programs across our clinical partners' health systems as well as to a national audience, garnering participants from over 100 different hospitals. The Certificate Training Program in Health Quality Transformation is a yearlong, intensive leadership training program in quality and safety, which has trained nearly 150 clinical teams from UCHealth University of Colorado Hospital and Children's Hospital Colorado. This training and practical project experience has led to significant improvements in outcomes, reductions in length of stay, enhanced clinic flow, and less medical and surgical harm.The Quality and Safety Academy (introduction to patient safety, case review, just culture, and improvement work) has served over 900 participants, primarily resident and fellow learners. The Improvement Academy supports individuals and teams working on quality improvement projects. This course offers two days of structured didactic sessions and application to project work along with

longitudinal coaching. Facilitative Leadership is a two-day development course for early-phase leaders. Foundations in Healthcare Leadership is a more extensive four-day leadership development program that is supplemented by one year of executive coaching. The Clinical Effectiveness and Patient Safety Grant Program (CEPS) offers grants of up to $25,000 to faculty, trainees, and staff to pursue innovations, improvements, and research in quality and safety. The Quality Improvement Writing Group provides a structured, mentored approach to help authors move their quality improvement and patient safety outcomes toward publication. The Patient Safety Academy helps teams build robust case review programs within their organizations. IHQSE also offers a year-long Fellowship in Health Quality Leadership for individuals seeking to develop the skills to lead quality and safety programs. In 2024, IHQSE received a $350,000 grant from the Gordon and Betty Moore Foundation to bring 35 national leaders in diagnostic excellence from 15 academic medical centers to the Anschutz Medical Campus for a three-day event to help them create and implement diagnostic excellence programs at their home institution. Additionally, 2024 saw IHQSE partner with the Colorado State University College of Veterinary Medicine to help them develop their faculty and staff capacity for doing quality and safety work as well as build a quality infrastructure within their hospital. This appears to be the first-of-a-kind relationship in the United States.

The Aurora Wellness Community has had a year of transitions. Lisa Neal-Graves (former CEO) left the AWC, but several new members have joined the team, including Griselda Pena Jackson, Barbara Pena, Maureen Maycheco, and Doug Taren. Griselda Pena Jackson, the director of community partnerships, has 12 years specializing in non-profit organizations focused on community engagement and education. Barbara Pena, business professional, is an administrative specialist with 11+ years of experience in diverse industries, Maureen Maycheco is an award-winning, multi-racial, marketing/communications professional, and Doug Taren, PhD, from the Nutrition Section in the Department of Pediatrics, has a 40-year history working on issues related to food security and child nutrition. Kari Mader MD has stepped into a new role within the AWC, as medical director of Aurora specialty access, helping to promote increased and equitable access to the specialty expertise to our faculty. We also welcomed Kelet Robinson, MD, as medical director for the new clinic, the AWCHC highlighted above. Kelet has a 20-year career working in the hospital & health care industry including Colorado's second-largest safety net site. Her leadership, in collaboration with expertise from the Department of Family Medicine and CU Medicine, allowed the successful operationalization of our promise to better serve our neighbors surrounding the Anschutz medical campus.

CU Medicine

CU Medicine (University Physicians, Inc. legal name) is the centralized practice plan for the faculty of the University of Colorado School of Medicine and is authorized to bill, collect and disburse all patient revenues and other revenues earned by the faculty, and to enter contracts for the collection of such revenues. CU Medicine is organized for the benefit of the University of Colorado. CU Medicine is an independent 501(c)(3) organization, separate from but controlled by the School of Medicine.

CU Medicine Services include managed care contracting, revenue cycle management, compliance, business development, and financial services for physicians and advanced practice professionals, as well as infrastructure for population health and the community practice division. All faculty of the CU School of Medicine are members of CU Medicine.

Leadership:

President, Dean of the School of Medicine	John Sampson, MD, PhD, MBA
Executive Director (CEO) & Secretary/Treasurer	Brian T. Smith, MHA
Medical Director, Senior Associate Dean of Clinical Affairs	Anne Fuhlbrigge, MD, MA
Vice President and Chief Financial Officer	Matthew Baughman, CFA
Vice President and Chief Revenue Officer	Kimberly Davis
Vice President and Chief Business Development Officer	Elizabeth Kissick
Vice President and Associate Dean for Community Practice	Mark Young, MBA

CU Medicine Board of Directors is comprised of all clinical department chairs, six voted at-large members, one basic science chair and representatives from Children's Hospital Colorado and UCHealth University of Colorado Hospital. The Board of Directors is served by the following committees and their current committee chairs are Executive Committee: Dean John Sampson; Governance Committee: Naresh Mandava, MD; Compliance Committee: Kevin Lillehei, MD; and Finance Committee: Nanette Santoro, MD.

As June 30 came to closure, we saw two significant leadership transitions. President/Dean John J. Reilly Jr., MD, retired after 9 years of leadership in an important growth phase for CU Medicine, including expanding CU Medicine clinical services into the communities surrounding the Denver metro and to the residents of the State of Colorado through our Upper Payment Limit Program. After serving as the Chief Operating Officer of CU Medicine since 2006, Gail Albertson, MD, also chose to retire. She has left the CU Medicine leadership team on strong ground to build upon as we face the ever-changing challenges of delivering high quality healthcare. We wish them both much luck in their future endeavors and thank them for their amazing service.

CU Medicine was recognized as the No.1 medical group in Colorado in quality by Anthem – our largest commercial payer. On behalf of all our providers we thank the Office of Value-Based Performance in partnership with Community Practice, Audit Compliance and Education, primary and specialty care practices for these outstanding

accomplishments. And finally, the most important part of our enterprise - our patients - provided such strong feedback around our marketing campaign “We CU…” that we were awarded The American Advertising Award (ADDY). CU Medicine is poised to continue a path of strong growth and high-quality care for patients in Colorado and beyond.

Thrive: Offices for the Faculty Experience
SCHOOL OF MEDICINE
UNIVERSITY OF COLORADO **ANSCHUTZ MEDICAL CAMPUS**

INTRODUCTION: The Offices for the Faculty Experience include the Office for Faculty Affairs, the Office for Faculty Development, the Office for Faculty Relations, and the Work and Culture Optimization Collaborative. Our mission is to drive systematic changes to improve career experiences and transform workplace culture while providing excellent services to faculty. We focus on fostering an environment where faculty are engaged, satisfied, and professionally fulfilled, feel a sense of belonging, and believe they have the support needed to be successful.

GOALS:

- Be among the top 10 employers of choice for health care professionals and biomedical scientists
- Set the standard for the faculty experience in healthcare
- Have reported burnout levels below national benchmarks and ratings of professional fulfillment and engagement that exceed those experienced elsewhere
- Support a diverse faculty body who feel respected, validated for their identities and contributions, and that their voices are heard

LEADERSHIP TEAM: Lotte Dyrbye, MD, MHPE, Senior Associate Dean for Faculty and Chief Well-being Officer, Steven Lowenstein, MD, MPH, Associate Dean for Faculty Affairs, Miriam Post, MD, Assistant Dean for Faculty Affairs, Cheryl Welch, Director for Faculty Affairs, Abbey Lara, MD, Assistant Dean for Faculty Relations, Aimee Gardner, PhD, Associate Dean for Faculty Development, and Jennifer Reese, MD, Assistant Dean for Faculty Well-being.

ACTIVE INITIATIVES

Faculty Affairs

- Enhancing infrastructure to improve service and reduce clerical workload for faculty and administrative staff, including a review of faculty data management systems and updating faculty action processes
- Providing academic promotion certificates to faculty
- Seeking system and School of Medicine policy updates and process changes in response to the Promotion Task Force recommendations
- Recognizing faculty: Physician, Scientist, & Advanced Practice Provider Recognition Days, Second Annual 2024 Distinguished Physician Award winners: Drs. Lam, Madinger, Stoneback, and Weigers; Distinguished Advanced Practice Professional winners: Emily Benton, Michelle Lalinde, Angela Falco, and Cheryl Meguid
- Building a dynamic faculty dashboard with Association of American Medical College (AAMC) benchmarks, incorporating overall and departmental information

Faculty Relations

- Providing individual and group professional development related to professionalism, values, and conduct
- Facilitating initiatives to improve team culture
- Managing allegations of unprofessional conduct

- Recognizing faculty who are exemplars of professionalism—2024 Faculty Professionalism Award winners: Drs. Karrer and Messersmith
- Supporting CUSOM faculty and trainees involved in medical malpractice litigation (CU Connect Peer Support)

Faculty Development
- Supporting clinician educators: The Academy of Medical Educators (AME) has a new tiered membership, monthly Medical Education Grand Rounds, monthly Scholarship in Innovation and Education (ScEI) Club, and a yearly Annual Medical Education Symposium. Medical education innovation is supported through the Rymer Innovation Awards with Drs. Jennifer Adams, Kate Adkins, Nicole Larrea, Catherine Callister, Andrew Maertens, Anna Neumeier, Shawna Tonick, Kathryn Rhine, and Emily Rosen receiving awards in 2024. AME also supports the Resident and Fellows as Educator Elective and the Teaching Scholars Program.
- Developing leaders: Early Leadership Development for Women in Medicine and Science and CU ThriveForward, a development program for mid-career women faculty, are currently offered. We also select and financially support faculty to attend the AAMC Early and Mid-Career Women Leadership Training and Executive Leadership in Academic Medicine (ELAM).

Work & Culture Optimization
- Improving work efficiencies, culture, and professional well-being through measurement, reporting, and action: Response to the 2024 Faculty, Resident, and Fellow Well-being Survey results are being crafted by supported and co-funded Departmental Well-being Leaders, Chairs, and CU SOM leaders.
- Partnering with the Institute for Healthcare Quality, Safety, and Efficiency (IHQSE) to incorporate metrics of the impact of process changes on the workforce
- Supporting mentoring initiatives, including sponsorship of the Department of Medicine Mentoring Academy

MAJOR ACCOMPLISHMENTS
- Processed 688 new faculty appointments and 293promotion dossiers
- Updated faculty reappointment process for faculty with limited appointments, streamlining workflows and reducing clerical burden for the departments
- Re-designed and launched the Academy of Medical Educators, now with almost 200 faculty members (doubling the previous size)
- Launched the 2024 CU SOM Faculty, Resident, and Fellow Well-being Survey with a 67% response rate and build infra-structure to support meaningful action
- Delivered the 2024 Annual Medical Education Symposium with two keynotes, two panels, 53 posters, nine workshops, and 27 oral presentations

COLLABORATIONS
- Healthcare Professional Well-being Academic Consortium (PWAC) that connects U.S.-based academic-affiliated medical centers with a shared commitment to advancing the well-being of healthcare professionals
- American Medical Association, Stanford, and Mayo Clinic for long-standing research collaborations and hosting of the American Conference on Physician Health
- AAMC Council of Faculty and Academic Societies, AAMC Group on Faculty Affairs

EDUCATION

Education

The education programs at the School of Medicine are under the leadership of **Shanta M. Zimmer, MD,** senior associate dean for education. The University of Colorado School of Medicine is committed to lifelong and interdisciplinary learning for health care professionals. We have many programs to serve the needs of undergraduate, graduate, and post-graduate students, beginning with pathway programs in middle schools to attract and prepare a diverse and talented applicant pool to the health professions. Students graduating from the MD program match into competitive residencies across the country and many are recruited to positions in our Graduate Medical Education programs which offer outstanding training for residents and fellows. Once graduates complete their training as physicians, physician assistants, physical therapists, and anesthesia assistants, the Office of Continuing Medical Education offers lifelong educational programs designed to improve competence, performance, and health outcomes. The following pages reflect information on the school's educational programs including Anesthesiology Assistant; Center for Advancing Professional Excellence; Child Health Associate/ Physician Assistant; Genetic Counseling; Graduate Medical Education; Office of Research Education; Office of Continuing Medical Education and Professional Development; Physical Therapy; and Undergraduate Medical Education.

Anesthesiologist Assistant Program

The University of Colorado's Master of Science Program in Anesthesiology is a rigorous 28-month graduate-level program housed within the Department of Anesthesiology at the Anschutz Medical Campus. When the first class was matriculated in the fall of 2013, it became only the ninth program of its kind in the United States. The past several years has resulted in some changes in the Anesthesiologist Assistant program landscape. There are now 21 Anesthesiologist Assistant programs offering similar degree programs: 20 accredited programs and 1 program undergoing accreditation.

The program is divided into two phases: A 16-month integrated didactic and clinical curriculum followed by a 12-month almost entirely clinical phase. Before transitioning into the primarily clinical phase, students must have completed four semesters of basic science and general and advanced anesthesia curriculum. Upon graduation, students will have over 3,000 clinical training hours, not including simulation. Students sit for the national certifying exam provided by the National Commission for Certification of Anesthesiologist Assistants (NCCAA) before graduation. Students who complete the program requirements are awarded a Master of Science Degree in Anesthesiology from the University of Colorado School of Medicine.

Mission

The mission of the Master of Science in Anesthesiology Program is to educate and train highly skilled Anesthesiologist Assistants in the cognitive, psychomotor and affective learning domains so they can work within the anesthesiologist-led Anesthesia Care Team to provide quality patient care.

Leadership

Vesna Jevtovic-Todorovic, MD,	Chair, Department of Anesthesiology
PhD, MBA Anthony Oliva, MD, PhD	Vice Chair of Education, Department of Anesthesiology
Jaime Daly, MD	Medical Director
Jillian Vitter, MD	Associate Medical Director
Luke Eaton, CAA, M.H.Sc	Program Director
Serena Younes, CAA, MSA	Associate Didactic Program Director
Rachel Johnson, CAA, MSA*	Associate Clinical Program Director
Amy Hebbert, BA	Program Manager
Lauren Pratt, BS	Program Coordinator

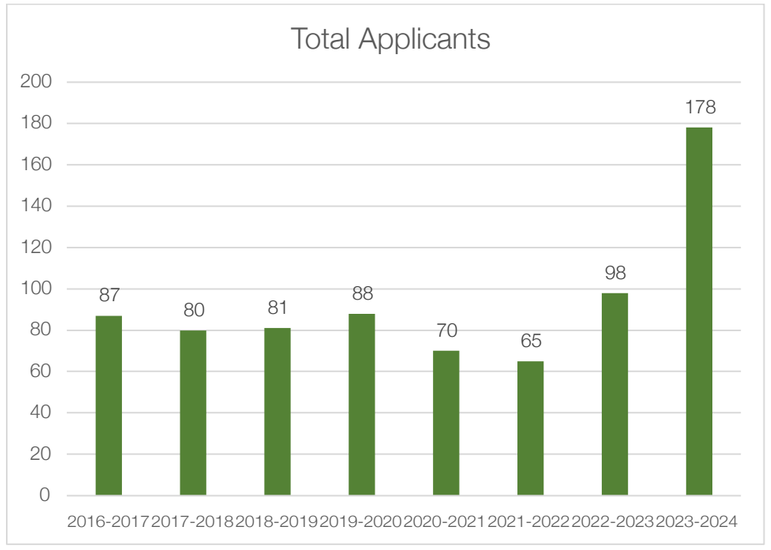
Rachel Johnson, CAA has resigned from her position as associate clinical program director. She will be transitioning out of the role fully by the end of September 2024. Eloise Mulroy, CAA, Children's Hospital of Colorado, will be joining us as associate clinical program director full-time in October 2024.

Website

The website is updated regularly to reflect the changes in staff, program outcomes and the new class.
https://medschool.cuanschutz.edu/anesthesiology/education/anesthesiologist-assistant-program

Student Overview

When the fall 2024 semester begins, the MS Anesthesiology Program will have a total of 42 students enrolled. The MS Anesthesiology Program has had nine graduating classes and a total number of 95 graduates. Below is the historical data for Total Applicants, Current Student Demographics, Student Demographics at Matriculation, and the Graduation and Certification rates.



Current Student Demographics				
	Class of 2023	Class of 2024	Class of 2025	Class of 2026
Students	11	15	16	14
Male : Female	4:7	6:9	4:12	6:8
In-State	8	12	8	10
Out-of-State	3	3	8	4

Student Demographics *at Matriculation*									
	Class of 2018	Class of 2019	Class of 2020	Class of 2021	Class of 2022	Class of 2023	Class of 2024	Class of 2025	Class of 2026
Students	11	13	12	14	13	12	16	16	14
Average Age	27	26	24	25	27	26	27	24	30
Male: Female	6:5	8:5	6:6	6:8	8:5	5:7	7:9	4:12	6:8
In State	8	7	4	6	7	6	7	8	10
Out of State	3	6	8	8	6	6	9	8	4
Average GPA	3.6	3.4	3.5	3.6	3.6	3.6	3.6	3.6	3.6
Average MCAT	59th %ile	56th %ile	57th %ile	62nd %ile	69th %ile	55th %ile	63rd %ile	48%ile	60th%ile

Class	Graduated	Pass
2023	11	11
2022	12	12
2021	13	13
2020	12	12
2019	13	13
2018	11	11
2017	10	10
2016	7	7
2015	6	6
Pass Rate	100%	100%

Recent Accomplishments

Curriculum and Instruction

The MS Anesthesiology Program offers a 28-month didactic curriculum designed by expert faculty and complemented by clinical rotations. The program boasts a unique curriculum that features didactic courses taught by attending anesthesiologists and CAAs. This allows students to interact formally with all anesthesia care team members from the beginning of training. Senior-year didactics include a senior project in research or quality improvement to supplement clinical requirements and an interactive Senior Seminar where students lead Problem-Based Learning Discussion (PBLD) sessions covering interesting cases and subject matter. We had several students present posters at the annual conference for the American Society of Anesthesiologists in October 2023 as well as the conference for the American Academy of Anesthesiologist Assistants in April 2024. In addition to classroom didactics, the students begin clinical hours within the program's first two months. MS Anesthesiology students become very comfortable with the operating room environment even before completing the didactic portion of the program. This comfort transforms into self-sufficiency as students rotate through various clinical subspecialties, including pediatrics, trauma, cardiothoracic, regional, neuroanesthesia, and obstetrics. While the Anschutz Medical Campus provides excellent learning opportunities, program leaders have also established multiple affiliation agreements with outside clinical sites offering students the opportunity to rotate in clinical settings along the Front Range as well as nationwide. Students complete the program with an extremely well-rounded base of knowledge and professionalism, and they are comfortable in various environments. For the past year, we have been focusing on improving our wellness curriculum. We have collaborated with the Student and Resident Mental Health Office to incorporate their trainings into our own existing programming. We have started providing 2 mental health days to our students to be used as needed throughout the program. Additionally, we added an extra wellness day for our first- year students in semester 3.

Simulation Lab

The Simulation Lab is an integral part of the overall curriculum taking place over three semesters during the first year. Students are taught various skills and concepts utilizing low-fidelity simulators for task training and a high-fidelity simulator, the SimMan 3G, for scenario-based training. Task-training exercises include basic and advanced airway management, anesthesia machine operation, setup and use of anesthetic agents, invasive monitor placement, and regional anesthesia techniques. Crisis Resource Management skills are taught using the SimMan 3G with scenario-based training. Crisis Management training includes ACLS protocols, local anesthetic toxicity management, difficult airway management, treatment of severe bronchospasm, and many other scenarios. The concept of TeamSTEPPS (team performance strategies and tools) is incorporated in all scenarios. We have recently made some updates to our Simulation Lab equipment including the installation of screens in the anteroom to the Simulation Lab. This allows us to stream what is happening in the Simulation Lab to the waiting space for other students to view. We have also purchased additional regional and neuraxial trainers that allow students to practice the necessary skills.

Scholarship

The Department of Anesthesiology has established a scholarship to provide support to students. All students are welcome to apply. Scholarship funds will cover the last three semesters of the MS-Anesthesiology Program. Past recipients have been Jonathan London (2018), Fabienne Haas (2019), Mike Dinh (2020), Kira Floge (2021), Jacob Stanley (2022), Molly Bell (2023).

Our program is also excited to offer a variety of smaller scholarships available to first year students and senior students.

Community Outreach

The MS-Anesthesiology students have completed community service projects every semester of the program's existence. In past years, students have prepared meals for Ronald McDonald House Charities of Denver using food from area businesses; the students funded gift cards and donated them to Ronald McDonald House; raised money by handmaking and selling scrub caps to benefit Lifebox, an organization that sends pulse oximeters to low resource and lower-middle income countries at no or reduced cost; helped to collect used or discarded medical supplies for Project Cure, the largest provider of donated medical supplies and equipment to developing countries around the world; participated as a group in a blood drive with Children's Hospital Colorado and staffed booths at local fundraising events such as Strides for Epilepsy 5K and university health fairs. This past year, we had several students volunteer at the 2nd Annual Youth Summit this past May. We also have a group of seniors that have been participating in outreach to local schools as well as outreach events on campus.

http://www.aaaep.org/

The University of Colorado PA Program has gained national recognition for its curriculum in primary care medicine. The Program confers a Professional Master's Degree (MPAS). In accordance with the mission of the program, the CHA/PA Program curriculum provides comprehensive physician assistant education in primary medical care with expanded training in pediatrics and need for service to disadvantaged, at risk and medically underserved populations. Graduates practice in all areas of medicine and serve patients of all ages.

Mission Statement

The mission of the Child Health Associate/Physician Assistant Program is to provide an innovative learning environment to educate socially conscious physician assistants dedicated to the holistic care of diverse and underserved patient populations across the lifespan with an emphasis on primary care and expanded training in pediatrics

Program Curriculum

The Colorado Curriculum is a cutting-edge, learner-centered educational platform designed to foster clinical decision-making and lifelong learning skills. The curriculum is based on clinical presentations rather than traditional courses, which mimics how patients present for care and how clinicians practice medicine. For example, during the week of the curriculum focused on the clinical presentation "shortness of breath," all learning in the basic sciences and clinical medicine is delivered in the context of a patient with shortness of breath.

The Colorado Curriculum consists of two didactic years, with clinical experiences integrated across both years. The third year of the program consists of 10 one-month rotations. The program begins in July with a summer immersion course that includes fundamentals of learning strategies, PA professional roles, wellness and resilience, and clinical topics.

The curriculum is organized into seven system-oriented blocks: Hematology, Infection, Inflammation and Malignancy (Heme/IIM); Gastrointestinal, Genitourinary and Renal (GI/GU/Renal); Cardiovascular and Pulmonary (CVP); Dermatology and Head, Eyes, Ears, Nose and Throat (Derm/HEENT); Musculoskeletal and Neurology (MSK/Neuro); Endocrinology and Reproduction (Endo/Repro); and Psychiatry. The curriculum is an iterative, spiral approach to learning, such that clinical topics which are introduced in the first year are often revisited at a more advanced level in the second year. Each block course integrates the basic sciences and clinical medicine by employing the use of small group experiences, case-based learning, patient panels, standardized patients (SPs), patient simulators, lectures, and collaborative sessions. Additionally, students participate in thread courses over both years which provide education in clinical skills, role development, advocacy, preventive care across the lifespan, and the clinical environment. The thread courses include Clinical Skills, Clinical Experiences, and Foundations in Prevention, Advocacy, and Professional Practice.
The curriculum includes fully integrated clinical experiences in hospital and community settings. During clinical experiences, students participate in observation, history-taking, physical examination and assessment, development of a differential diagnosis and clinical decision-making and planning of treatments and interventions. Students work closely with preceptors and other members of the health care team and are evaluated on skills and competencies required for patient care.

As a part of the University of Colorado School of Medicine, the faculty of the entire School of Medicine and affiliates contribute greatly to the quality of the learning experiences provided at the CHA/PA Program. Affiliations with the University of Colorado Hospital, Children's Hospital Colorado, and Denver Health and Hospitals in addition to clinics, provide a network of clinical experiences to enhance the training of students. The faculty within the departments of Pediatrics, Family Medicine, Internal Medicine, Surgery, and others regularly participate in both classroom and clinical training of the CHA/PA Program students

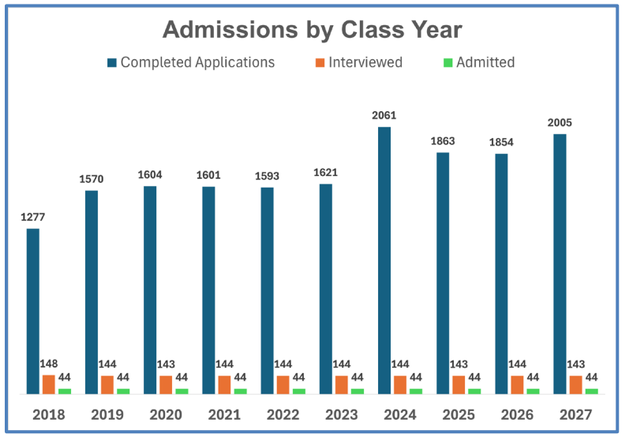
Program Faculty and Leadership

The education, scholarship, and service roles of the principal faculty of the CHA/PA Program provide students with experienced faculty mentors with clinical practices in general pediatrics, family medicine, pediatric and adult subspecialties.
Program faculty serve in state and national leadership roles. Jonathan Bowser is a past President for Physician Assistant Education Association (PAEA) and serves on the President's Commission. Tanya Fernandez serves on Colorado Academy of Physician Assistants (CAPA) scholarship and awards committee. Jacqueline Sivahop facilitates workshops for new faculty and program directors for PAEA and was a feature editor for the *Journal of Physician Assistant Education* (JPAE). Kate LaPorta participated in the PAEA Standard Setting workgroup for the End of Curriculum exam and serves on the Aquifer Family Medicine Assessment Author workgroup, and Kelsey Dougherty serves on several Aquifer committees including, Associate Editor – Clinical Excellence Board, Member of the Adoption and Use Team, Member of the PA Affinity Group, Member of the Curriculum Language Working Group.

International Connections

The University of Colorado Child Health Associate/Physician Assistant Program continues its partnership with the Trifinio Clinic in Guatemala. CHA/PA students engage in clinical experiences in this clinic site in rural northwestern Guatemala. Our global partnerships continue to offer us new perspectives on our educational program and the work we do here, helping us provide better care for our patients in the US and abroad.

Student Overview



The CHA/PA Program has a very competitive admissions process and continues to attract top students from across the country. During the 2023-24 admission cycle, the program received 2005 applications, of which 143 were interviewed to admit 44 students.

Program graduates are employed in all areas of primary and subspecialty areas of practice including pediatrics, family medicine, surgery, internal medicine, emergency medicine, dermatology, and many more. The program has a 97% five-year average NCCPA board pass rate.

Admissions —Student Demographics				
Class Year	**2024**	**2025**	**2026**	**2027**
Total Students	44	44	44	44
CO Resident	25	20	17	23
Non-Resident	19	24	27	21
Overall GPA	3.80	3.70	3.76	3.76
Science GPA	3.76	3.63	3.69	3.69
Average Age	25	23	23	23
Hispanic	8	8	8	5
Alaskan Native/American Indian	1	1	4	1
Black	2	4	3	5
Asian	4	4	8	5
White	29	27	21	28

Program Information

Program Director: **Jonathan Bowser MS, PA-C**
Medical Director: **Tai Lockspeiser MD, MHPE**
Associate Program Director: **Tanya Fernandez MS, PA-C**
Program website: http://medschool.ucdenver.edu/paprogram

Genetic Counseling Program

The Master of Science in Genetic Counseling Program prepares students for professional practice and board certification as genetic counselors. The program is fully accredited by the Accreditation Council for Genetic Counseling (ACGC). Upon graduation, alumni are eligible to sit for the national certification exam administered by the American Board of Genetic Counseling (ABGC). Established in 1971, the CU Anschutz Genetic Counseling Program is the third oldest training program for genetic counselors in North America and one of only five such programs in the Rocky Mountain region.

Mission Statement

The Master of Science in Genetic Counseling Program prepares students for professional practice and board certification as genetic counselors. The program is fully accredited by the Accreditation Council for Genetic Counseling (ACGC). Upon graduation, alumni are eligible to sit for the national certification exam administered by the American Board of Genetic Counseling (ABGC). Established in 1971, the CU Anschutz Genetic Counseling Program is the third oldest training program for genetic counselors in North America and one of only five such programs in the Rocky Mountain region.

Program Curriculum

The intensive 21-month curriculum integrates extensive coursework in human clinical and laboratory genetics and genomics, psychosocial and counseling theory, research, and ethical, legal, social and professional practice issues with more than 1,000 hours of direct, supervised clinical training in pediatric, metabolic, reproductive, oncology, adult and specialty genetics clinics. During the second year, students complete a scholarly mentored capstone project addressing a current clinical practice, laboratory, educational, policy or service delivery issue in genetic counseling. Students are encouraged to submit abstracts for presentation of their projects at national meetings and to publish their findings in peer-reviewed journals.

Professional Practice of Program Alumni

Genetic counselors play a critical, expanding role in the healthcare system. They are at the forefront of precision genomic medicine initiatives. As genetic risk assessment and genetic testing become integral components of virtually all medical specialties, genetic counselors help to ensure quality, informed, client-centered delivery of these services. The Bureau of Labor Statistics identifies genetic counseling as one of the fastest-growing healthcare fields.

CU Anschutz Genetic Counseling Program alumni practice throughout Colorado and the nation. Practice settings of alumni include hospitals, academic and private genetics centers, diagnostic laboratories, telehealth genetic counseling services, clinical research programs, biotechnology companies, state public health departments and patient advocacy organizations.

As members of multidisciplinary healthcare teams, genetic counselors provide scientific expertise, education, risk assessment, non-directive support for decision making and psychosocial needs, and community resources. Genetic counselors are central to the provision of quality, comprehensive care of individuals and families affected with or at risk for specific genetic conditions, or with genetic predispositions to cancer, cardiovascular or other diseases. Genetic counselors in clinical settings use a client-centered approach to ensure that patients and their medical providers can understand and appropriately utilize genetic information and laboratory tests to promote informed healthcare choices.

Laboratory-based genetic counselors serve as professional liaisons to hospital systems, individual health care providers and their patients. They help providers and patients understand new testing modalities and appropriate testing options, conduct utilization management review to promote cost-effective use of genetic testing, and provide individualized results interpretation. Genetic counselors in both clinical and laboratory roles utilize their scientific expertise to Laboratory-based genetic counselors serve as professional liaisons to hospital systems, individual health care providers and their patients. They help providers and patients understand new testing modalities and appropriate testing options, conduct utilization management review to promote cost-effective use of genetic testing, and provide individualized results interpretation. Genetic counselors in both clinical and laboratory roles utilize their scientific expertise to research genomic variants and ensure that clinical interpretation of often novel findings of genomic testing reflects current knowledge and is conveyed to clients in an understandable manner. Many program alumni are faculty at their institutions, promoting genomic literacy as educators of trainees, other healthcare professionals and the public, and conducting clinical and translational research. Alumni facilitate support and advocacy groups for genetic conditions, engage in health care policy development regarding genetic services, and provide consulting to biotechnology and other industries. It is an exciting time for the program's graduates to be entering the genetic counseling field, as professional roles and opportunities continue to expand and evolve in the context of precision genomics-based healthcare.

Student Profile

Admission to the Genetic Counseling Program is highly competitive and is conducted through a national match program. In the spring 2024 admissions cycle, six students matched from around the U.S. from a pool of almost two hundred applicants and will begin their training in August. They range in age from 24 to 26. Their median undergraduate GPA was 3.83. Since completing college, they have been working in diverse professional roles including classroom teacher, medical scribe, genetic counseling assistant, registered behavior technician providing ABA therapy, clinical research coordinator, and pharmacy technician. One completed a competitive two year NIH post-baccalaureate fellowship with the National Human Genome Research Institute (NHGRI). All have obtained client advocacy and counseling experience through programs providing crisis counseling, reproductive health services, undergraduate peer support, domestic violence services, academic mentorship for high school students, adaptive outdoor recreation, and college experience for young adults with intellectual disability.

Notable Accomplishments - 2023-2024 Academic Year

- 83% of the program's 2023 graduates taking the American Board of Genetic Counseling (ABGC) Certification Exam achieved certification and the CGC credential on their first attempt (nationally, the first attempt pass rate for this exam cohort was 69%). The overall first attempt boards pass rate is 97.9% for the program's past eight graduating cohorts.
- Six students graduated in May 2024, entering clinical practice in the specialties of pediatrics, oncology and reproductive genetics.
- One student in the 2024 graduating class had their Capstone research project accepted for poster presentation at the American College of Medical Genetics and Genomics Conference held in Toronto, Canada, in March 2024.

M.S. Genetic Counseling Program Information:

Program Director: **Carol Walton, MS, CGC**
Assistant Director, Clinical Training: **Kathleen Brown, MS, CGC**
Website: https://www.cuanschutz.edu/graduate-programs/genetic-counseling

GRADUATE MEDICAL EDUCATION

The Graduate Medical Education (GME) Office is responsible for the oversight of ACGME accreditation, the campus graduate medical educational environment, as well as payroll, benefits & administrative issues for all residency and fellowship training programs at the University of Colorado School of Medicine (CUSOM). One of the largest GME programs in the world, we oversee 31 ACGME-accredited residency programs, 87 ACGME-accredited fellowship programs, and 112 non-ACGME accredited training programs.

In addition to academic oversight, the mission of the Office of Graduate Medical Education at CUSOM is to provide Colorado, the nation & the world with programs of excellence through:

	EDUCATION The provision of educational programs to program directors, program coordinators, residents/fellows, the entire GME community as well as practicing health professionals & the public at large;
	RESEARCH The development of new knowledge in the basic & clinical sciences, as well as in health policy & health care education;
	PATIENT CARE State-of-the-art clinical & research education programs which reflect the unique educational environment of CUSOM, as well as the needs of the patients it serves, ads
	COMMUNITY SERVICE Sharing the CUSOM's expertise & knowledge to enhance the broader community, including our affiliated institutions, other healthcare professionals, alumni,other colleagues, & citizens of the state.

GME implements policies approved by the Graduate Medical Education Committee (GMEC) of the School of Medicine. The ACGME charges the GMEC with responsibility for monitoring & advising on all aspects of residency education including compliance with ACGME work hours, patient safety & quality improvement requirements, and in maintaining a strong learning environment. GMEC is informed by many active subcommittees including the Program Oversight Committee, the Clinical Learning Environment Committee, and the Education Committee, among others.

The GMEC itself is composed of program directors, GME Faculty Liaisons from the major teaching hospitals, & officers of the Housestaff Association, and a large contingent of non-voting but academically active members from across all training programs. GMEC reports to the Dean of the School of Medicine through the Associate Dean for GME/DIO & the Senior Associate Dean for Education.

Graduate Medical Education Leadership

Geoffrey Connors, MD, FACP ACGME Designated Institutional Official (DIO) Associate Dean for Graduate Medical Education	**Carol Rumack, MD** Associate DIO for GME Accreditation and Compliance
Tyler Anstett, MD Director of GME Quality & Safety Programs	**Nida Awadallah, MD** Director of GME Resident Remediation
Jackie Ward-Gaines, MD Director of GME Diversity, Equity, and Inclusion	**Ashley Wexler-Walter, MBA** Director of Finance and Administration

Website: https://medschool.cuanschutz.edu/graduate-medical-education

2023-2024 GME HIGHLIGHTS

MAJOR CHANGES taken in collaboration with GMEC and CUSOM GME Affiliated Hospitals

1. The GME Office grew with the appointment of a new Associate Dean for Graduate Medical Education/ DIO, Geoffrey Connors, MD, with Carol Rumack, MD, remaining as Associate DIO for Accreditation and Compliance, May 2024.
2. The GMEC reviewed and approved 13 Non-Standard Training (NST) new program descriptions.
3. GME Website updates
    a. Additional Wellbeing Resources added
    b. Anonymous reporting tool added
    c. Addressing accessibility issues
4. Lotte Dyrbye, MD, MHPE, Senior Associate Dean for Faculty and Chief Well-being Officer, conducted a new PWAC (Professional Wellbeing Academic Consortium) wellbeing survey, working with GME and our Housestaff Association Co-Presidents in April 2024.
5. New GME Director of Diversity, Jackie Ward-Gaines, MD, Emergency Medicine faculty.
6. ACGME Survey Results for 2024 showed all resident and faculty results at or above national average.
7. New Housestaff retirement benefits were added for all GME trainees.
8. To complement our new Faculty education series “Essentials 1.0,” we added “Essentials 2.0” for existing program directors and program coordinators.

12th Annual GME Outstanding Program Coordinator Awards

The Graduate Medical Education Committee, in collaboration with the Program Coordinator Council (PCC), awarded Nicole Canterbury-Passoth as one of this year’s CUSOM GME Outstanding Program Coordinators. She is also the CUSOM GME Nominee for the 2025 national ACGME Program Coordinator Excellence Award. Vicki Muscatello, Otolaryngology Residency & Pediatric Otolaryngology Fellowship, was also awarded as CUSOM GME Outstanding Program Coordinator.

Nicole Canterbury-Passoth

Internal Medicine Residency

CUSOM GME Outstanding PC Award

ACGME PC Excellence

Vicki Muscatello

Otolaryngology Residency & Pediatric Fellowship

CUSOM GME Outstanding PC Award

ACGME PROGRAS RECEIVING INITIAL ACCREDITATION
Colon and Rectal Surgery

NEW GMEC APPROVED (NON-ACGME) FELLOWSHIP PROGRAMS*	
Program Name	**GMEC Approval Date**
Advanced Interventional Cardiology	March 20, 2024
Pediatric Electrophysiology	January 17, 2024
Pediatric Interventional and Congenital Cardiology	January 17, 2024

Figure 1

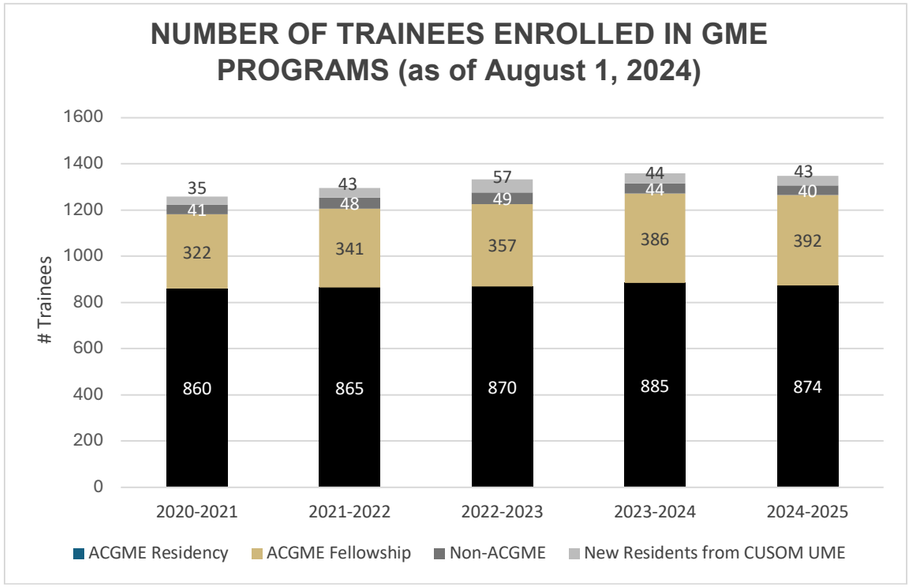
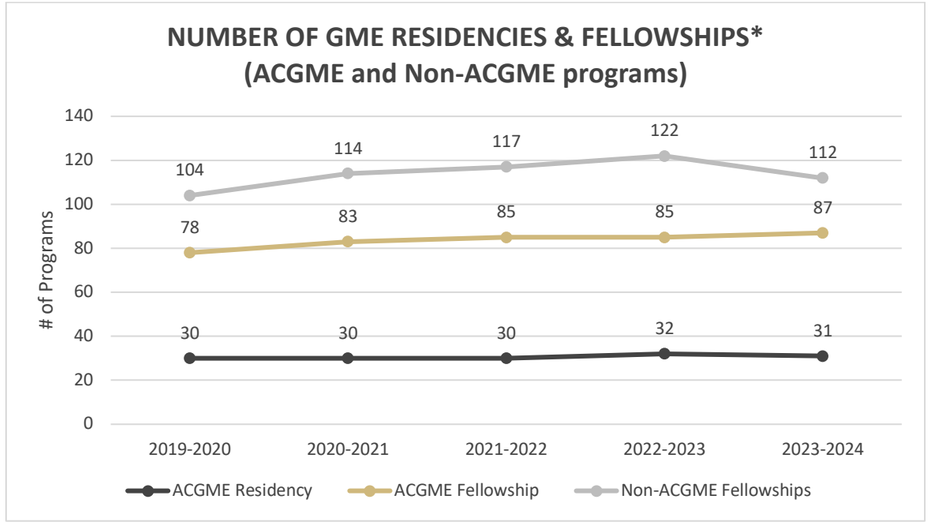


Figure 2



*Child and Adolescent Psychiatry was recategorized from a Residency to a Fellowship to align with the ACGME definition in September 2023.

Figure 3

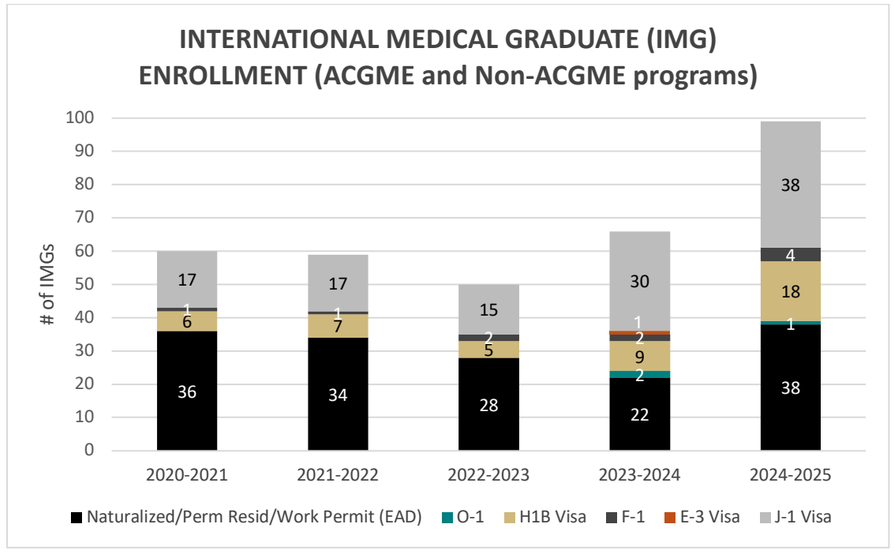
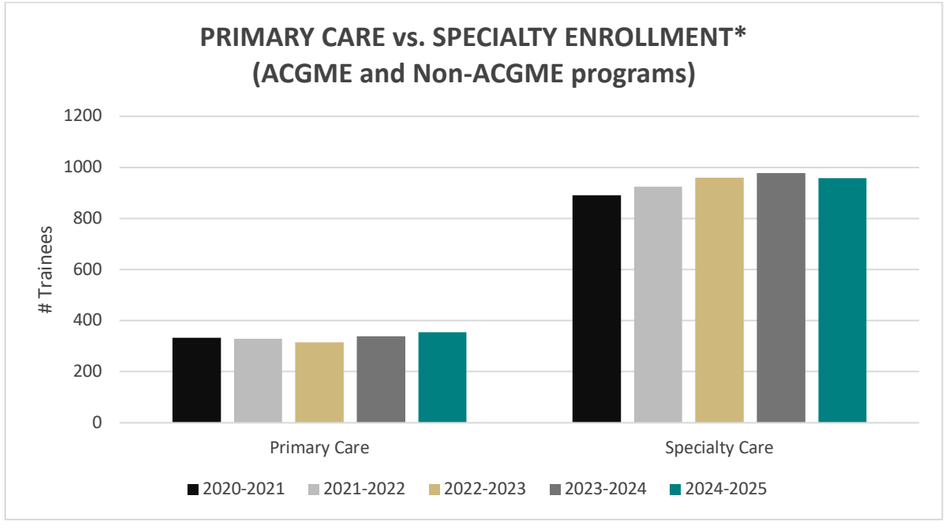


Figure 4



*2024-2025 Primary Care programs include: Family Medicine, Family Medicine Rural Training Track, Internal Medicine, Internal Medicine/Pediatrics, Pediatrics, Public Health & General Preventive Medicine, Geriatric Medicine, Obstetrics and Gynecology. The following programs were added or removed from this category for this year's data. *Added*: Internal Medicine/Pediatrics, Geriatric Medicine, Obstetrics and Gynecology *Removed:* Pediatrics/Physical Medicine and Rehabilitation, Pediatrics/Medical Genetics and Genomics.

Figure 5

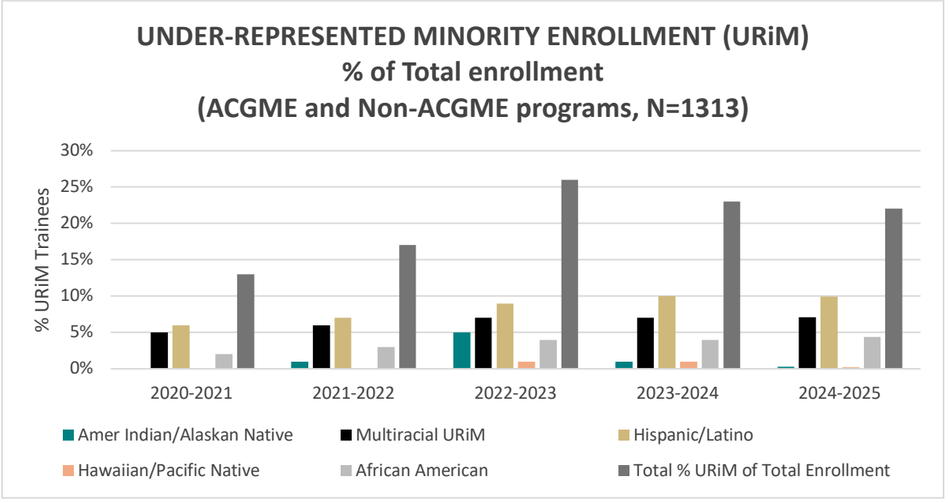
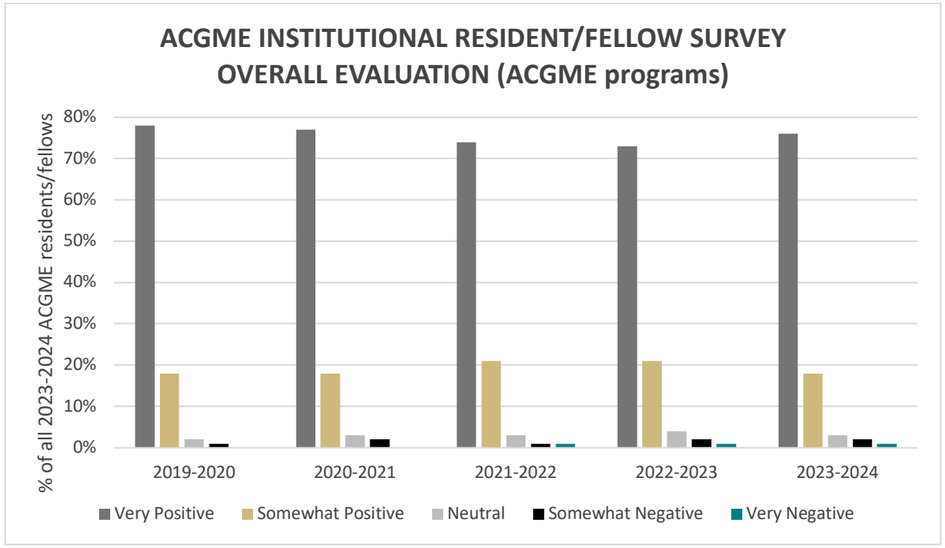


Figure 6



GRADUATE PLANS – GME 2023-2024 GRADUATE SURVEY

For the 2023 -2024 academic year, **382** residents & fellows graduated from ACGME & Non-ACGME approved programs. All graduates completed the 2023-2024 GME Graduate Survey, the source of the following data.

Figure 7

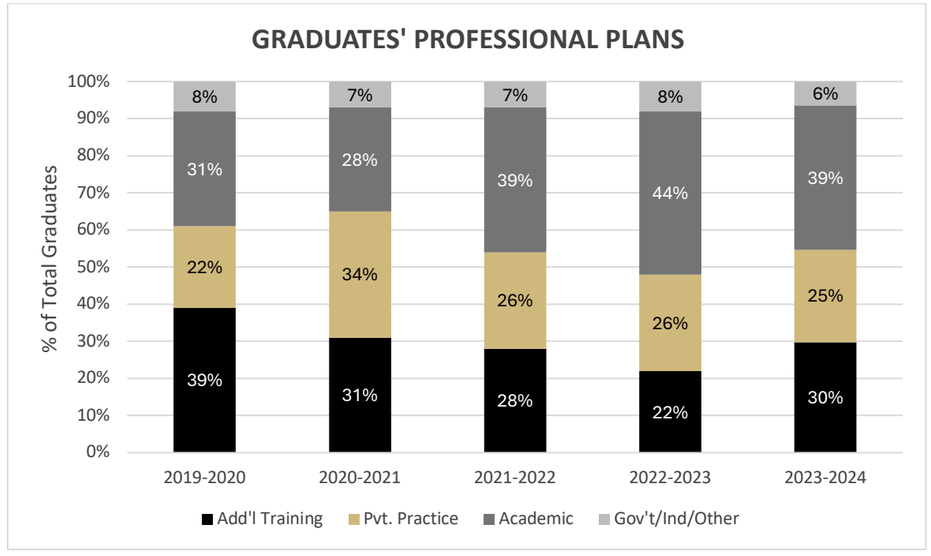
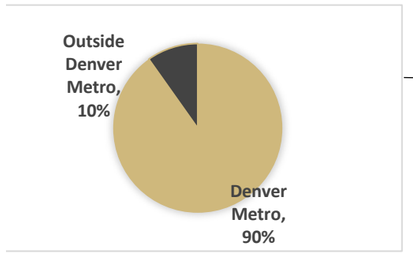


Figure 8



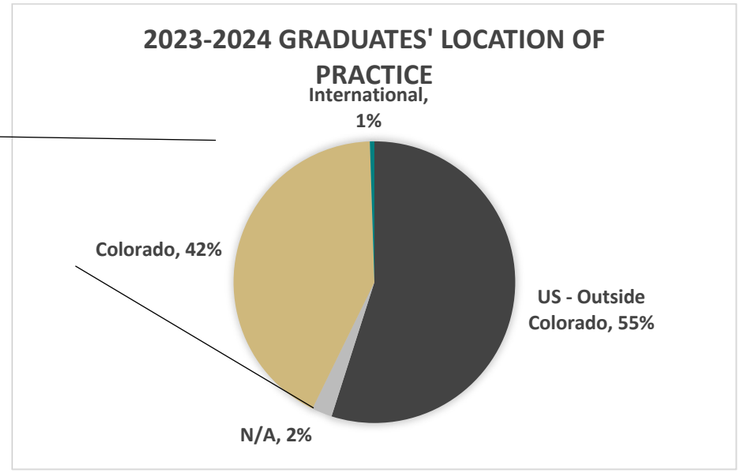


Figure 9

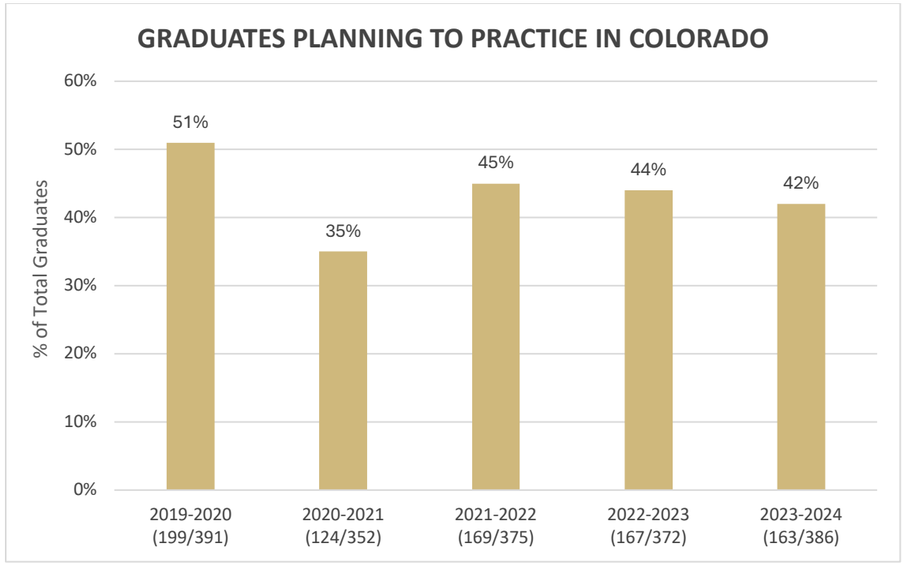
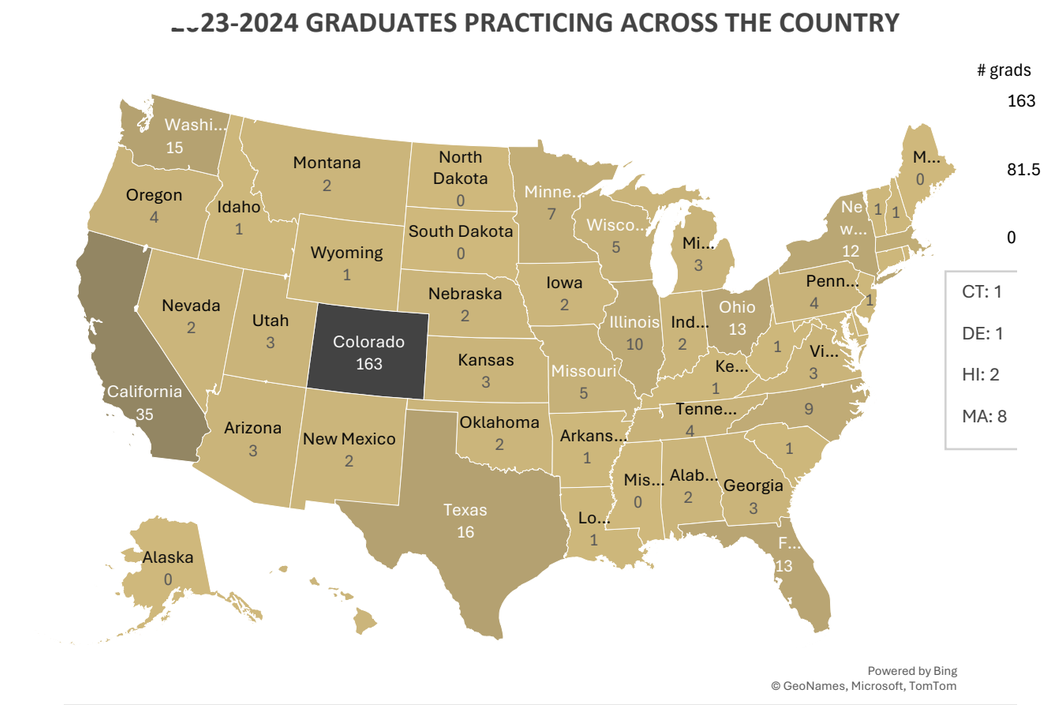


Figure 10



Office of Continuing Medical Education

The mission of the Office of Continuing Medical Education (OCME) is to "enhance learners' knowledge, competence and performance in order to improve clinical outcomes and health equity." The vision of the OCME is to "provide innovative, outstanding continuing medical education to promote lifelong learning for health care professionals that improves patient care and the US healthcare system." Additional information is available at https://medschool.cuanschutz.edu/education/cme.

The OCME is led by Bradford Winslow, MD, Associate Professor of Family Medicine and Associate Dean for Continuing Medical Education. Dr. Winslow assumed this role on an interim basis in August, 2023 after the retirement of Dr. Brenda Bucklin, and was named Associate Dean on February 1, 2024. Lucinda Allen, Assistant Dean of Finance & Administration, is currently helping to manage the office, and the office is also staffed by Carolyn Wieber, John McCormick and Tiana Carter (CME coordinators).

In 2023 OCME certified 100 CME activities (primarily live courses and regularly scheduled series) that provided 21,619 CME credits and helped educate 28,481 physician learners and 21,248 non-physician learners. The American Board of Medical Specialties (ABMS) Portfolio Program (MOC Part IV: Improvement in Practice) is also managed by OCME. Twenty-four specialty boards, under the guidance of the ABMS, have implemented a four-part MOC process to help ensure physicians maintain expertise in their specialties as health care evolves. Each specialty board has developed its own specific requirements, options for meeting them, and timeframes in which they must be met.

OCME plans to expand its services and provide more CME activities to more customers, including developing a broader relationship with UCHealth. A CME Advisory Council will be reinstituted in 2024 to provide guidance and

oversight. Members of the Advisory Council are listed on the next page. The state legislature passed a law this year requiring that all physicians must complete at least 30 hours of CME activities upon Colorado medical license renewal every two years, so the demand for OCME's services will likely increase. OCME is formulating a strategic plan to address these needs.

CME Advisory Council 2024

- **Amiran Baduashvili, MD,** Associate Professor, Medicine-Hospital Medicine, CU Anschutz School of Medicine; Director, Advanced Hospital Medicine Clinical Scholars program; Associate Vice Chair of Education, Department of Medicine
- **Bethany Benish, MD**, Associate Professor, Department of Anesthesiology, Denver Health Medical Center, CU Anschutz School of Medicine; Associate Department Chair of Anesthesiology; Director of Trauma Anesthesia; Residency Associate Program Director
- **Jonathan Bowser, MS, PA-C**, Associate Professor, Pediatrics-CHA/PA Program; Associate Dean of Physician Assistant Studies, CU Anschutz School of Medicine
- **Andrew Bradford, PhD**, Professor, Department of Obstetrics and Gynecology, CU Anschutz School of Medicine; Assistant Dean of Essentials Curriculum; Divisions of Reproductive Sciences
- **Karen Chacko, MD**, Professor, Department of Medicine, CU Anschutz School of Medicine; Associate Dean for Clinical Outreach, Adult Health; Medical Director for Virtual Health
- **Kristie Click, MA,** Business Services Manager, Department of Medicine, Division of Gastroenterology and Hepatology, CU Anschutz School of Medicine
- **Ann Froese-Fretz, MS, RN, CNS, CPNP-PC**, Program Director, Continuing Nursing Education, Office of Continuing Nursing Education, CU Anschutz Medical Campus College of Nursing
- **Aimee Gardner, PhD**, Visiting Professor, Surgery-GI, Trauma, and Endocrine Surgery, CU Anschutz School of Medicine; Associate Dean of Faculty Development; Director, Academy of Medical Educators
- **Trent Hickes**, Director, Physician Relations, Metro Denver Region, UCHealth
- **David Wm Price MD, FAAFP, FACEHP, FSACME, DABFM,** Professor, Family Medicine, University of Colorado Anschutz School of Medicine; Senior Advisor to the President and CEO, American Board of Family Medicine; Health Professions Education and Quality Improvement Advisor and Coach
- **Jennifer M. Trujillo, PharmD, BCPS, FCCP, CDCES, BC-ADM**, Professor, Department of Clinical Pharmacy, Skaggs School of Pharmacy and Pharmaceutical Sciences, CU Anschutz, Associate Dean for Education
- **Shanta Zimmer, MD,** Professor, Department of Medicine-Infectious Disease, CU Anschutz School of Medicine; Senior Associate Dean of Medical Education

Office of CME:

- **Bradford Winslow, MD, FAAFP**, Associate Professor, Family Medicine, CU Anschutz School of Medicine; Associate Dean for Continuing Medical Education; CME Advisory Council Chair

Office of Research Education

The School of Medicine's Office of Research Education is the administrative home of 13 Biomedical PhD programs (1 umbrella-admitting and 12 PhD-granting programs) and partners with the dual-degree MD/PhD program, also known as Medical Scientist Training Program (MSTP). The Office of Research Education also works closely with the undergraduate MD program.

Students in the Office of Research Education PhD programs receive the education and support to conduct innovative biomedical research. The PhD programs provide training in a wide variety of essential skills, including oral and written communication, leadership, and personal and professional integrity. The diverse, inclusive, and

safe environment, fostered by the School of Medicine and Anschutz Medical Campus, supports the holistic training provided by our programs that prepares students for a wide range of career opportunities.

https://medschool.cuanschutz.edu/ore

Office of Research Education PhD Programs

Biomedical Sciences Umbrella

The Biomedical Sciences Program was formed at the University of Colorado Anschutz Medical Campus in 1997. The Biomedical Sciences Program serves as an umbrella program, providing incoming students with the ability to rotate with faculty across numerous disciplines and graduate programs. This provides significant flexibility for students to choose from different research areas in which to pursue their graduate degrees. **Aaron Johnson**, PhD, directs the Biomedical Sciences program and works with an established executive committee of the directors of all Office of Research Education PhD-granting programs to advise on faculty membership, student mentorship, and admissions. Students who matriculate in the Biomedical Sciences Program will perform coursework and laboratory rotations in their first year. For rotations, students can choose to rotate in the labs of any of the more than 200 faculty in the program. Upon successful completion of the first year of graduate school, the students will then join their laboratory of choice, as well as one of 11 different graduate programs at the University of Colorado Anschutz Medical Campus. It is our goal in the Biomedical Sciences program to expose incoming graduate students to a variety of biomedical science-related disciplines, train students to evaluate scientific literature, think critically, develop testable hypotheses, and guide them in identifying a biomedical discipline in which to perform thesis research.

https://www.cuanschutz.edu/graduate-programs/biomedical-sciences-program/home

Cancer Biology

The Cancer Biology Program is an interdepartmental program that was created in 2006. The program is under the direction **of Rebecca Schweppe**, PhD, and combines training in the basic biomedical sciences with opportunities to apply clinical and translational research to studies on human cancer. The Cancer Biology Program is committed to educating PhD students in the fundamentals of modern biomedical research and differs from traditional programs by providing opportunities to learn about clinical and translational aspects of cancer biology. We believe that understanding cancer from multiple perspectives will better prepare students to compete in a biomedical research environment increasingly focused on translational applications of basic research. The goal of the Cancer Biology Program is to attract outstanding students with the highest potential and to stimulate in them the independent and creative scientific thinking necessary to develop future leaders in the multifaceted field of cancer research. The program's highly accomplished training faculty includes over 60 basic and clinical scientists drawn from biomedical and clinical sciences. Areas of emphasis include lung, breast, head and neck, thyroid, prostate, bladder, and blood cancer. Our curriculum is rigorous, yet flexible, and provides opportunities for advanced study in cellular and molecular oncology, as well as the translational medical sciences. The University of Colorado Anschutz Medical Campus is home to an NCI-designated Comprehensive Cancer Center, an acknowledgment of its role as a leader in both clinical cancer treatment and basic cancer research. Our research community brings together scientists with diverse research approaches to focus on the problem of cancer. Graduate students are a vital part of this community and as a program we strive to build a vibrant and supportive learning environment. The program facilitates multiple events to build this community including journal clubs, a seminar series, poster sessions and an annual retreat in the Rocky Mountains.

https://www.cuanschutz.edu/graduate-programs/cancer-biology

Cell Biology, Stem Cells and Development

The graduate program in Cell Biology, Stem Cells and Development was created in 2007 as an interdepartmental and interdisciplinary training program, engaging students and faculty from more than 10 basic science and clinical departments and numerous members of the Gates Center for Regenerative Medicine. The Cell Biology, Stem Development program provides graduate training for doctoral students in hypothesis-driven experimental approaches

and cutting-edge technology to allow students to pursue important questions at the juncture between the fields of cell, developmental, and stem cell biology. Cell Biology, Stem Cells and Development students and faculty have common interests in understanding how cells function and signal in development, and how cellular-level functions contribute to human disease and regenerative therapies. This common curiosity promotes extensive collaboration and interaction among labs and a vibrant intellectual environment. In addition, the Cell Biology, Stem Cells and Development program provides structured training in mentoring, teaching, and science communication to equip students for leadership positions in academia, industry, and other careers. The program currently comprises an interactive group of 38 and 60 training faculty, which is sufficiently small to provide a close-knit, supportive yet rigorous, training environment, while large enough to provide a scientifically varied set of labs and mentors with which to interact. In the past year, Cell Biology, Stem Cells and Development students published 20 scientific publications, were awarded two NIH F31 fellowships, received 2 NSF GRFP fellowships, and mentored eight undergraduate students in the developing scholars research training pipeline program. In July 2021, the Cell Biology, Stem Cells and new T32 training grant from the National Institute of General Medical Sciences to strengthen training opportunities in the genetics of development, disease, and regeneration.

https://www.cuanschutz.edu/graduate-programs/cell-biology-stem-cells-and-development

Computational Bioscience

The Computational Bioscience Program trains students to develop novel computational methods for advancing biology and medicine. The program creates professionals prepared to conduct interdisciplinary research in the fields of translational bioinformatics, clinical research informatics, and computational molecular biology. Our curriculum integrates training with computation and biomedical sciences with student research and teaching activities that grow increasingly independent through the course of the program. The Computational Bioscience program provides graduates with the foundation for a lifetime of continual learning. Our students begin supervised research immediately, collaborating with top scientists, working with the latest high-throughput instruments on critical biomedical problems. Research training spans computational aspects of basic translational and clinical sciences in a variety of disciplines and disease areas. Graduates have the expertise to join faculty programs in bioinformatics, medicine, or computer science, or to assume high-level research positions in government or industry. We seek students who aspire to achieve excellence in research, education, and service, and who will apply the skills they learn toward improving human health and deepening our understanding of the living world.

https://www.cuanschutz.edu/graduate-programs/computational-bioscience/home

Human Medical Genetics and Genomics

The Human Medical Genetics and Genomics Graduate Program provides training to graduate students interested in a field of research that has seen an explosion of data, knowledge, and innovative technologies. DNA sequencing of genomes of humans and other species, discovery of genes and variations that underlie development and disease, rapid application of these discoveries to medical practice is revolutionizing medicine by precise diagnostic tests, treatments, and even disease prevention. It is anticipated that "personalized" or "precision" medicine will thereby dramatically improve human health, longevity, and quality of life. Founded in 1997, the Human Medical Genetics and Genomics PhD program teaches our students modern genetics and genomics theory and methodology, critical and assessment of the literature, formulation and testing of research hypotheses, advanced experimental techniques, bioinformatic and statistical analysis of genomic and other "omics" data and interpretation of results to answer key scientific questions. Our faculty includes over 50 laboratory scientists and clinicians, providing an exceptionally interactive and collaborative environment that enables quick translation of the latest genetic and genomic discoveries

students can thrive intellectually and be scientifically productive under the guidance of a supportive and highly collaborative faculty. As a result, our students have presented their research at national and international scientific conferences, published their research in highly respected scientific journals, and have received awards and grants both institutional and external funding agencies. Our PhD students have also been highly successful in their careers, in academia, industry, teaching, as well as non-traditional settings like forensics and regulatory affairs.

https://www.cuanschutz.edu/graduate-programs/human-medical-genetics-and-genomics

Immunology

Immunological research in Colorado has a rich history punctuated by numerous seminal discoveries related to allergy, immune recognition, immune signaling, immune tolerance, and inflammation. A primary mission of internationally recognized Immunology program is to educate and train the next generation of immunologists for careers heading competitive and productive research programs. Numerous graduates hold leadership roles in academic or industry research settings. The immunological expertise we provide to our graduates also has fostered success in areas of public health, science policy, and education. We offer rigorous didactic courses in immunology, inflammation biology, and related fields. Our faculty evaluate, instruct, and mentor students in the program through these courses and through experiential studies that foster experimental competence, intellectual development, inquisitiveness, and communication skills. Further, a collaborative and supportive educational and research environment supports the ability of our students to achieve scientific excellence and demonstrate their productivity as authors and speakers. The immune system plays a central role in current national and global health issues. By exposing our graduate students to basic and translational science approaches, our graduate training program enriches the experience in a practical and meaningful manner. Our graduates are prepared to make seminal advances in basic understanding of the immune system and its functions and to manipulate the immune system for improving human health in clinical contexts. The graduate program in Immunology is supported by NIH T32 training grants and includes faculty mentors from more than a dozen Departments and divisions at the University of Colorado Anschutz Medical Campus, National Jewish Health, or the Barbara Davis Center for Childhood Diabetes. **Beth Tamburini, PhD** and **Ross Kedl, PhD** are the Program co-Directors.

https://www.cuanschutz.edu/graduate-programs/immunology

Integrated Physiology

The Integrated Physiology Program is a highly unique and diverse graduate program on the Anschutz Medical Campus that consists of exceptional basic and clinician scientist training faculty from at least 19 basic and clinical departments and divisions in the School of Medicine, the Skaggs School of Pharmacy and Pharmaceutical Sciences, and the School of Dental Medicine. The program is structured to leverage the long, outstanding, and rich research expertise on the Anschutz Medical Campus in areas such as reproductive sciences, obesity and nutrition, cardiovascular and pulmonary diseases, metabolism and endocrinology, and perinatal biology. Many of these disciplines are supported by centers on the campus that are directed by integrated physiology training faculty. Thus, the Integrated Physiology Program offers a training opportunity for students who have an interest in all aspects of physiology, from system/organ physiology to cell/molecular physiology and provides an opportunity for students to interact with NIH R01-funded basic science and clinician faculty. The study of physiology is at the core of modern biomedical research, which relies on integrating fundamental concepts of whole animal and organ physiology with sophisticated molecular and cellular approaches to investigate important questions related to human health and disease. Our program objective is to train graduate students to understand mechanisms underlying the function of various systems in the body that contribute to both normal and pathological physiology, to become proficient and successful investigators who learn how to target basic research to clinically relevant problems, and to develop translational research projects. Our students have presented their research at national and international scientific conferences, published in highly respected scientific journals, and have received awards and grants from institutional and external funding agencies. Integrated Physiology students are overrepresented in the competitive NIH CCTSI TL1 program, with many leading to successful NIH pre-doctoral awards. Our PhD students have also been highly successful in their careers, with >95% of our graduates remaining in academia or industry. The Integrated Physiology Program director is **Mary Weiser-Evans, PhD**.

https://www.cuanschutz.edu/graduate-programs/integrated-physiology

Medical Scientist Training

The Medical Scientist Training Program (MSTP) is a multidisciplinary, inter-institutional MD/PhD dual-degree training program educating students in clinical medicine and biomedical research. Its mission is to provide students with the breadth and depth of training necessary to excel as a physician-scientist. Post-baccalaureate students are recruited from a national pool of ~500 applicants, and those selected have proven exceptional talents in research science, a curiosity to solve mechanisms of disease, a drive for discovery, a well-thought-out motivation to pursue a career in medicine, and exceptional leadership. The program was formed in 1983, and in 1992 it received MSTP status by successfully competing for NIH T32 funding, which currently provides about $1 million per year to support 20 trainees. The program has strong leaders and mentors, with Director **Cara Wilson, MD**, who is a physician-scientist with a consistent record of NIH research funding as well as extensive experience in mentoring and career development of trainees. **Joe Hurt, MD, PhD**, is clinical associate director. **Kika Sucharov, PhD**, is the thesis associate director. The program has been competitively reviewed and funded by NIH for each of the past six cycles. The program has been a campus and national leader in recruiting students from diverse backgrounds and has received diversity awards from CU and commendations from the National Institute of General Medical Sciences. There are about 230 faculty mentors for students to choose from in 17 PhD Programs at the University of Colorado Anschutz Medical Campus, National Jewish Health, and the University of Colorado Boulder. There are currently 89 students in the program spanning all years of training. Program graduates typically graduate with both degrees in an average time of 8.4 years. Graduates of the MSTP obtain residencies at the nation's elite programs, with ~75% of those completing all training now in academic medicine, government (NIH or CDC), or industry, including starting up their own biotech companies. Importantly, we have an increasing number of MSTP graduates who are now faculty at the University of Colorado Anschutz Medical Campus. The Colorado MSTP and its leaders have been key in establishing the National Association of MD/PhD Directors and Administrators, the MD/PhD Section of the AAMC GREAT Group, and the Annual National MD/PhD Student Conference.

Microbiology

The Graduate Program in Microbiology at the University of Colorado Anschutz Medical Campus is a PhD granting education and training program designed to prepare students for outstanding careers in science. Through rigorous didactic courses and mentored experimental studies, the program trains students in diverse areas of microbiology including molecular pathogenesis of viral, bacterial, and parasitic diseases and the role of the microbiome in human health and disease. Our program strives to provide students with the scientific expertise to become leaders in competitive independent research programs, science education, science policy, and industry. Although based within the Department of Immunology and Microbiology, the program faculty includes members of the Departments of Medicine, Neurology, Pediatrics, and Biochemistry and Molecular Genetics. **Breck Duerkop, PhD** serves as the Program Director and is supported by committees comprised of faculty and student representatives to facilitate advising, admissions and recruitment, evaluations and promotion, and student enrichment and governance. The research interests of the faculty that participate in the Graduate Program in Microbiology are diverse and include molecular mechanisms of infectious disease pathogenesis, effects of the microbiome on human health and disease, innate and adaptive immune responses to infection, pathogen immune invasion strategies, products and metabolites associated with infectious disease outcomes, regulation of gene expression of both host and pathogen, and development of novel vaccines and therapeutics to prevent or mitigate infectious diseases. With recent appreciation for emerging infections, human risk factors for infectious diseases, and the complexity of the microbiome, the topics of microbiology and pathogenesis of infectious disease are important fields in biomedical research. Finally, our program has a competitive National Institutes of Allergy and Infectious Diseases Molecular Pathogenesis of Infectious Disease (MPID) T32 training grant, currently in its 20th year of funding. The MPID annually supports four outstanding graduate students working on projects relevant to the molecular pathogenesis of infectious diseases.

https://www.cuanschutz.edu/graduate-programs/microbiology/home

Molecular Biology

The Molecular Biology Program at the University of Colorado Anschutz Medical Campus provides rigorous training in a supportive environment. The molecular biology faculty are members of 11 departments who are applying the techniques of molecular biology to answer questions in diverse areas at the forefront of modern biology and medicine. The program offers an opportunity to study in a student-centered environment. Molecular biology, the science of how living organisms function at the molecular and cellular level, has spearheaded the recent revolution in understanding human disease and led to the birth of the biotechnology industry. The goal of the Molecular Biology Program is to equip students for careers at the cutting-edge of biological research. The faculty is committed to providing students with the training they need to carry out the highest quality research using state-of-the-art techniques. The teaching philosophy here is to instill the theoretical knowledge and practical experience that enables our students to identify important questions in science, to design experiments that address those questions and to critically evaluate results. Special emphasis is placed on learning to communicate research results to others effectively by participating as featured speakers in the program's seminar series. Training students to become scientists prepares them for careers in many areas. Previous graduates are working in academic, government, and industrial biotechnology research, teaching, and public policy positions. Molecular Biology Program faculty include members of the Departments of Biochemistry and Molecular Genetics, Cell and Developmental Biology, Medicine, Immunology and Microbiology, Pathology, Pharmacology, Pharmacy, Pediatrics, Craniofacial Biology, Rheumatology, and Obstetrics and Gynecology, and include internationally recognized experts in bioinformatics, cancer, cell biology, development, gene expression, genomics, microbiology, molecular structure, and virology. Their diverse interests provide students with an enormous choice of areas in which to pursue their thesis research. The Molecular Biology Program has been recognized as a Center of Excellence at the CU Anschutz Medical Campus, and was honored to receive a $2 million private endowment, the Victor and Earleen Bolie Scholarship Fund, to support student education, research, and training. Along with this funding opportunity, the program continues to be funded by a highly competitive NIH pre-doctoral T32 training grant, currently in year 1 after previous completion of a 20-year NIH pre-doctoral T32. Our students have recently been awarded Howard Hughes Medical Institute pre-doctoral fellowships, along with National Science Foundation Graduate Research Fellowships. The program and the university, continue efforts to increase the number of students from backgrounds underrepresented in science, with the goal of training them to become important contributors to the biomedical research field and their communities.

https://www.cuanschutz.edu/graduate-programs/molecular-biology/home

Neuroscience

The Neuroscience Program was formed in the late 1980s as an interdepartmental PhD graduate training program drawing faculty members from many departments in the School of Medicine and the Anschutz Medical Campus. The current program directors are **Gidon Felsen, PhD**, and **Nidia Quillinan, PhD**. The goal of the Neuroscience Program is to provide students a foundation of understanding in neuroscience, and to train critical thinkers who identify important problems, generate experimentally testable hypotheses, and draw significant conclusions from the results of their ongoing research. Students receive multidisciplinary training covering the breadth of neurobiology, including cellular and molecular neurobiology, neural development, systems neuroscience, and neuropharmacology, as well as hands-on training in state-of-the-art laboratory techniques. An additional focus is on training in modern quantitative methods to analyze datasets. This aspect begins with a computer programming bootcamp and continues with programming exercises that are integrated throughout the coursework. The training in neuroscience is also augmented by a variety of program-supported enrichment activities, including a robust weekly seminar series, a two-day annual retreat in the mountains, a student-run journal club, and monthly lunches that regularly feature guest speakers representing a variety of neuroscience-related careers. The Neuroscience Program includes more than 70 training faculty from 17 different basic science and clinical departments, providing students a breadth of choices for potential thesis labs. Moreover, the

establishment of the Neurotechnology center in 2019 has infused new School of Medicine resources ($9.9 million over 5 years) into the neuroscience community. This has helped expand both the research cores on campus as well as the number of new faculty hires in neuroscience. In 2023, the Neuroscience Program renewed its long-standing T32 that funds first- and second-year student slots, helping the program to maintain a large student class size. The program strives to grow and sustain a diverse and inclusive student community through active recruitment of students from underrepresented and marginalized backgrounds in science, and to provide training in bias awareness and diversity best practices.

https://www.cuanschutz.edu/graduate-programs/neuroscience/home

Pharmacology and Molecular Medicine

The Pharmacology and Molecular Medicine PhD Training Program offers students the opportunity to study mechanisms of basic biology and disease, while using pharmacological interventions as a means to disentangle these mechanisms and/or to develop novel treatments. The Pharmacology and Molecular Medicine Training Program is interdepartmental, with faculty from a range of departments/divisions across the School of Medicine and School of Pharmacy. Training faculty are renowned in neuroscience, cancer biology, cardiovascular biology, signal transduction, structural biology, and systems biology. Research laboratories are highly collaborative and interdisciplinary, frequently using multiple parallel approaches, including molecular biology, structural biology, genomics, and informatics paired with cutting-edge methodologies employing high powered imaging techniques, such as optogenetics. A defining feature of the program is the focus on personalized medicine and translating fundamental benchtop discoveries to clinical practice. Students enter the training program directly or via the Biomedical Sciences program or the Medical Scientist Training Program (MSTP). The Pharmacology Training Program has a long and well-established history of training biomedical science PhD students.

https://www.cuanschutz.edu/graduate-programs/pharmacology

Rehabilitation Science

Rehabilitation Science is the translational field of study that integrates knowledge from the basic and clinical sciences to improve our understanding of human movement, physical function, and disability across the lifespan. Students receive individual mentorship from nationally recognized rehabilitation scientists in state-of-the-art research facilities, with a customized curriculum to meet the interests of each student. Breadth of knowledge is acquired through foundational coursework in research design, biostatistics, and rehabilitation science, whereas depth of knowledge is gained through elective coursework in one of five areas of specialization: clinical trials research, health services research, biomechanics, mechanistic research, and implementation science. This approach prepares students to become independent research scientists who integrate knowledge from multiple perspectives ranging from the molecular to the systems level to solve complex problems of physical disablement that will advance clinical practice in the field of physical rehabilitation.

https://www.cuanschutz.edu/graduate-programs/rehabilitation-science

Structural Biology, Biochemistry and Biophysics

The Structural Biology, Biochemistry and Biophysics Program is an interdisciplinary program focused on the study of mechanisms underlying biomolecular interactions and function, drug action, and diagnostics. It aims to provide students with foundational training in: structural biology, biochemistry, and biophysics; critical thinking skills; the ability to carry out independent rigorous research following the scientific method; and the ability to communicate their science effectively. Our training faculty are scientifically diverse, studying mechanism broadly using several approaches, including structural, biophysical, biochemical, and omics. To support our students' research needs, the program uses well-developed core facilities, including nuclear magnetic resonance spectroscopy, X-ray crystallography, mass spectrometry/proteomics, mass spectrometry/metabolomics, biophysics, and cryo-electron microscopy. Our program prepares students to be independent researchers in the study and application of structural biology, biophysics, or biochemistry in the academic, industrial, biotech, or consulting spaces.

https://www.cuanschutz.edu/graduate-programs/structural-biology-and-biochemistry

Physical Therapy Education Programs and Pathways

The University of Colorado School of Medicine Physical Therapy Program in the Department of Physical Medicine and Rehabilitation is home to multiple educational programs. Our academic programs in the field of rehabilitation span entry-level professional education, post-professional training, and advanced doctoral education. These educational offerings include the Doctor of Physical Therapy degree, Pediatric Physical Therapy Residency, Orthopedic Physical Therapy Residency, Faculty Residency, the Doctor of Physical Therapy-Master of Public Health degree track, and the PhD degree in Rehabilitation Science.

In collaboration with the University of Colorado Colorado Springs (UCCS) Campus, the CU Physical Therapy Program offers a hybrid pathway. The UCCS hybrid pathway shares the same curriculum and has the same graduation requirements as the residential pathway on the Anschutz Medical Campus. Utilizing resources and talent from both the CU Anschutz Medical Campus and the UCCS Campus, we combine our world-class physical therapy education with innovative teaching practices and practical experiences.

Students in the hybrid pathway can live in their local community throughout their DPT education and travel to the UCCS Campus for approximately 2 weeks of intensive lab immersion each semester. The rest of the course content occurs online in synchronous ("live") or asynchronous format. The hybrid pathway blends the convenience of online learning with the excellence of in-person lab immersion experiences. Students with specific interest in rural healthcare and preparation for pursuing a PT career in a rural community are considered ideal candidates for the hybrid pathway in Colorado Springs. Clinical experiences are offered in the Colorado Springs area, rural Colorado, and across the nation. It may also be possible for students to complete clinical experiences in their local community. Tuition rates are equal for both the hybrid and residential pathways.

Senior Leadership

Venu Akuthota, MD
Chair, Department of Physical Medicine & Rehabilitation

Michael Harris-Love, PT, MPT, DSc, FGSA, FAPTA
Executive Vice Chair of Physical Therapy, Department of Physical Medicine & Rehabilitation Associate Dean for Physical Therapy Education, School of Medicine

Kevin Laudner, PhD, ATC
Dean, Helen and Arthur E. Johnson Beth-El College of Nursing and Health Sciences, University of Colorado Colorado Springs

Jackie Berning, PhD, RD, CSSD
Chair, Department of Health Science, University of Colorado Colorado Springs

Jennifer Stevens-Lapsley, PT, PhD, FAPTA
Interim Vice Chair of Research, Department of Physical Medicine & Rehabilitation

Program Leadership

Michael Harris-Love, PT, MPT, DSc, FGSA, FAPTA
Joanne Posner-Mayer Endowed Chair in Physical Therapy Director, Physical Therapy Program – Residential Pathway

Daniel Malone PT, PhD, CCS
Director, Physical Therapy Program – Hybrid Pathway

Jennifer Stevens-Lapsley, PT, PhD, FAPTA
Director, PhD Program in Rehabilitation Science

Cory Christiansen, PT, PhD, FAPTA
Section Director, Research & Development

Dana Judd, PT, DPT, PhD
Section Director, Student Affairs

Amy McDevitt, PT, DPT, PhD, OCS, FAAOMPT
Section Director, Curriculum

Joe Palmer, PT, DPT, PhD
Section Director, Clinical Education

Website: http://www.cuphysicaltherapy.org

Physical Therapy Program

The Physical Therapy Program prepares each student to become a Doctor of Physical Therapy (DPT). Physical therapists are recognized as experts in movement and function who treat patients of all ages in many different settings. Graduates of the CU Physical Therapy Program are prepared to collaborate with other healthcare providers to meet the musculoskeletal, cardiovascular, and neuromuscular needs of patients through direct access to care.

The CU Physical Therapy Program is ranked 11th out of 245 doctor of physical therapy accredited physical therapy programs in the United States by the *U.S. News and World Report* (2024). It is one of the first 25 educational programs still in existence in the United States and is currently celebrating its 75th year. This program has been continuously accredited since its inception in 1947, receiving an unconditional ten-year accreditation in 2020.

Mission:
To lead discovery and innovation to improve movement, participation, health and wellness for individuals and society through excellence in education, research, clinical care, and service.

Vision:
To transform health and foster wellness in individuals and society through education, discoveries, engagement and innovation.

Values:
Respect: For all individuals' safety, rights, dignity, and perspectives
Integrity: Because professional behavior reflects who we are
Altruism: In service to the individual, community, and organization
Diversity: For inclusivity in all endeavors
Accountability: To all those seeking care and providing care within our profession and health care systems Passion: Because we are committed to lifelong learning, service, and community engagement Collaboration: To leverage collective input from all individuals
Leadership: Within the university, profession and community at large
Quality: To attain excellence in all we do

Applicants to the CU Physical Therapy Program

Applicants to the CU Physical Therapy Program come from a wide range of academic backgrounds. There are minimum prerequisites, like those for the MD Program, that emphasize basic sciences, writing ability, and psychology. In addition, many of the applicants have substantial experience in healthcare-related professions. Some have advanced degrees, and all have taken the opportunity to learn about the profession of physical therapy for application to the CU Physical Therapy Program.

Application Data 2023-2024

- Completed/Verified Applications: 1,271
- Interviewed: 270
- Enrolled: 71 (Residential Pathway); 34 (Hybrid Pathway)
- Cumulative GPA: 3.63 (combined); 3.65 (R)/3.61 (H)
- Last 60-Credits GPA: 3.78 (combined); 3.8 (R)/3.74 (H)

Students of the CU Physical Therapy Program

Approximately 105-115 students enter the CU Physical Therapy Program each year divided among two pathways: residential and hybrid. More than half of the students are from Colorado, while other students are accepted to the program from across the United States. Students enter this program with high qualifications and graduates of the program pass a national licensure examination with scores that are competitive with or above the average for the United States.

The entering class of physical therapy students in the summer of 2024 has many unique life experiences that enhance and enrich the body of students who are exceptionally qualified academically. Among this cohort, many students have had extraordinary research accomplishments including multiple national publications and presentations. Valuable volunteer experiences include advocating for social justice within the pediatric medical field, donating funds to foundations serving those with muscular dystrophy, hosting an educational support group for women with endometriosis in rural Colorado, mentoring young women to encourage them in science and technology fields, and other fundraising efforts for various charities and organizations. This cohort also has many former college athletes with noteworthy achievements in soccer, track and field, cross country, volleyball, gymnastics, and dance. At least two members of this class have served in the United States military. Some students have transitioned from other professions such as EMT, pulmonary rehabilitation, yoga and other fitness professionals, teaching, and business. There are also professional dancers and those who have guided others in health and fitness, such as Pilates. All these unique attributes of the incoming class will contribute to the richness of this class who will learn and grow with each other.

The program is deeply committed to increasing diversity within the program and ultimately, the physical therapy profession. The admitted Class of 2026 is comprised of 24% from a rural area, 23% first generation and 29% who identify as racial or ethnic minorities. Twenty-three students have Hispanic backgrounds, three students identify as Black/African American, one American Indian, one Native Hawaiian/Pacific Islander and two students identify as two or more races/ethnicities. Other specific demographic data is included below.

Demographics of Admitted Students

Class:	2022	2023	2024	2025	2026
Female*	65%	80%	74%	68%	(C) 62% (R) 63% (H) 59%
Male*	35%	20%	26%	31%	(C) 35% (R) 32% (H) 41%
Non-Binary/Other*	**	1%	0%	1%	(C) 3% (R) 4% (H) 0%
CO Resident	45%	44%	46%	46%	(C) 60% (R) 51% (H) 79%
Non-Resident	55%	56%	54%	54%	(C) 40% (R) 49% (H) 21%
Minority	26%	23%	29%	20%	(C) 29% (R) 21% (H) 44%
Average Age	24	24	24	24	(C) 26 (R) 26 (H) 27
Cumulative GPA	3.66	3.6	3.67	3.66	(C) 3.63 (R) 3.65 (H) 3.61
Science GPA	3.61	3.43	3.54	3.55	(C) 3.49 (R) 3.53 (H) 3.42

(C) = Combined Pathway Data
(R) = Residential Pathway Data, CU Anschutz Medical Campus
(H) = Hybrid Pathway Data, Colorado Springs Campus

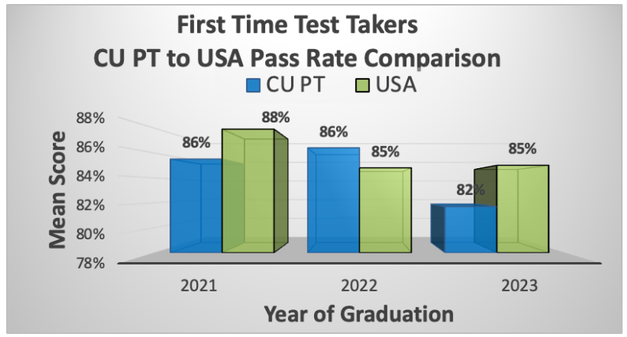
*Based on gender identity
**Not tracked in PTCAS prior to Class of 2023

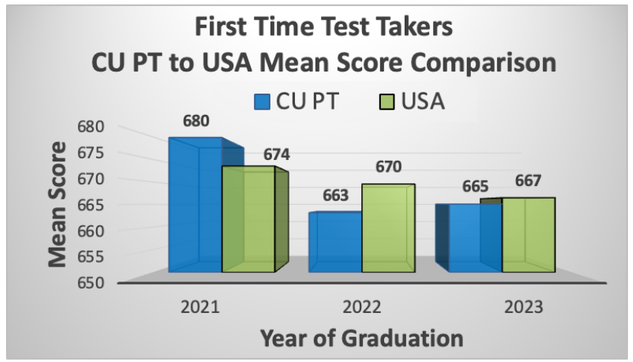
Graduates of the CU Physical Therapy Program

Graduates from the CU Physical Therapy Program perform exceptionally well on the national licensure examination, administered by the Federation of State Boards of Physical Therapy (FSBPT). Nearly 90% of our most recent graduates have passed the exam on their first attempt, with 88% of our last four years of graduates having passed the exam on their first attempt. Graduates are employed in a variety of settings that range from outpatient to inpatient facilities and include patient populations that span pediatrics to geriatrics.

FEDERATION OF STATE BOARDS OF PHYSICAL THERAPY

Summary of scaled results based on FSBPT criterion-referenced passing score of 600.





Faculty

Faculty of CU Physical Therapy are innovative as leaders in physical therapy education and practice. Faculty are highly committed to the education of the CU PT students. They are experienced educators, many of whom contribute to clinical care. Many faculty members are recognized nationally and internationally for their scholarship. All are members of the American Physical Therapy Program Association (APTA) where they serve in leadership roles (e.g., on the Board of Directors of APTA; President of the Cardiovascular and Pulmonary Section of APTA). They also serve other professional organizations (e.g., members of NIH grant review sections and committees), as well as service to the community (e.g., President of Colorado State PT Board, DORA; DAWN Clinic; Stout Street Clinic for individuals who are homeless). Since 2008, the faculty developed a robust and substantial research agenda with a current research portfolio of just under $25 million.

Curriculum

The curriculum is two and a half years in length comprised of seven semesters of didactic coursework and 38 weeks of clinical education. Some students continue in their final clinical experience after graduation in a paid internship. The curriculum prepares students to improve movement, participation, health and wellness in individuals and populations. As such, curricular content is divided into foundational and clinical sciences, patient management and clinical skills, professional development, and clinical education. There is intentional integration between all these components through threaded curricular elements (see figure below). Students learn patient management for individuals across the lifespan with musculoskeletal, cardiovascular, and neurologic disorders, disorders, as well as physical therapy for patients with a variety of other medical conditions.

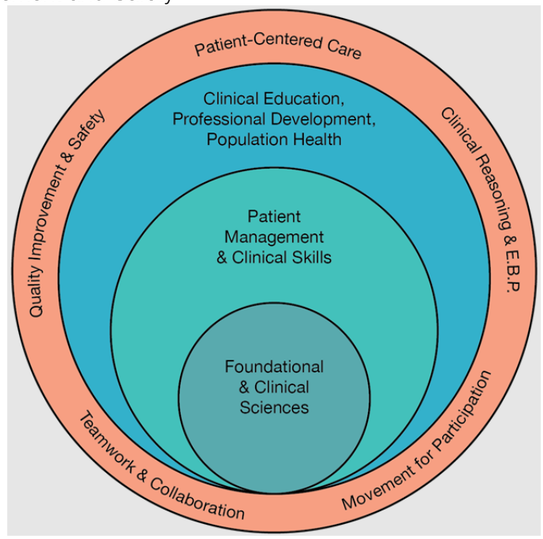
Clinical education experiences occur early and frequently, which allows situational learning and application at several points throughout the two and a half years. The curriculum includes a series of courses focused on developing professional identity, with emphasis on core professional values, effective communication and interpersonal skills, psychosocial aspects of care, clinical reasoning and evidence-based practice. Students reflect on what it means to be a Doctor of Physical Therapy, leadership and career management, health care delivery systems, and social determinants of health in the context of individual and population health.

Faculty of the CU Physical Therapy Program review and revise the curriculum annually to ensure that content, emphasis and pedagogy remain current and consistent with changes in the profession and healthcare.

Curricular Elements

The curriculum is carefully designed to integrate five content areas that are threaded throughout the curriculum:

- Patient-Centered Care
- Clinical Reasoning and Evidence Based Practice
- Movement for Participation
- Teamwork and Collaboration
- Quality Improvement and Safety



CU PT Program Curriculum Elements

Center for Advancing Professional Excellence

The Center for Advancing Professional Excellence (CAPE) on the Anschutz Medical Campus and the Center for Simulation Learning on the UCCS Campus provide innovative high-fidelity simulation environments for students to practice physical therapy examination, intervention, and communication skills. Two comprehensive examinations/ assessments take place during the first and second years of the program. The Doctor of Physical Therapy Program is one of the few and fortunate physical therapy programs in the United States where students can work with standardized patients and high-fidelity mannequins in conjunction with a full-service Simulation Center of Excellence.

Interprofessional Education

The CU Physical Therapy Program participates in a longitudinal Interprofessional Education (IPE) curriculum, which is designed to prepare students for interprofessional collaborative practice. The curriculum focuses on developing competencies in teamwork/collaboration, values/ethics, and quality/safety. Each student is assigned to an interprofessional student team, which includes students from some or all the following schools/programs: School of Medicine (Physical Therapy, Medicine, Child Health Associate/Physician Assistant), School of Pharmacy, College of Nursing, and School of Dental Medicine. Over the first two years of the curriculum, the interprofessional student team meets to understand and apply fundamental content in teamwork/collaboration, quality/safety, and values/ethics. In years two and three, students spend an afternoon in the Center for Advancing Professional Excellence (CAPE) to participate in collaborative patient care.

Clinical Reasoning Capstone Project

The didactic curriculum culminates in a capstone project. The capstone project includes the writing and presentation of a patient case report that synthesizes the didactic content of the curriculum with the student's clinical experiences, while highlighting the application of evidence-based practice and clinical reasoning.

Research Initiatives

Entry-level DPT students are encouraged to participate in research under the guidance of nationally recognized faculty mentors and present their findings through national scientific conferences and peer reviewed publications. Several research facilities are available that enhance the ability of faculty to conduct rehabilitation research and to mentor students who seek to develop research skills while completing their physical therapy education. One facility, the Interdisciplinary Movement Science Laboratory (IMSL), contains state-of-the-art equipment for motion analysis of gait and other functionally relevant tasks. A sister facility in the Geriatric Research, Education, and Clinical Center (GRECC) contains an instrumented treadmill with a motion analysis system that allows intervention and outcome research for populations with walking dysfunction. These motion analysis facilities are also equipped for studies involving electromyography (EMG) and transcranial magnetic stimulation (TMS). In addition, faculty lead the Muscle Morphology, Mechanics, and Performance Laboratory (3MAP Lab) which includes equipment used to assess sarcopenia and myosteatosis, and the Spinal Cord Injury Imaging Research Laboratory which focuses on the prognosis and treatment of individuals with spinal cord injury. The Rehabilitation Science Consortium (RSC) houses graduate students, post-doctoral fellows, research assistants, and physical therapy students who assist with research projects.

Scholarships

The CU Physical Therapy Program is committed to providing sustainable scholarship support to help offset the cost of education to students. Scholarships are available to both prospective and current students and are awarded based on merit, diversity, and commitment to practice in specific areas such as rural communities. The CU Physical Therapy Scholarship and Endowment Board was formed in 2012 and has successfully increased the PT Program's committed funds from less than $300,000 in 2011 to over $5 million. Together, the Board, CU Physical Therapy Program leadership, and the Alumni Association have increased the endowment and current use funds to distribute over $280,000 in scholarships annually, with over $300,000 having been awarded in 2023-24.

Faculty Residency Program

The University of Colorado Anschutz Medical Campus Faculty Residency is a structured, post-professional education program for licensed physical therapists who have graduated from an accredited DPT program and who aspire to an academic faculty position. The program is designed to greatly advance physical therapist preparation by training highly qualified educators and productive scholars. Future leaders in physical therapist education are developed through multiple teaching experiences, structured mentorship opportunities, and mentored educational scholarship throughout the program.

The mission of the University of Colorado PT Program Faculty Residency Program is to develop competent faculty who are prepared to engage in innovative education by providing a curriculum and mentored experience that supports excellence in the preparation of future healthcare providers and participation in academia. This residency received initial accreditation status from the American Board of Physical Therapy Residency and Fellowship Education (ABPTRFE) in June 2023. In December 2023, the residency program has graduated its first resident who accepted a faculty position at the University of Vermont's Physical Therapy Program. The program matriculated its 2nd and 3rd residents in 2023 and 2024, respectively.

Orthopedic Physical Therapy Residency Program

The University of Colorado School of Medicine Physical Therapy Orthopedic Residency in partnership with UCHealth is a structured, post-professional education program for licensed physical therapists who have graduated from an accredited DPT program and are seeking specialized training in orthopedic physical therapy. The orthopedic residency will offer experiences in various outpatient and classroom settings through the resources of the University of Colorado Physical Therapy Program on the Anschutz Medical Campus and mentorship in clinical patient management in Denver area UCHealth outpatient physical therapy clinics. The mission of the orthopedic physical therapy residency program is to elevate the profession and standard of patient care by developing specialized orthopedic physical therapists who demonstrate integrity, excellence and leadership through innovative evidence-based patient management, as well as professional and community education.

The residency program is designed to significantly advance preparation of the orthopedic physical therapist as a highly qualified provider of patient care services in multiple, complex clinical practice settings. Future leaders in orthopedic physical therapy are developed through coursework and clinical experiences during the 13-month residency program. The residency program was accredited by the American Board of Physical Therapy Residency and Fellowship Education (ABPTRFE) in September 2022. Graduate residents are eligible to take the clinical specialist board examination to be recognized as Orthopedic Board-Certified Clinical Specialists by the American Board of Physical Therapy Specialists (ABPTS). To date, the residency program has a 100% graduation rate and 100% first time pass rate for the orthopedic specialist board exam. Resident graduates have gone on to assume leadership and/or educational roles in their respective clinics and in some cases as affiliate faculty in entry level PT programs.

Pediatric Physical Therapy Residency Program

The University of Colorado Physical Therapy Pediatric Residency Program is an accredited post-professional clinical and didactic education program for licensed physical therapists who have graduated from an accredited DPT program and seek to specialize in pediatric physical therapy. The mission of this residency program is to provide a comprehensive program of didactic, clinical, and professional experiences to develop pediatric physical therapy specialists. Through clinical care experiences, educational excellence, exposure to research and active engagement in scholarship, teaching opportunities, professional and community service, and participation in collaborative teamwork, residents will become future leaders in the profession.

The residency program is designed to significantly advance preparation of the pediatric physical therapist as a highly qualified provider of patient care services in multiple, complex clinical practice settings. Future leaders in pediatric physical therapy are developed through coursework and clinical experiences during the 13-month residency program. In addition to clinical opportunities in multiple settings with structured mentorship, the program also includes participation in the Leadership and Education in Neurodevelopmental Disabilities (LEND) program through JFK Partners (www.jfkpartners.org) and access to the resources of the University of Colorado Physical Therapy Program. The American Board of Physical Therapy Residency and Fellowship Education (ABPTRFE) accredits all residency and fellowship programs, and the University of Colorado Pediatric Residency Program is fully accredited through September 2028.

Graduate residents are eligible to take the clinical specialist board examination to be recognized as Pediatric Board-Certified Clinical Specialists by the American Board of Physical Therapy Specialists (ABPTS) in the year following completion of the residency, and thus far, our pass rate is 100%. Clinical sites during the residency include the ENRICH Early Intervention team through JFK Partners, Main Campus and Highlands Ranch Therapy Care Clinic of Children's Hospital Colorado, Rise School of Denver, Cherry Creek School District, Therapies for Hope, Adam's Camp, and acute inpatient care in Children's Hospital Colorado.

PhD Program in Rehabilitation Science

Rehabilitation Science is an interdisciplinary and translational field of study that integrates knowledge from the basic and clinical sciences to improve our understanding of human movement, physical function, and disability across the

lifespan. Students receive individual mentorship from nationally recognized rehabilitation scientists in state-of-the-art research facilities, with a customized curriculum to meet the unique interests of each student. Breadth of knowledge is acquired through foundational coursework in research design, biostatistics, and rehabilitation science, whereas depth of knowledge is gained through elective coursework in one of five areas of focus: clinical trials research, health services research, translational research, mechanistic research, and implementation science. This approach prepares students to become independent research scientists who integrate knowledge from multiple perspectives ranging from the molecular to the systems level to solve complex problems of physical disablement that will advance clinical practice in the field of physical rehabilitation.

Students of the PhD Program in Rehabilitation Science are highly successful, as evidenced by many measures. Such measures include grants and fellowships awarded to students during their pre-doctoral studies and contributions as co-investigators to investigations that are funded by foundations and NIH. Students regularly publish peer-reviewed manuscripts, either as first or contributing authors. Since the Rehabilitation Science PhD Program began in 2011, eight students are currently enrolled, nine students have graduated, and 100% of graduates are either completing post-doctoral fellowship training or they have secured faculty positions.

DPT-MPH Dual Degree Track

The University of Colorado Doctor of Physical Therapy (DPT) and Master of Public Health (MPH) Dual Degree Track is a structured, professional education program for learners with a shared interest in physical therapist practice and public health. The mission of the dual degree track is to prepare students as transformative leaders, capable of working alongside diverse partners to promote movement, build healthy communities, and advance health equity. Graduates of the program will promote movement across the lifespan, engage patients and community members as partners to understand and address barriers to health, and work collaboratively to design, implement, and evaluate prevention and health promotion programs. The DPT-MPH Dual Degree Track received final approval from the faculty senate and deans of both the University of Colorado School of Medicine and the Colorado School of Public Health. Our first cohort of 3 DPT students will matriculate into the MPH program in 2025.

2023 Program Honors

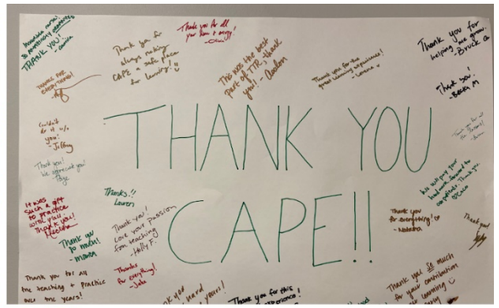
- **Michael Bade**, **PT, DPT, PhD, OCS, FAAOMPT** received a three-year R21 award totaling $400K for his project titled: “Swelling Management after Total Knee Arthroplasty.” He also received the CU PM&R Professionalism Award.
- **Catherine Bilyeu, PT, DPT, OCS**, was named the CU PT Program Associate Director of Clinical Education. She was also an invited participant for APTA Academy of Education National Task Force on Excellence in Education Certification.
- **Robyn Gisbert**, **PT, DPT,** has previously completed Health and Wellness Coach training through the Mayo Clinic, met the training and certification exam requirements of the National Medical Board of Examiners, and is now recognized as a National Board-Certified Health & Wellness Coach (NBC-HWC).
- **Michael Harris-Love, PT, MPT, DSc, FGSA, FAPTA**, was awarded the Champion of Allied Health Award from the Mayo Clinic School of Health Sciences Alumni Association. The award is among the highest honors given by the association and recognizes contributions to professional mentorship and leadership, program development, multidisciplinary practice, and health science research. He was also a Panelist for the APTA 2023 Lynda D. Woodruff Lecture on Diversity, Equity and Inclusion.
- **Meghan Hernandez, PT, DPT, PCS**, stepped into the pediatric content coordinator role at the beginning of 2023. She participated in the APTA Pediatrics Education Summit III in June and continues to work with a small working group post-Summit related to Diversity, Equity, and Inclusion in pediatric PT education. She presented two education sessions and one platform presentation at the 2023 Educational Leadership Conference. Lastly, she participated in the 2023 APTA Grant Writing & Mentoring in Education Research (GAMER) workshop in October.
- **Lauren Hinrichs-Kinney, PT, DPT, PhD, OCS**, completed her PhD program. She was also elected as co-chair of the Colorado APTA Nominating Committee.

- **Holly Ingham, PT, DPT, APT,** had a proposal, “High School Students with Cognitive Impairments: Functional Changes with Group Interval Training”, which was accepted for the APTA Pediatrics Annual Conference scheduled in November 2023. She also passed her exam and is now a now a Board-Certified Pediatric Specialist.
- **Dana Judd, PT, DPT, PhD,** directs the Faculty Residency Program. The residency program received initial accreditation from ABPTRFE. She also was accepted to the Academic Management Institute leadership training program for women in association with the Colorado-Wyoming Network of Women Leaders and the American Council on Education.
- **Rebecca Keefer, PT, DPT, CCS,** had two posters accepted at CSM 2024. She also spoke at the 35th annual Rocky Mountain Interprofessional Research and Evidence Based Practice Symposium for a platform presentation:
  “Outcomes Following the Implementation of a Rehabilitation Focused Clinical Pathway Following Lung Transplant”. Additionally, Dr. Keefer joined a national task force as part of the clinical education SIG to build an SCCE roadmap.
- **Toby Kinney, PT, DPT, OCS, FAAOMPT, MBA, PhD,** was selected as one of the Society for Simulation in Healthcare Virtual Scholars in 2024. He also completed his PhD program and was also promoted to Assistant Professor.
- **Wendy Kriekels, PT, DPT, NCS,** was selected to serve on the Academy of Neurologic Physical Therapy’s Movement System - Balance Diagnoses Knowledge Translation Taskforce.
- **Dawn Magnusson, PT, PhD,** was invited to serve on the PTJ Editor in Chief Search Committee. She is also working to advance equity- and family-centered early childhood systems with the Colorado team that received the Early Childhood Developmental Health Systems (ECDHS): Evidence to Impact Center award.
- **Daniel Malone, PT, PhD, CCS,** was named the CU DPT Hybrid Pathway Program Director.
- **Mark Mañago, PT, DPT, PhD, NCS,** won the ANPT DDSIG Best Platform Award at CSM: "Feasibility of Low-Load Resistance Training with Blood Flow Restrictions for People with Severe Multiple Sclerosis." He was featured on the latest Degenerative Disease SIG Podcast about his work using BFR in people with severe MS.
- **Amy McDevitt, PT, DPT, PhD, OCS, FAAOMPT,** completed her PhD program at the University of Newcastle, Australia. She was a speaker at the APTA Combined Sections Meeting in February 2023 and was invited to speak at the American Council of Academic Physical Therapy (ACAPT) Clinical Reasoning Symposium in Phoenix, Arizona, April 2023.
- **Amy Nordon-Craft, PT, DSc,** was the keynote speaker for the Metropolitan State University of Denver IPE Conference.
- **Joe Palmer, PT, DPT, PhD,** along with **Tami Struessel, PT, DPT, OCS, MTC,** were named part of the Colorado delegation to the American Physical Therapy Association House of Delegates. In his role as a member of the American Council of Academic Physical Therapy's task force on academic-clinical partnerships, he co-presented an education session at ELC in Philadelphia in October. Joe completed his PhD in Education Leadership, Policy, and Research. He was also named CU PT Director of Clinical Education upon Jenny Rodriguez’s retirement.
- **Mike Pascoe, PhD,** began work as course coordinator developing clinical anatomy courses in the Hybrid DPT Pathway at UCCS. He also served as Editor of the “Kenhub Atlas of Anatomy” and co-authored two anatomy chapters for the textbook “The Head and Neck: Theory and Practice”. He co-authored an article published in PLOS ONE on the use of body donors for surgical skill training, and his work on gynecology resident training in anatomy lab was selected for an oral presentation at the annual meeting of the American Association for Anatomy in Washington DC. These accomplishments were discussed during interviews on the Modern Pain Care and the A&P Professor podcasts.
- **Jenny Rodriguez, PT, DPT, MHS,** received the APTA Academy of Physical Therapy Education's highest honor, the Award for Leadership in Education She also received the Cerasoli Award for Outstanding Contributions to Physical Therapy Education and the CU PT Excellence in Teaching Award.
- **Eric Sawyer, PT, DPT, OCS, STC, CFEI©,** became a Certified Financial Education Instructor through the National Financial Educators Council. He was promoted to Assistant Professor, named Assistant Director of Clinical Education for the Hybrid DPT Pathway at UCCS, appointed to the Treatment Guideline Advisory Group for Labor & Employment for the Colorado Division of Workers’ Compensation and became a manuscript reviewer for the Journal of Allied Health.

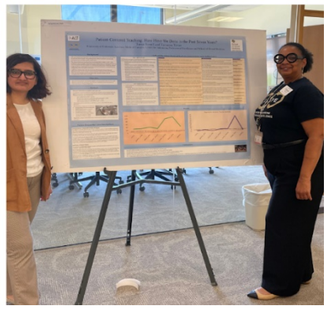
He and **Lara Canham, PT, DPT OCS** also presented at the Education Leadership Conference on, “No Frills; Let’s Talk Dollar Bills. Discussing Finances, from Prospective Students to Graduates”.

- **Andrew Smith, PT, DPT, PhD,** was promoted to Associate Professor. He was also invited to speak about his research at the Spinal Cord Injury Model Systems Project Directors Meeting earlier this June.
- **Jennifer Stevens-Lapsley, PT, PhD, FAPTA,** was also part of the team of APTA thought leaders that published the Research Agenda for Physical Therapy from the American Physical Therapy Association. She was also appointed as the Associate Director of Research for the Geriatrics Research, Education and Clinical Center (GRECC) at the Eastern Colorado VA Healthcare System.
- **Tami Struessel, PT, DPT, OCS, MTC,** recently completed her 2nd renewal as an Orthopedic Clinical Specialist (OCS). She serves as the American Physical Therapy Association Colorado Mile High District Delegate to the House of Delegates and the Colorado Chapter Governmental Affairs Co-Chair. She recently completed her service on the National APTA Task Force to establish guidelines for Continuing Competency. In April 2024, she was an Invited Speaker at the Physical Therapy Learning Institute Disruptive Innovation Physical Therapist Education Summit.

Center for Advancing Professional Excellence

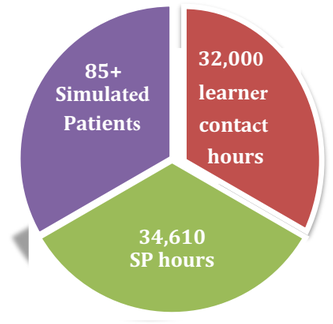


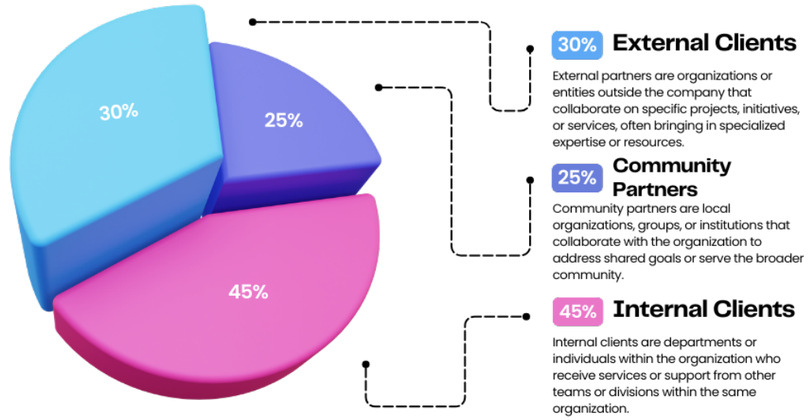
CENTER FOR ADVANCING PROFESSIONAL EXCELLENCE



The Center for Advancing Professional Excellence (CAPE) is a state-of-the-art standardized patient and simulation center that provides current and future healthcare professionals with access to the latest teaching and learning innovations. Through simulation experiences, learners can learn, develop, and improve patient-centered care. The **29,000-square-foot** CAPE is a unique resource for the Rocky Mountain region. This educational environment allows learners to gain real-world experience working with patients, handling clinical situations, and collaborating with other healthcare professionals.

CAPE promotes excellence in the health professions through education and assessment of clinical skills, including communication, physical examination, clinical reasoning, and teamwork. CAPE continues to grow and innovate while accommodating more learners and healthcare professionals. CAPE's community of supporters fuels its efforts to bring a world-class education within reach for current and future healthcare professionals in the Denver metro area, the region, and beyond. CAPE continues to lead the charge on advanced training of standardized patients capable of providing a broad array of portrayals, physical exam teaching, evaluation, and feedback for internal, external, and community partners.





Internal Collaborations

In May of 2023, CAPE partnered with SOM faculty to run **182 4th year medical students** through multiple **critical care scenarios** where they were able to do **hands-on training** in resuscitations, including septic shock and cardiac arrest, as well as navigate difficult conversations around **health equity in opioid management and breaking serious news**.

CAPE successfully ran SOM Traverse Assessments for the Class of 2027 in our new space. **172 SOM students** completed Traverse 1 -5 at CAPE, and **12 SOM students** completed Traverse 1-5 at the **satellite Ft. Collins Branch (FCB)**.

~700 interprofessional learners completed a 4-hour hands-on patient care collaborative experience

CAPE has partnered with faculty from all six health professions training programs to teach and assess approximately **2,613** learners across all cohorts.

CAPE continues collaboration with the **College of Nursing** faculty to integrate simulated patients in the **mental health curriculum** for undergraduate and graduate nursing students.

External & Affiliate Collaborations

For the 2023-2024 school year, we have maintained strong collaborations with external partners like Denver Health, Red Rocks Community College, Colorado Mesa University, and Colorado State University to deliver training and conduct research in communication, teamwork, care transitions, and physical exam instruction, utilizing simulated professionals and mannequins.

The CAPE is collaborating with the **Colorado Department of Public Health and Environment (CDPHE)** to develop a **new Community Health Worker competency assessment**, led by Principal Investigator Elshimaa Basha. The project received $75,000 for development and piloting, with intentions to extend the partnership for another four years to support assessment rollout and sustainability. This effort intends to strengthen Colorado's Community Health Worker workforce by standardizing competency-based examinations, introducing voluntary credentialing and Health Navigator Registry.

In the last year, **CAPE administered 22 assessments for the Center for Personalized Education for Physicians (CPEP)** and faculty from the Departments of Emergency Medicine, Anesthesiology, Neonatology and Obstetrics & Gynecology to offer competency assessment, re-entry to clinical practice, and education services for healthcare professionals utilizing various simulation modalities.

CAPE continues **collaboration with Children's Hospital Colorado Simulation Lab** to integrate simulated patients in trainings for interns, residents, and fellows, and now diversity, equity, and inclusion hands-on trainings.

The CAPE gave **80 high school to undergraduate CU Pre-Health Scholars Program (CUPS) students** intensive experiences every Monday in June 2024. Jocelyn Blake and Devra Keyes worked with the program to teach clinical and communication skills through interactive sessions using Standardized Patients (SPs), communication coaches, and high-fidelity manikins. The CU Pre-Health Scholars Program promises outstanding education and healthcare for everybody. Through a holistic understanding of social determinants of health, researchers and practitioners center on historically marginalized communities' values, experiences, and needs.

One new exciting collaboration: We developed complex family scenarios for **Kempe Center trainees**, allowing them to navigate intricate family dynamics and gender identities. Trainees receive instant feedback from SPs, gaining valuable experience. For over 50 years, the Kempe Center has been dedicated to improving the lives of children and families through expert medical care and advocacy focused on equity and policy effectiveness.

The **Black Health Initiative of Children's Hospital of Colorado** as they train community advocates and healthcare providers to Identify knowledge gaps, collaborate to enhance care, and utilize diverse modalities to improve access and patient experience for African-American women and children. This year, we also offered the training of pediatric residents.

Community Collaborations

CAPE was featured on **Roadtrip Nation**, a show that presents high school students with different career paths. This episode featured our Simulation Lab and how it is used in conjunction with experiential learning during medical school.

The CAPE is thrilled to host the incredible exhibit **"Eye to Eye: Portraits of Pride, Strength, Beauty" by Carey Candrian**, internal medicine associate professor at the School of Medicine. This powerful exhibit celebrates the bravery of older women in the **LGBTQ community**—our neighbors, friends, relatives, colleagues, and patients—who have faced immense challenges with resilience and courage. The portraits on these walls tell stories of women who, despite enduring silence, stigma, and rejection, stand strong and proud today. We invite you to witness their strength and share in their journey.

Team Achievements

CAPE Director Elshimaa Basha, along with team members Tanya Russell and Devra Keyes, made impressive contributions to the annual AME Education & Innovation Symposium. Their oral and poster presentations focused on innovative approaches to advancing health equity and enhancing teamwork. The CAPE team highlighted strategies for building trust to promote health equity using a simulation-based, interprofessional, and community-building approach. We also showcased our successful partnership with the School of Dental Medicine, emphasizing improved teamwork and communication through patient-centered teaching over the past seven years and hands-on simulation during dental emergencies.

SIMCAPTURE

The CAPE's **educational technology team** has tirelessly explored innovative approaches to maximize our learning management system, **SimCapture**. This platform enables CAPE to efficiently manage, record, and assess simulation training, whether conducted on-site or in-situ. SimCapture integrates audio, video, annotations, patient monitors, and simulator data into one seamless, web-based interface. Recent updates included expanding encounter timing, adding to the scoring and evaluation options, and improving the control interface and exam flow displays.

Team Updates

Amy Nordon-Craft, DSc, PT is enlarging her responsibilities as the Assistant Director of CAPE. Her role now encompasses supervising SP supervisors and case educators in addition to overseeing the professional development of CAPE. Amy's unwavering commitment to upholding CAPE's mission serves as the driving force behind her dedication to her expanded role.

Kirsten Broadfoot, PhD, is partnering with the CAPE to expand the **Interprofessional Commmunication Toolbox (I-ACT)** to include additional programs and external partners with additional focus on Health Equity training, communication research, and faculty development to standardize the teaching and assessment of communication skills across all healthcare professions.

The CAPE team enlisted the **Health Equity in Action Lab (HEAL**) to train the team on action and leadership for health equity through training, consultation, and deliberate practice. Each team member will hold a **Foundations in Equity certificate**.

Future Goals and Vision: The CAPE team has submitted multiple abstracts and proposals to the 2025 International Meeting for Simulation in Healthcare, hosted by the Society for Simulation in Healthcare (SSH). We're also advancing our scholarly work with a pending publication on our Interprofessional Anschutz Communication Skills Toolbox (I-ACT). By fostering innovation and inquiry, we aim to develop evidence-based practices, enhance collaboration, and explore new methods to improve health outcomes. This includes launching the Black Birth Equity Lab to address racial disparities in maternal health and close the Maternal Care Gap.

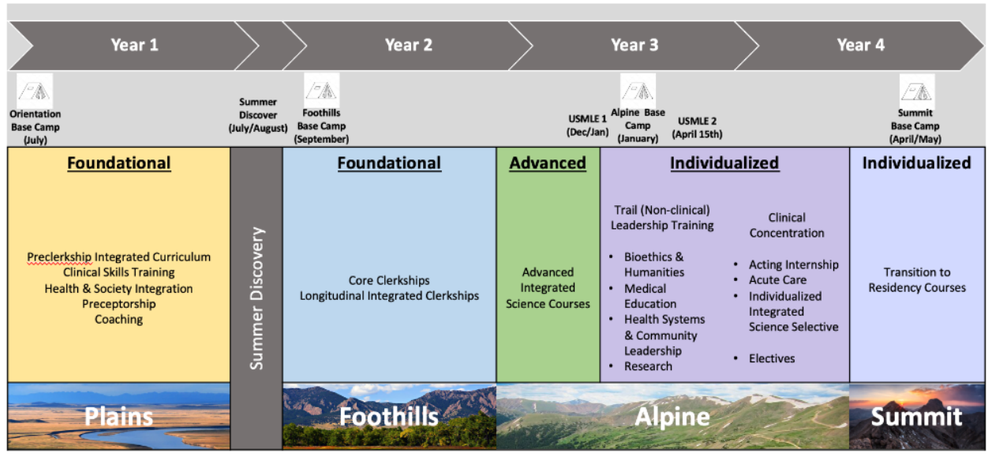
Undergraduate Medical Education

The Undergraduate Medical Education (UME) office oversees students entering medical school with the goal of earning the Doctor of Medicine degree. The students dedicate four or more years to an intensive period of study, clinical rotations, and personal growth. The UME office is responsible for guiding the students throughout their journey to become a Doctor of Medicine. The process begins with selecting the students who are personally and academically prepared to make the journey. The students receive counseling, financial/career advising, a rigorous curriculum in basic and clinical sciences, state-of-the-art experiences in simulation, rigorous assessments, and technological support throughout their medical school experience. This section of the Facts and Figures book reviews some activities in each of these areas. Website: http://medschool.cuanschutz.edu/education.

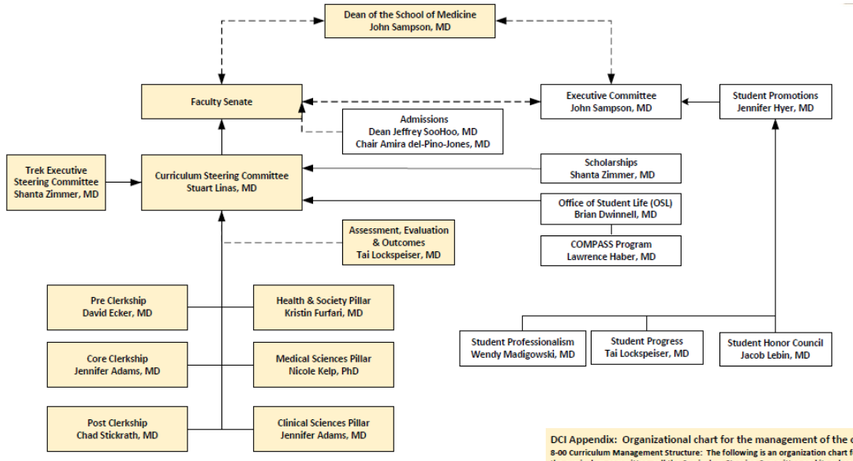
Following the successful visitation by the Liaison Committee on Medical Education (LCME) in March 2017 our undergraduate medical education team decided, with encouragement from former Dean John J. Reilly, Jr., MD, to embark on a process to revise our curriculum focusing on preparing our graduates for the future of medicine, science, and health systems. On October 30, 2017, **Senior Associate Dean for Education Shanta M. Zimmer, MD**, led a kickoff retreat for the process. With approximately 150 participants, this introductory event served as a catalyst to share ideas and begin the hard work of deciding how our curriculum can be redesigned. We chose **leadership, curiosity,** and **commitment** as the principles that our future graduates need to practice compassionately and skillfully in the ever-changing health care systems and communities as superb clinicians, innovative educators, and creative investigators. Following the retreat, more than 25 committees planned an innovative new curriculum focusing on the pillars of Leadership, Curiosity, and Commitment. Faculty from the School of Medicine led these committees, with membership of students, staff, clinicians, scientists, and community members who worked diligently to build the Trek curriculum. Trek

integrates basic science elements longitudinally throughout the academic careers of our students to prepare them and to enhance their personal and professional development as clinicians. The first phase launched in July 2021.

The Plains is comprised of foundational experiences that take students through pre-clerkship integrated basic science curriculum, clinical skills training, health and society, preceptorship, and coaching. After completing their summer discovery period, students transition to the Foothills where they will participate in Longitudinal Integrated Clerkships (LICs). In the post-clerkship portion of the curriculum, students will work through advanced science courses and USMLE 2 and 1. Students will then find more individualized paths, called trails, which include electives, dedicated research and discovery, acting internships, required critical care experiences, and transition to residency electives. Lastly, our students will reach the Summit of their undergraduate medical education where they transition to graduate medical education and the next phase of their training. Oversight of the curriculum includes multiple committees reporting to the Curriculum Steering Committee and the Faculty Senate.



CUSOM Undergraduate Medical Education Structure



DCI Appendix: Organizational chart for the management of the curriculum

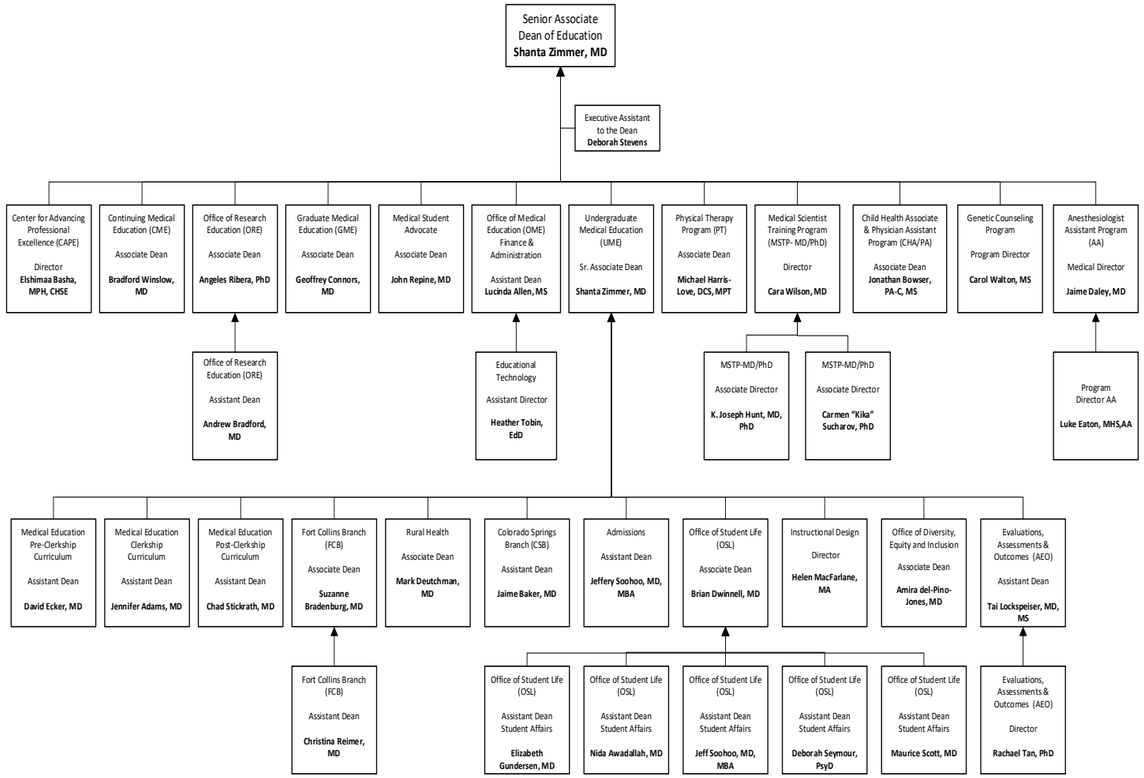
8-00 Curriculum Management Structure: The following is an organization chart for the management of the curriculum that includes the curriculum committee, call the Curriculum Steering Committee and its subcommittees, the chief academic officer, and units/ individuals involved in curriculum design, implementation and evaluation.

Medical students are elected/appointed/volunteer on all student committees. For additional information on participation please contact the Office of student Life (OSL)
Reviewed for LCME compliance Standard 8

Represents reporting structure _____
Represents line of communication - - - - - -

9/10/2024

University of Colorado School of Medicine
Office of Medical Education Leadership & Offices
07/12/2024



Medical Education Resources

The Trek curriculum website (https://medschool.cuanschutz.edu/education/current-students/curriculum/trek-curriculum) provides an overview and detailed information on the pillars and phases. Additionally, there are links to the Ft Collins Branch Campus, special elective tracks and programs for medical students.

For a detailed look at the topics and learning objectives covered in the core courses of the Trek curriculum, an interactive curriculum data visualization (https://viz.cu.edu/t/SOM/views/TrekCurriculumMapBubbleSearchTool-FacultyDisciplineBubbleSearch?:showAppBanner=false&:display_count=n&:showVizHome=n&:origin=viz_share_link) is available online. To access, users must be logged into the AMC VPN using their CU credentials. If unable to access the curriculum map, please reach out to Katherine.Berg@cuanschutz.edu.

The Instructional Design team has a range of tutorials, instructional videos and linked resources for teachers, and information on accessibility and universal design for learning as well as templates for Word documents and PowerPoint slides. To access this information please email SOM.InstructionalDesign@cuanschutz.edu or set up an appointment through instructional design bookings (https://outlook.office365.com/owa/calendar/TrekInstructionalDesign@olucdenver.onmicrosoft.com/bookings/)

Educational Technology supports the technologies and technology users of the Trek Curriculum. Support is available to medical students and medical educators and administration through Zendesk. (https://medschool.zendesk.com/)

Curriculum Steering Committee

a. Chair: **Stuart Linas, MD**
b. The Curriculum Steering Committee (CSC) is responsible for the oversight, design, implementation, integration, evaluation, review, and revision of the medical school curriculum. With appropriate faculty input, the CSC will:
    - oversee the medical education program as a whole, including design, integration, evaluation and improvement;
    - guide, review, approve course, block, and thread content and educational formats;
    - systematically establish the evaluation procedures for curriculum, student, and faculty assessment;
    - focus on helping achieve specific curricular outcomes associated with graduating superior physicians;
    - periodically review and amend educational policies; and
    - recommend, facilitate, and develop procedures to assure that suggested changes to the curriculum are implemented.
c. The Curriculum Steering Committee posts all its materials on a SharePoint site available to its users.
d. Specific accomplishments are outlined in the table below:

CSC Accomplishments for FY 2024

New Members	• Voting: None • Non-Voting: None
Continuous Quality Improvement (CQI) and Phase Reports	• Longitudinal Curriculum ○ Individual Plains Blocks ○ Annual Program Evaluation reports ○ Phase 1-3 reports ○ Pillars-Health & Society, Medical Sciences, Clinical Sciences ○ GQ Survey ○ Intern Survey ○ Fort Collins Regional Campus
	○ Colorado Springs Branch Campus ○ Interprofessional Education
Key Change(s) to Curriculum	• Prepared for 2023 Bulge LIC • COVID-19 Modifications • Revised CSC Charter to reflect new Trek Curriculum
Oversight	• Internship Match Process • Grading consistency across all campuses and LICs • Scheduled Hours Compliance Process • Assignment process for LIC • Regional Campus: Fort Collins comparability • Approved changes to P1, P2 Assessment process • Trek Curriculum Class of 2025 forward • Mental Health accessibility • Charged new Task Force to report on Mistreatment and The Learning Environment • CSC reviewed Mistreatment Task Force reports and implemented plans to improve student experience. • LCME monthly reports in preparation for March 2025 site visit

The Plains Pre-clerkship Curriculum

The Plains (pre-clerkship) curriculum consists of 14 integrated courses that present the medical sciences, clinical sciences, and health systems sciences to prepare students for their clerkship year and beyond. **David Ecker, MD,** Assistant Dean of Education, oversees the Plains curriculum. Courses, on average, span 3 to 6 weeks, and they consist of didactic, active learning, experiential, laboratory, and small group discussion sections (to name a few). In addition to learning and applying the medical sciences necessary for a developing physician, each week students engage in stable small groups with a physician coach to advance their clinical skills as part of the Developing Our Clinical Skills (DOCS) curriculum, which emphasizes a humanistic approach to medical care. During those half-days, students apply, practice, and receive feedback on their foundational communication, physical examination, and clinical reasoning skills through both simulation and actual patient care experiences. Students also spend one-half day each week in small groups led by their physician COMPASS Guide participating in the Health & Society curriculum, which integrates behavioral and social sciences, informatics, evidence-based medicine, health care policy, culturally effective medicine and ethics, interprofessional education, and professionalism to prepare students to care for our diverse population. Students may also choose to participate in electives to personalize their curriculum and explore interests outside the standard curriculum. The overarching for our students' future medical education and to equip them for a lifetime of learning, research, clinical care, and community service.

Developing Our Clinical Skills Curriculum:

The Developing Our Clinical Skills Curriculum is comprised of several elements: Communication, Physical Examination, & Clinical Reasoning training, as well as Preceptorship experiences. The DOCS Curriculum is a hands-on, experiential curriculum that is integrated with the other pillars of the Trek curriculum. Students will meet weekly in stable small groups with a DOCS Coach, who is a physician trained to develop students' clinical skills. The longitudinal relationships between students and their coaches will allow individualization of students' learning and development. Standardized patient encounters and regular clinical exposure in a physician preceptor's practice are key components of this curriculum. Course Director **Brandy Deffenbacher, MD**, and the Associate Course Directors **Anna Munoa, MD** & **Deb Seymour, PsyD** (Communication), **Phillip Hitchcock, MD** (Physical Exam), and **Catherine Callister, MD** (Preceptorship),

continue to develop and produce a dynamic, integrated curriculum of foundational clinical and professional skills and experiences that equip students for their clinical years. The curriculum is aligned with material taught in the Plains Curriculum to encourage integration of classroom learning into clinical practice.

If you are interested in volunteering as a preceptor for the Developing Our Clinical Skills (DOCS) curriculum please email som.docs-preceptorship@cuanchutz.edu.

Clerkship Phase Curriculum Committee (CPCC)

The Clerkship Phase Curriculum Committee is responsible for the design, implementation, and evaluation of the Clerkship Phase of medical student curriculum. The committee meets regularly to develop and implement the curriculum.

The Trek curriculum enrolled clerkship students in the Class of 2026 from September 2023 – August 2024. Students were enrolled entirely in LICs. This curriculum was governed by the CPCC committee.

The following individuals served as Longitudinal Integrated Clerkship Directors in 2023-24: Kate Adkins, MD, Sharisse Arnold-Rehring, MD, Jaime Baker, MD, Heather Cassidy, MD, Henry Colangelo, MD, Anne Frank, MD, Emily Gottenborg, MD, Kate Jennings, MD, Amy Johnson, MD, Vishnu Kulasekaran, MD, Ben Leon, MD, Bryan Lublin, MD, Frank Merritt, Roberto Silva, MD, Meghan Treitz, MD, Ben Vipler, MD

Assistant LIC Directors included: Ashley Barash, MD, Sarah Faubel, MD, Amy Grover, MD, Megan Lykke, MD, Kari Mader, MD, Hana Smith, MD, Amanda Swanson, MD

Jennifer Adams, MD, is Assistant Dean of Medical Education and Clinical Clerkships and is responsible for planning, management, and leadership of the Clerkship Phase.

For more information visit our website at:
http://www.ucdenver.edu/academics/colleges/medicalschool/education/degree_programs/MDProgram/administration /Pages/UMECommittees.aspx

Clerkship Phase:
The Clerkship Phase consists of competency-based longitudinal integrated clerkships that provide opportunities for mastery of the core knowledge, skills, and attitudes required of physicians. The curriculum provides clinical experiences in the hospital, ambulatory clinics, emergency room, labor and delivery suite, and operating rooms. Emphasis in the curriculum is placed on opportunities for students to increase continuity and authenticity of clinical experiences in the format of Longitudinal Integrated Clerkship. Goals and learning objectives have been developed by the Clinical Content Directors to reflect the clinical experiences and are mapped to ACGME competencies. In addition, overarching medical education program objectives have been developed by a consensus-based process. These objectives are defined in outcome-based terms that allow assessment of medical students' progress in developing competencies to be achieved at the time of graduation. These objectives reflect the expectations of physicians by the profession and the public.

Students are organized in 16 LIC programs at 9 clinical sites across the state. Administrative and faculty support for each LIC includes an LIC Director, Coordinator, and 7 specialty liaisons (analogous to a site director for each core specialty). Over 2,100 faculty preceptors and 800 residents teach students in the LIC curriculum. Each LIC has a curricular concentration allowing students to focus their learning beyond clinical care on an area of interest. Concentrations include: Inquiry (research), Advocacy, Health Equity, Public Health, Quality & Safety. All students participate in a standard weekly team-based learning (TBL) curriculum delivered at all LIC sites where core curricular objectives are covered.

Students use learning logs to record conditions observed, diseases, and procedures. Low and high-stakes assessments

have been incorporated into each clerkship. Shelf exams, clinical assessments, mid-point feedback sessions, mid- or end-of-block standardized patient exams and clinical practice exams provide additional opportunities for assessment of students' clinical performance and opportunities for feedback on student performance. LIC directors monitor students' clerkship experiences at all clinical sites.

Clinical partnerships are essential for the training experiences of medical students in the clinical core. Core affiliate institutions include University of Colorado Hospital and other UCHealth hospitals including Poudre Valley Hospital and Memorial Hospital, Denver Health, the Veterans Administration, the Children's Hospital Colorado, St. Joseph's Hospital, and many community practice sites both affiliated with these organizations and independently operated. Our clinical partners have maintained a strong commitment to medical education as well as their missions to patient care excellence. The SOM's ability to train medical students in the clinical curriculum would not be possible without the strong partnership of our clinical partners.

Group Accomplishments:
During the 2023-34 Academic Year, the CPC committee accomplished the following initiatives:

1. Entering 3rd year of novel all-LIC curriculum
2. Very high level of student satisfaction with LIC programs (86.9% satisfied/very satisfied) and LIC directors (100%satisfied/very satisfied)
3. Improvements in almost all metrics related to learning environment and mistreatment with change to LIC model
4. Significant increases in all metrics related to student wellness with change to LIC model
5. High levels of faculty satisfaction and retention with the LIC model
6. Continuous quality improvement with in-depth review and discussion in workshop format of the following areas involving all courses: Clinical Teaching, Sub-Optimal Learning Environment, Mistreatment, Didactics, Orientation, and Unique Curricular Innovations.
7. Faculty development including in person and virtual trainings at the Anschutz Medial Campus, trainings in the community (Denver Health, Ft. Collins and Colorado Springs), lunchtime sessions offered at Kaiser Permanente, TBL teaching workshops, podcasts, and accessed a growing library of asynchronous materials posted on the Office of Community Based Medical Education (OCBME) website. Most offerings have been made available for CME and MOC credit.
8. Successful engagement with clinical partners and integration of students into hospital and community initiatives through student concentration projects, collaboration with local leadership, and students' longitudinal care of patients.
9. Development of a student ambassador program in which 4th-year students apply to serve as peer mentors and participate in leadership development.
10. Extensive faculty and student output of educational scholarship at national and international meetings and numerous published manuscripts related to the CUSOM LIC curriculum and outcomes.

Post-clerkship Curriculum

The mission of the post-clerkship curriculum is to utilize unique clinical and non-clinical courses to develop well-rounded physicians who are prepared to be excellent house officers and leaders who are curious, lifelong learners with a commitment to serve the profession, our patients, and society.

The curriculum consists of a semester of a required advanced science course curriculum, a required four-week acting internship, six weeks of basecamps, eight weeks of individualized leadership/change agency curriculum, two to four weeks of critical care, 28 weeks of elective time and a capstone presentation of students' mentored scholarly activity projects. Working with the Office of Student Life, the post-clerkship curriculum is designed to foster: 1) knowledge base and skill development; 2) career preparation/development; and 3) professional identity formation all in an individualized manner for each student.

The Post-Clerkship Curriculum is led by:

Chad Stickrath, MD, FACP
Associate Professor of Medicine
Assistant Dean for Medical Education, Post-Clerkship Curriculum
University of Colorado School of Medicine

Jessica Ackels, BA
Post-Clerkship (Alpine-Summit) Curriculum Manager
University of Colorado School of Medicine

More information about the post-clerkship curriculum can be found at:
https://medschool.cuanschutz.edu/education/current-students/curriculum/trek-curriculum/alpine-summit-post-clerkship-phase

Trek Basecamps

The Trek Basecamps Course is an 8-week longitudinal curriculum delivered at three intentional time points of clinical transition: before the clerkship year, before advanced clinical and acting internships, and before graduation. As such, through the cultivation of continuous self-advancement, students solidify, and advance relevant knowledge and skills required for success during their next stage in training. Through small-group skills practice and case-based sessions, students advance clinical reasoning, psychomotor, communication, and efficiency skills as well as dedicate time toward reflection and professional identity exploration. As students advance, the content learned spirals in complexity as well as differentiates and maps toward students' individualized specialty of practice culminating in the transition to residency basecamp which is predominantly comprised of a specialty-specific curriculum divided into the following specialties: Anesthesia, Emergency Medicine, Family Medicine, Internal Medicine, OBGYN, Pediatrics, and Surgery.

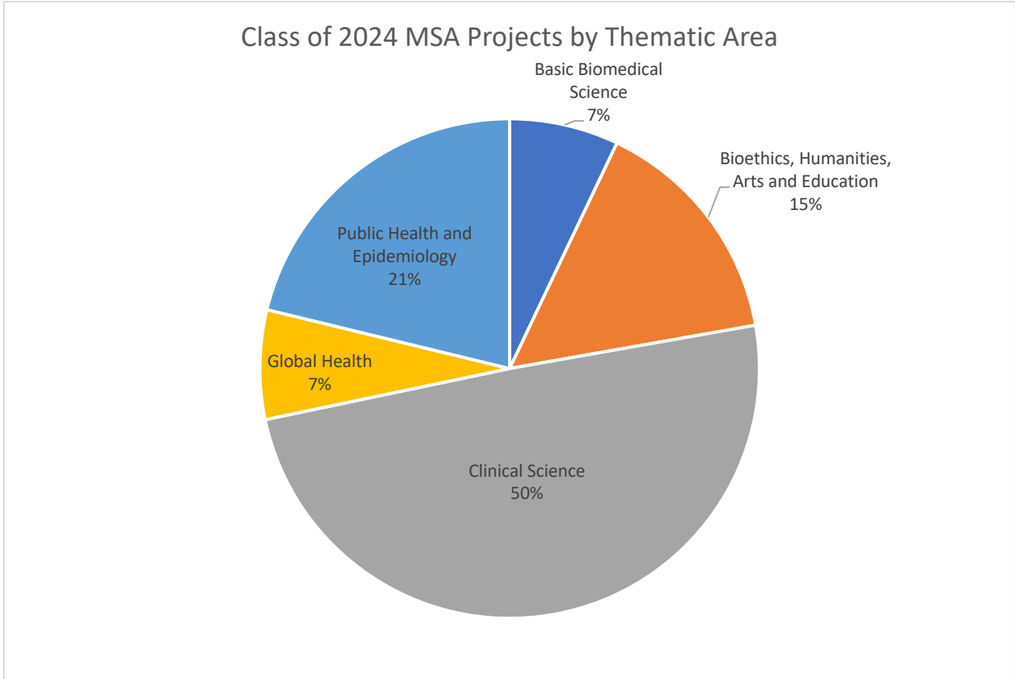
The Basecamps course is directed by **Anna Neumeier MD, Dr. Cason Pierce MD, and Dr. Matthew Rustici MD**. As most of the course is taught through small groups with student-to-faculty ratios between 1:4 up and 1:16, it appreciates its 798 instructors who donate over 2175 hours of direct teaching time. For more information visit the course website: https://medschool.cuanschutz.edu/education/current-students/curriculum/trek-curriculum/basecamps

Mentored Scholarly Activity Program 2023-2024

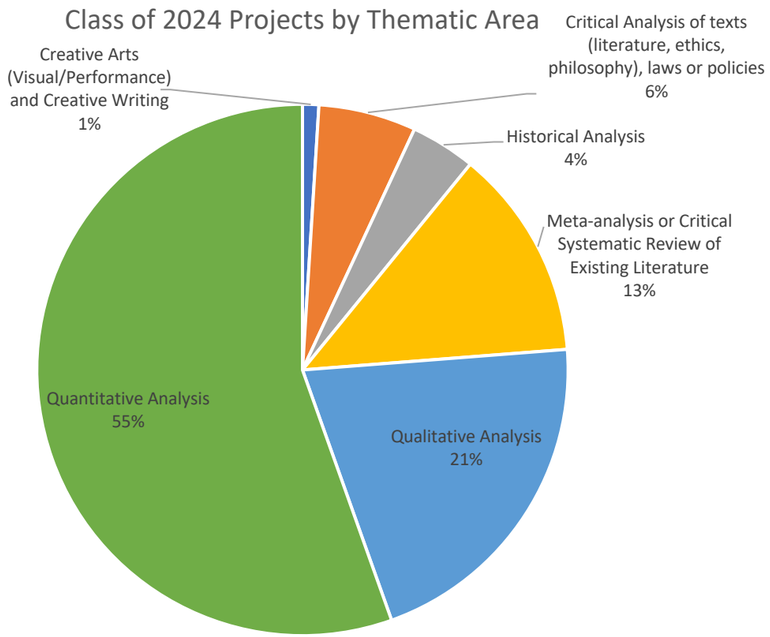
The Mentored Scholarly Activity program (MSA) is a required longitudinal curriculum across all phases for all School of Medicine students. The goal of the MSA curriculum is to foster self-directed, life-long learning and patient/population advocacy over the course of medical careers, positioning students to be able to address gaps in medical knowledge, quality and safety, and public health practice. The MSA requires students to identify and work with a mentor to complete their projects, which prepares them for working with mentors in their careers, serving as mentors to others, and eventually leading teams in the medical profession. The MSA program has a broad definition of scholarship ranging from traditional research to literature reviews, quality improvement, medical education, and humanities. Students choose projects that represent their interests. We encourage students to participate in projects that address disparities in health outcomes and promote diversity and representation in the health professions. Projects culminate with a scholarly paper and a Capstone poster presentation in the spring of the students' graduation year.

The 2023-2024 MSA leadership team and their topic expertise consisted of **James Maloney, MD**, Director (Clinical Research), **Cecilia Low Wang, MD**, Associate Director (Clinical Research), **Leana May, DO, MPH**, Associate Director (Global Health**), Daniel Goldberg, JD, PhD**, Associate Director (Bioethics, Humanities, Arts and Education), **Sarah Rowan, MD**, Associate Director (Public Health and Epidemiology), and **John Tentler, PhD,** Associate Director (Laboratory-based Biomedical Science). Over 360 CU faculty members currently serve as mentors. MSA has partnered with the Colorado School of Public Health to work with the Colorado Biostatistics Consortium to assist medical students with their study design and data analysis. Librarian liaisons at the Health Sciences Library provide expert consultations for literature reviews tailored to the student's project topic. In 2023, 40% of MSA students had published a manuscript by graduation and 50% had their work as a professional meeting abstract. For the graduating Class of 2024 Capstone Poster Forum Event, approximately 85 faculty members volunteered to evaluate the posters of 135 student presenters, and each student evaluated posters of their peers.

For more information on becoming a volunteer faculty mentor, please contact the MSA program, at MSA.SOM@cuanschutz.edu. (Website: https://medschool.cuanschutz.edu/education/current-students/curriculum/mentored-scholarly-activity#ac-summit-3)



Class of 2024 – 135 Total Students
Basic Biomedical Science – 10
Bioethics, Humanities, Arts, and Education – 21
Clinical Science – 66
Global Health – 9
Public Health and Epidemiology - 29



Class of 2024 – 135 Total Students

Creative Arts (Visual/Performance) and Creative Writing – 2
Critical Analysis of texts (literature, ethics, philosophy), laws or policies – 8
Historical Analysis – 3
Meta-analysis or Critical Systematic Review of Existing Literature – 18
Qualitative Analysis – 29
Quantitative Analysis - 75

Medical Student Research Track

Leadership:
Marsha Anderson, MD, Director, Research Track
Mary McGinnis, Coordinator, Research Track

The Research Track (MD Program) fosters development of an identity as a physician capable of completing all aspects of a research project from the identification of a health care-related scientific question to the written dissemination of scientific information as a first author on a manuscript developed for submission. Since its inception in 2007, 290 students have completed the track, with 769currently enrolled in the program. The 93 graduates in the last 5 years (2020-2024) students have published 225 papers, and 58% of the graduates in those years published first-authored papers from their work in medical school. Students work with an experienced faculty mentor through all four years of the School of Medicine curriculum, including one full-time research month in the summer after the first year, and two additional full-time research months during their fourth year. Students present their research locally, regionally, and nationally. In addition, the track provides experiential learning in how to develop polished, professional research presentations and papers. The Research Track prepares students to continue working as researchers during their residencies and future medical careers.

The research track relies on the generous funding support of departments, centers, and an endowment. Funding sources commit to support a student throughout their four years as a research track student. Funding includes three months of stipends for full time research work, as well as travel to present at the Western Student Medical Research Forum and one national meeting that aligns with the student's area of research.

Funding Department, Center, or Source	Students sponsored in 2023-2024
Anesthesiology	3
Cancer Center	4
Child and Adolescent Psychiatry	2
Fort Collins Branch	10
Gates Institute	1
Immunology and Microbiology	3
Medicine	6
Neurology	4
Neurosurgery	2
Ob/Gyn	3
Orthopedics	5
Ophthalmology	5
Pathology	1
Pediatrics	16
Pediatric Urology Research Enterprise	2
Radiology	3
Radiation Oncology	1
Schweppe Endowment	14
Surgery	8

Research Track Student Awards and Honors

Twenty-two Research Track students had oral or poster abstracts accepted for presentation at the 2024 Western Medical Research Conference held in January 2024 in Carmel, California. Three Research Track students received awards at the meeting:

- Pritika Parma, was honored with the 2024 WAFMR Trainee Research Award
- Salina Goff received a Student Subspecialty Abstract Award for her high scoring abstract.

Michaele Corbisiero, a 4th year Research Track student, was awarded a 2024 Anschutz Campus "Trainee Research Excellence Award."

Schweppe Scholars

The Schweppe Scholars Program, funded by the Schweppe Foundation, supports Research Track students to participate in the Research Track for 4 years. Schweppe Scholars for 2023-2024 were:

Salman Ashraf, Bruck Gezahegn, Joy Huang, Preston Le	Class of 2024
Melissa Carpenter, Eric Fu, Hillary Ta	Class of 2025
Cameron Bean, Lia Constantine, Ananya Shah, Tristan Seawalt	Class of 2026
Alexandra Danciutiu and Kyle Jamar	Class of 2027

Anschutz Health Sciences Student Research Forum

The 38th Annual Student Research Forum was held in December 2024. This campus wide forum was organized and funded by the School of Medicine Dean's Office. Eighty-one students presented their research, representing the School of Medicine, School of Dentistry, School of Public Health, and the Graduate School. Fifty-nine faculty members volunteered to judge posters. Nineteen students with the highest scoring presentations were given a $350 scholarship.

Education Technology

The Trek curriculum is delivered, supported, and evaluated with a collection of technologies. In addition to the maintenance and support of existing technologies, there were a range of new projects this year.

- Continued development of a student information database and interface for the Office of Student Life, Office of Medical Education and curriculum delivery teams.
- Support and maintenance of the Trek learning ecosystem, a collection of systems, which include the functions of learning management, curriculum management, learning resource management, student assessment, course and faculty evaluation, and clinical experience tracking.
    - This collection of systems is designed to meet the needs of the Trek curriculum.
- Creation and implementation of a system for mapping curriculum, where the curriculum is prepped before uploading.
- Maintenance of learning experience loggers.
- Development of learning modules in H5P, an online tool used to create and deliver interactive curricular content, which is integrated into the learning management system.
- Development and implementation of the longitudinal integrated clerkship placement system for the Trek Foothills.
- Development of a clinical schedule app for the Advanced Science Courses that delivers individualized rotation schedule for each student.
- Development and implementation of an absence request and tracking system.
- Development and implementation of a collaborative calendaring system for the longitudinal integrated clerkship students.
    - Students manage their assigned clinical time in Outlook with the guidance and oversight of course administration.
- Continued improvement and refinement of technology support for students, staff and faculty.

Education technology support is available to medical students and medical educators and administration through Zendesk. (https://medschool.zendesk.com/)

Instructional Design Update

Also, in support of the MD program, the Instructional Design team created template documents that encourage good practices for accessibility and universal design. This team has developed and delivers training for OASIS, Canvas, other learning systems, and the processes that support the delivery of the curriculum. The design team launched an effort to aid all course directors and instructors in meeting the Colorado House Bill 21-1110 for digital accessibility. In the 2024-2025 academic year, the team has set the following aims for the digital delivery of the Trek curriculum:

- Use of Headers/Heading Styles in Word and PowerPoint
- Application of accessible font size and type on slides
- Use of accessible colors and high contrast text and images
- Addition of alternative text on images
- Captioning on videos through use of supported video delivery systems

The instructional design team collaborates with course and content directors to use technology tools well and deliver curriculum well. Information on the services of this team are available by emailing SOM.InstructionalDesign@cuanschutz.edu or you can set up an appointment through instructional design bookings.

Office of Assessment, Evaluation and Outcomes

The mission of the CUSOM Office of Assessment, Evaluation, and Outcomes (AEO) is to create a data-driven culture that promotes growth and improvement of educational programs and individual students. During AY 23-24 we collected and analyzed the assessment and evaluation data described below and reported on outcomes of the reformed "Trek" curriculum (classes of 2025, 2026, and 2027) and the final year of the "Hybrid" curriculum (class of 2024).

Assessment

One of the AEO Office's main goals is to create a coordinated assessment program that promotes best practices and facilitates student growth. The types of assessment data we collect include:

- **Internally developed written assessments**
  All internally developed written assessments are created by course and content directors under the guidance of the CUSOM Assessment Team (MD and PhD testing experts), to adhere to National Board of Medical Examiners (NBME) item writing best practices. During AY 23-24 the pre-clinical/Plains students took 43 formative and 10 summative assessments during their preclinical courses and the post-clinical/Alpine students took 2 summative assessments during their advanced science courses (ASCs). Across all these assessments, students answered 2,656 multiple-choice questions written by faculty. To ensure that test scores accurately reflected student ability in the course material, psychometric analyses and content review were conducted after each assessment. Equating was applied to determine the cut scores for the Plains summative assessments and standard setting studies were undertaken to establish the cut scores for the Alpine assessments.
- **Externally developed written assessments**
  Students take 9 NBME exams during the Trek curriculum. The Comprehensive Basic Science Exam (CBSE) is a general, integrated achievement test covering material typically learned during basic science education and reflects content coverage and item formats used on the USMLE Step 1 exam. Students take the CBSE twice during the Plains year for progress testing and at the end of the ASCs as a practice Step 1 opportunity. Students must pass 5 clinical subject (Shelf) exams during their clinical/Foothills year: Medicine, OBGYN, Pediatrics, Psychiatry, and Surgery. Then at the end of the year, students take the Comprehensive Clinical Science Exam (CCSE), which covers material typically learned during core clinical clerkships and reflects content coverage of the USMLE Step 2 exam.
- **Internally developed performance assessments**
  CUSOM faculty have developed 9 performance assessments for the UME curriculum. Students take 3 anatomy lab practicals and 5 objective structured clinical examinations (OSCEs) spaced throughout the Plains year. The anatomy lab practical requires students to identify structures on a cadaver based on short written prompts. The OSCEs are simulation experiences with standardized patients, administered at the Center for Advancing Professional Excellence (CAPE). The OSCE assessments are designed to measure students' communication, medical documentation, oral presentation, and physical examination skills. At the end of the ASCs, all students must pass an internally developed Clinical Practice Examination (CPE) administered at the CAPE. The eight-station CPE assesses clinical data gathering and reasoning on clinical presentations representative of their learning during the clerkship year.

- **Clinical assessments**
  Grading in the Foothills is based primarily on supervisor assessments completed by residents and attending physicians about student performance in the clinical setting. A fully deidentified dashboard showing student performance data and comments in each of the specialties is used by the Foothills grading committees. At the time of this report there were over 10,000 clinical assessments completed for the AY 23-24 year: 1,323 Comprehensive forms (completed by longitudinal preceptors at the end of the year), 6,009 Core forms (completed by preceptors and immersion supervisors at intervals during the year), and 3,013 Brief forms (completed by supervisors after short interactions).
- **Professionalism assessments**
  Professional behavior is expected of students throughout medical school and is a program competency for graduation. During the Plains, students are assessed by every small group facilitator on their participation, preparedness, promptness, presence, and rapport with others. In AY 23-24, 15,508 small group assessments were completed.

Evaluation

The AEO Office routinely collects, synthesizes, and reports de-identified student feedback to promote faculty growth and curricular improvement. Data is mostly collected through survey instruments containing both rating scale and open-ended questions. All open-ended feedback is read by an AEO team member who flags any concerning feedback for review by leadership before results are reported. To promote confidentiality of student feedback and facilitate interpretation of results, qualitative analyses are routinely conducted on open-ended feedback to identify data trends and potential action items for curricular improvement. To that end, we also have numerous Evaluation Dashboards summarizing student feedback, many of which are available to the public to promote transparency and accountability.

The types of evaluation data we collect includes:

- **Curricular evaluations**
  The AEO Office evaluates every UME course and summarizes student feedback for curriculum leadership in support of continuous quality improvement efforts. During AY 23-24, students completed 13,970 course evaluations administered by the AEO Office: 826 ASC course, 2,771 ASC Clinical Placement, 517 acting internship course, 3,549 Alpine elective, 373 Foothills course, 2,824 Foothills clinical site, 1,276 Plains course, 408 Plains content, 603 Plains elective, 209 Traverse week, and 614 Basecamp course evaluations.
- **Teaching evaluations**
  All faculty and residents receive a teaching report if they are evaluated by at least three students. For University-affiliated faculty, the AEO Office uploads these reports directly into PRiSM, the faculty online performance review system. By the time the reporting cycle for AY 23-24 has finished, the AEO Office will have distributed approximately 827 attending and 4,233 preceptor/mentor evaluation reports, 812 resident clinical evaluation reports to residents and their program directors at 63 residency programs at CUSOM, Denver Health, Exempla St. Joseph's, and HealthOne-PSL, and approximately 2,330 evaluation reports for didactic instruction.
- **Trek Real Time Feedback survey**
  This survey is available on-demand to students in all phases of the curriculum to share their positive and negative experiences in real time. All comments are anonymous unless the submitter chooses to identify themself. The feedback is automatically sent to the Assistant Dean of Assessment, Evaluation, and Outcomes and the corresponding curricular phase Dean, who shares the report with the subject(s) of the feedback and other concerned parties, as necessary. Faculty leadership follows up with the submitter of all non-anonymous reports. During AY 23-24 there were 218 submissions (n=144 Plains, n=1 Foothills, and n=73 Alpine), providing a mix of positive and negative feedback about faculty, the curriculum, and the learning environment.
- **End of phase surveys**
  Before starting medical school, students complete an incoming student survey (ISS) to provide a baseline measure for attitudes and beliefs that are important outcomes of the Trek curriculum. Students are then surveyed at the end of each curricular phase to measure current attitudes and beliefs and gather more general feedback on the students' educational experiences. At the time this report was written, data collection for AY 23-24 was still ongoing. In AY 22-23, students were asked 345 unique questions across these end of phase surveys, as well as 436 common questions asked on multiple surveys (e.g., the Dyrbye well-being index).
- **Focus groups**
  The AEO Office routinely conducts focus groups to gather in-depth feedback on topics that cannot be obtained via survey. In AY 23-24, focus groups were conducted for the Health & Society pillar, pharmacology content area, and the ASCs to gather student feedback on strengths and areas for improvement and better understand their learning experiences. All focus groups were representative of students from both the AMC and Fort Collins campuses. Executive summaries were drafted and shared with leadership, and insights guided curriculum adjustments to enhance the overall educational experience.

Student Ratings of Courses and Faculty by Academic Year – Pre-clinical/Plains Curriculum

Pre-clinical Rating	Mean		
	AY 23-24	AY 22-23	AY 21-22
Quality of the course*	3.89	3.90	3.76
Lecturer effectiveness**	4.25	4.20	4.05
Small group facilitator effectiveness**	4.43	4.43	4.28

*5-point scale: 1=Unacceptable; 2=Borderline; 3=Acceptable; 4=Very good; 5=Excellent
**5-point scale: 1=Not at all; 2=Slightly; 3=Moderately; 4=Very; 5=Extremely

Student Ratings of Courses and Faculty by Academic Year – Clinical/Foothills Curriculum

Clinical Rating	Mean		
	AY 23-24	AY 22-23	AY 21-22
Quality of the clerkship*	4.47	4.13	4.21
Attending teaching effectiveness**	4.74	4.67	4.66
Resident/fellow teaching effectiveness**	4.71	4.62	4.65

*5-point scale: 1=Unacceptable; 2=Borderline; 3=Acceptable; 4=Very good; 5=Excellent
**5-point scale: 1=Not at all; 2=Slightly; 3=Moderately; 4=Very; 5=Extremely

Student Ratings of Courses and Faculty by Academic Year – Post-clinical/Alpine Curriculum

Post-clinical Rating	Mean		
	AY 23-24	AY 22-23	AY 21-22
Quality of the advanced science courses*	3.85	3.43	--
Quality of acting internships*	4.60	4.51	4.57
Quality of electives*	4.55	4.56	4.57
Attending teaching effectiveness**	4.69	4.72	4.81
Resident/fellow teaching effectiveness**	4.76	4.73	4.79

Note. The advanced science courses were first held in AY 22-23.
*5-point scale: 1=Unacceptable; 2=Borderline; 3=Acceptable; 4=Very good; 5=Excellent
**5-point scale: 1=Not at all; 2=Slightly; 3=Moderately; 4=Very; 5=Extremely

Outcomes

The AEO Office supports program development efforts and provides data and analyses by request to assist educational activities and curricular program decision-making. During AY 23-24, other AEO activities included:

- **Trek Progress Committee (TPC)**
  All student performance information is tracked by the TPC, a standing committee of the CUSOM Promotions Committee. Having the TPC allows us to more clearly track student performance across all four years of medical school to ensure that all students are progressing appropriately and meeting our expected milestones and outcomes. The TPC has three main purposes: (1) Provide feedback to all students about their progress and opportunities for growth, (2) provide support for all students according to need, and (3) create plans for students who need higher levels of support to succeed and oversee the implementation of those plans. The TPC is chaired by the Assistant Dean of Assessment, Evaluation, and Outcomes, and includes representation from each of the three pillars of the curriculum, the chair of the student professionalism committee, and additional individuals to provide diverse perspectives. Representatives from the Office of Student Life and Remediation are present at the meetings but do not vote. In AY 23-24 we had 18 TPC meetings that reviewed 70 unique students (33 in the Plains, 25 in the Foothills, and 12 in the Alpine). Each student was discussed between 1 and 5 times over the course of the year.
- **Dashboards**
  The AEO Office continues to expand the number of individualized Dashboards for outcome tracking that are created with the evaluation and assessment data we collect. We have Dashboards for each phase of the Trek curriculum that allow for visual representation of data and facilitate comparisons across courses and years. In addition, we have dashboards to monitor key metrics such as failure of NBME Shelf exams and performance on NBME comprehensive exams that are accessible only to certain individuals.
- **Dashfolio**
  The Dashfolio is the flagship dashboard developed and maintained by the AEO Office, providing visual displays of individual student performance across all curricular phases to help identify areas of strength and areas for improvement and guide learning over time. A Demo Dashfolio is publicly available, which was compiled using the data from more than a dozen students to demonstrate the functionality and utility of this dashboard. Students meet periodically with their mentors to review and interpret information in their Dashfolio, and the TPC members use the Dashfolio to track student progress.
- **Student Data Advisory Committee (SDAC)**
  The SDAC is led and managed by the AEO Office and oversees all research studies using medical students as subjects. The committee reviews all surveys and requests for data. During AY 23-24, SDAC reviewed 33 different projects, approving 29 of them which were then distributed to students. In addition, we successfully created an IRB approved data repository that can now be used for secondary research to promote increased educational scholarship based on the data we collect for assessment and evaluation.
- **Research support**
  The AEO Office regularly works with students and faculty to support their educational research projects and collect high-quality data from medical students while protecting confidentiality. During AY 23-24, AEO Office team members contributed to 18 manuscripts that have been published or submitted for publication. We also provided various levels of support for dozens of oral and poster presentations at local and national meetings. Now that the Trek curriculum is fully implemented, we are beginning to publish on curricular outcomes including topics like preceptor retention in the LIC model, differences between students trained in an LIC vs. traditional block rotations, new approaches to assessment, and our approach to spiraling content throughout the curriculum.

Assessment, Evaluation, and Outcomes Office team members:

Tai Lockspeiser, MD, MHPE – Assistant Dean of Medical Education – Assessment, Evaluation, and Outcomes
Rachael Tan, PhD – Director of Office of Assessment, Evaluation, and Outcomes
Erin Broening – Evaluator
Wendy Christensen, PhD – Statistician
Sheilah Jiménez, MA – Professional Research Assistant
Sean Marshall, MA – Outcomes Program Manager
Jonathan Menke – Assessment Specialist
Susan Peth – Evaluation Program Manager
Marisha Roberts – Coordinator
See the AEO Office website for additional information.

Office of Student Life

The Office of Student Life (OSL) houses both Student Affairs and Admissions. OSL is headed by Brian Dwinnell, who serves as the Associate Dean for Student Life, having responsibility for both Admissions and Student Affairs. There are several outstanding Assistant Deans in OSL including Dr. Jeff SooHoo now serves as both an Assistant Dean of Admissions and Assistant Dean of Students Affairs. Dr. Deborah Seymour serves as an Assistant Dean of Student Affairs for Student Success. Dr Nida Awadallah, who has served as the Director of Clinical remediation and as an Assistant Dean of Students Affairs. Dr's Elizabeth Gundersen and Maurice Scott, both palliative care physicians, serve as Assistant Deans in Student Affairs as well. Dr. Maurice Scott also has a role working with the Associate Dean of Diversity, Equity and Inclusion, Dr. Amira del Pino-Jones. Melanie Trinkwald is the Manager of Student Affairs, reporting to the Interim Director, Jodi Cropper, who has done a remarkable job in her role.

The mission of OSL is to provide support for applicants and students throughout their cycle with the School of Medicine and to specifically provide multiple levels of support to a diverse group of students in order to help ensure their academic success and to support their personal well-being. OSL provides services for prospective students, current students and graduates over the entire spectrum of their time with the School of Medicine and beyond. This starts when a candidate expresses an interest in being considered for the MD program, continues through their matriculation and time as a student and into their careers as they need support for medical licensing. The Office provides guidance, advice, and administrative assistance to applicants and students. The Office is responsible for the admissions interview and selection process, monitoring student registration, student progress and graduation. OSL organizes and manages many events including the Preview Day, the first-year orientation, the Matriculation (white coat/stethoscope) Ceremony, Match Day and the hooding and oath ceremony at graduation. OSL also holds regular live and virtual office hours along with which were well attended by students and faculty. Coming out of the pandemic the students experienced many unique mental health and financial issues for some students, which required additional OSL intervention.

Our Admissions Team is led by Assistant Dean for Admissions, Dr. Jeff SooHoo, and Admissions Manager, Karina Goodwin. There are two admissions professionals, Lamar Cherry and our newest addition, Yasmine Pugh. Lamar was promoted to a Senior Professional role and has taken over additional responsibilities. This small but efficient team manages 10,000 applications yearly, ultimately selecting 184 highly motivated and qualified students from remarkably diverse backgrounds. While the admissions team goal is to select a class that mirrors the community, this goal has become more challenging with the recent SCOTUS decision which does not allow the consideration of race and ethnicity in the application process. All interviews are conducted virtually as the approach has been successful and less expensive to applicants.

OSL provides organization and support for the Student Promotions Committee, which routinely involves very complicated student cases. The OSL team meets every Monday morning for an "Executive Committee" in which students needing additional support are discussed. OSL added the Assistant Dean for Assessment Evaluation and Outcomes, Dr. Tai Lockspeiser, to this committee in order to further coordinate support efforts with the Progress Committee. OSL also supports the Student Life Advisory Committee which is comprised of students from all levels and serves as an advisory group to the Deans in OSL, Medical Student Council (MSC), and ultimately the Curriculum Steering Committee. The OSL Deans routinely attend MSC to provide the students with important updates as well as address student concerns. In addition, the OSL Deans actively participate in ASAL, the campus-wide committee for student affairs issues for all of the campus professional schools.

Financial aid and scholarships are also managed and/or tracked by OSL. Thanks to the efforts of our Financial Aid Officer, Deedee Colussy, along with expanded scholarship efforts led by Dean Zimmer, our Assistant Dean of Finance, Cindy Allen, and the Office of Advancement, we have been able to reduce our mean student debt.

For more information visit our website at: https://medschool.cuanschutz.edu/education/current-students

Scholarship Committees

- During the 2023-24 academic year, the office continued to manage the SOM Scholarship Committees, the Adler Scholarship Committee, as well as the ARCS scholarship process and several other scholarships. In this year, the School of Medicine provided scholarships to over 250 medical students, 26% of whom were entering students and 74% continuing. The total amount of scholarship money awarded was $5,571,052.

- The Dean's Distinguished Medical Scholarship program, a four-year half and full-tuition recruitment scholarship, was awarded to 23 incoming medical students who matriculated in 2023 as members of the class of 2027. Dean's Distinguished donors included the following: Anschutz Endowment Scholarship Fund, Battock Scholarship, Blackwood Scholarship Fund, CU Medicine MD Student Scholarship Fund, George Lopez Fund, and Diversity Scholarship Fund.

- 5 seniors received a total of $20,000 in Adler MSA Scholarship in recognition of excellence for their completed MSA projects.

- 12 students received ARCS Scholarships based on research excellence for $7,500 each, totaling $90,000.

For more information visit our website at: https://medschool.cuanschutz.edu/education/md-admissions/requirements/financial-aid-costs

Student Affairs

The Student Affairs group is headed by Brian Dwinnell, who serves as the Associate Dean for Student Life, having responsibility for both Admissions and Student Affairs in the Office of Student Life (OSL). There are several part time Assistant Deans in OSL. Each Assistant Dean shares in particular duties such as MSPE's, student advising, etc., but also each has specific responsibilities. Dr. Jeff SooHoo now serves as both an Assistant Dean of Admissions and Assistant Dean of Students Affairs. Dr. Deborah Seymour serves as an Assistant Dean of Student Affairs for Student Success. Dr Nida Awadallah, who has served as the Director of Clinical remediation is now an Assistant Dean of Students Affairs, still overseeing clinical remediation. Dr's Elizabeth Gundersen and Maurice Scott, both palliative care physicians, serve as Assistant Deans in Student Affairs as well. Dr. Maurice Scott also has a role working with the Associate Dean of Diversity, Equity and Inclusion and serves as our point person for both the Colorado Springs and Ft Collins Branches. Dean Gundersen serves as the point person for the Rural LIC and oversees our Scholars Year Program. Melanie Trinkwald is the Manager of Student Affairs, reporting to Jodi Cropper, who has served in outstanding fashion as the interim Director of OSL. Jodi Cropper has begun a process to evaluate various IT systems OSL uses as well as redefining responsibilities, such as course building and grades which are currently managed in OSL.

The COMPASS (COaching, Mindful reflection, Professional identify formation, Assessment, Self-directed learning, & Self-care) Program, is also housed in OSL. Dr. Lawrence Haber enters his 3rd year as the director. COMPASS is an individualized mentoring program that pairs students in groups of 10 with a single faculty member, focused on supporting that student throughout all four years of medical school. Student Navigators (4th year student near peer advisors) are also assigned, allowing for longitudinal mentorship throughout student's time here. guides have three main pillars of responsibility- Coaching, with faculty development a huge focus of the School of Medicine, with an innovative program around coaching, with an emphasis on professional identity formation, developed by outside consultants; Teaching, with these guides responsible for educating on Health and Society topics; and assessment, with the guides responsible for giving feedback and serving in a grading capacity for students who they do not coach. COMPASS was developed due to a greater need for individual student support as it relates to academic success and the stressors of medical school. We have 2 separate groups of Guides who will be working with 2 cohorts of students either 1st and 3rd year student groups, or 2nd and 4th year groups. Outcomes thus far are related to student satisfaction with their guides and the program. The ratings have been uniformly extremely positive.

The Office of Medical Education have also funded a Director of Career Advising position, and Dr. Jenny Soep, who works closely with the OSL Deans around career advising. Dr. Soep will be entering her 2nd year in this role. The feedback regarding the guidance she provides for the application process and the organization and availability of specialty advisors has been very positive. With the changes in the Electronic Residency Application System (ERAS) and the move to more holistic review with Step 1 becoming PASS/FAIL, Dr. Soep provides oversight of the specialty advisors and provides guidance to students as they enter the application process. She has also been instrumental in understanding new applications systems, such as those used by Plastic Surgery and now OB/GYN.

The Office of Student Life (OSL) is responsible for the oversight of most student support services including academic, career and personal advising, financial aid, residency applications, support and referrals for struggling students, and USMLE Step Exam preparation. Our office works closely with several campus resources including ODAI (Office of Disability Access and Inclusion), Student Mental Health, Student Engagement and Outreach, Office of Diversity Equity and Inclusion to name a few. Our remediation team with Dr. Deb Seymour Dr. Nida Awadallah, continues to have a measurable impact. We have seen a significant reduction in the Step 1 failure rate thus far, and an increase in our mean Step 2 score. We continue to discuss expanding our remediation efforts, including working with the Progress Committee on a more proactive approach to identifying and providing early intervention for struggling learners and faculty development with our COMPASS Guides and LIC sites to expand our web of support. There are also efforts to structure remediation in the clinical setting. A remediation task force is currently meeting to develop a long-term plan. OSL is also responsible for the coordination of major student activities MSC funding and events, student interest groups, orientation, the match process, Match Day, graduation, visiting externs, student scheduling, and the Student Promotions Committee.

In 2019, the University approved the creation of a Master's in Medical Science degree. This degree is for students who have at least completed the preclinical curriculum but do not to continue in the MD program. This degree recognizes the significant amount of effort and discrete knowledge our students obtain during these two years and may assist in obtaining employment in a variety of fields going forward. We plan to begin an effort to catalogue career paths taken by our Master's recipients.

Areas of responsibilities and service include:

- Working with students having academic or personal struggles; connecting them with our learning resource experts and/or making appropriate referrals
- Career advising and creation of the Medical Student Performance Evaluation (MSPE)
- Overseeing major events, including Orientation, Match Day, and Graduation
- Overseeing USMLE Step 1 and 2 preparations
- Providing programming and support for students in the areas of personal and professional development, career exploration and planning, stress and burn-out, student wellness and study/time management skills, and preparation for the Match
- Providing programming and support for the COMPASS Program and other faculty who are mentoring or advising students
- Providing learning specialists to assist students with academic preparation
- Working with specialists in the financial aid office to support student debt management
- Working with donors and departments to provide and administer scholarships and awards
- Scheduling and course creation as well as confirming grades for all four phases
- Manage the visiting student (extern) process using VSLO, both from the home school and the host school
- Tracking student data including grades, evaluations, absences, clinical requirements
- Advocating for students by sitting on the various curriculum committees at the School of Medicine
- Overseeing and providing support for Medical Student Council, OSR, student interest groups, AOA, and GHHS
- Working with the Student Promotions Committee for successful transitions and remediation. When necessary, work with the struggling students to facilitate the decisions of the Student Promotions Committee
- Working with the Progress Committee to provide support and coordinate messaging for students in need of additional support.
- Interfacing with national organizations as it relates to medical student experiences (e.g. AAMC, NBME, etc.)
- Meeting with student leadership including class and MSC presidents and OSR representatives.
- Coordinate with legal counsel regarding policy and individual student issues
- Communicate with CPHP regarding students referred for additional support

On March 15, 2024, Match Day was held in person at the Marcy and Bruce Benson Atrium in the new Anschutz Health Sciences Building. The Class of 2024 was smaller by design due to the curricular reform process. 151 students matched into residency positions. The table below shows a full list of specialty matches. 39% matched in potential Primary Care specialties (Family Medicine, Internal Medicine, Medicine – Primary track, Med-Peds, and Pediatrics). Some of these students may ultimately choose to specialize in a non-primary care field.

The top residency choices included Internal Medicine (30 categorical matches), Family Medicine (17 matches), Anesthesiology and Emergency Medicine (each with 12 matches), Pediatrics (8 matches), Orthopedics (6 matches) and OB/GYN (6 matches)

Colorado will retain 29% of the class and California will receive 15% of the class. We placed students in 31 different states.

2024 Residency Match Data	
Specialty Choice	Number of Students
Anesthesiology	12
Dermatology	1
Emergency Medicine	12
Family Medicine	17
Family Med-Psychiatry	1
General Surgery	8
Internal Medicine	30
Medicine-Pediatrics	4
Medicine-Preliminary	1
Medicine-Psychiatry	1
Neurological Surgery	5
Neurology	7
Obstetrics-Gynecology	6
Ophthalmology	2
Orthopaedic Surgery	6
Otolaryngology	2
Pathology	1
Pediatrics	8
Phys Medicine & Rehab	2
Plastic Surgery (Integrated)	1
Psychiatry	5
Radiology-Diagnostic	5
Surgery-Preliminary	4
Urology	6
Total Distinct Students	151

On May 20, 2024, 151 students graduated with M.D. degrees during an in-person ceremony in person, in Boettcher Commons.

For more information visit our website at: https://medschool.cuanschutz.edu/education/current-students

Admissions

The Office of Admissions continues to be led by **Jeffrey SooHoo,MD, MBA**, Assistant Dean of Admissions. Since the beginning of the COVID-19 pandemic, interviews for the School of Medicine have been conducted virtually. The School of Medicine received 10,003 primary applications for 184 seats in the Class of 2028. Of the 183 entering students, 9 students entered the MD/PhD Program, 28 will participate in the Colorado Springs Branch Campus Longitudinal Integrated Clerkship and 12 will enter the CU/CSU branch campus in Fort Collins. Additionally, the Office of Admissions recruited and interviewed applicants for multiple pathway programs, accepting students into the University of Colorado Denver BA/BS-MD Program and the University of Colorado Denver Post-Baccalaureate Program.

The Office of Admissions continues to employ a holistic admission process. Grades and MCAT scores are significant variables in deciding who is invited for interviews, but greater emphasis is placed on the total application which includes letters of recommendation, primary and supplemental essays, and the applicant's experiences and attributes. The admissions process also requires that applicant's complete and online situational judgment test to better assess non-cognitive competencies expected of entering medical students.

Demographics

Class of	2026	2027	2028
Class Size	184	184	183
Female	99	104	89
Male	85	80	93
CO Resident	94	78	94
Non-Resident	90	106	89
URiM*	49	48	30
Average Age	25	25	24
Cumulative GPA	3.73	3.80	3.82
Math/Science GPA	3.69	3.77	3.78
MCAT (total)	514	515	515

* Under-represented in Medicine as defined by CUSOM Diversity Plan

Applicant Data 2023-2024

Primary AMCAS Applications: 10,003
Completed Secondary Applications: 5,684
Interviewed: 661
Offers of Admission: 397

Annual achievements include:

- Successful recruitment of twelve students that matriculated into the CU/CSU Branch Campus in Fort Collins, 28 into the Colorado Springs Branch, and 18 students into the Rural Program.
- Continued partnership with the Office of Advancement and Scholarship Committee, with a record number of Dean's Distinguished Scholarships distributed to incoming students.

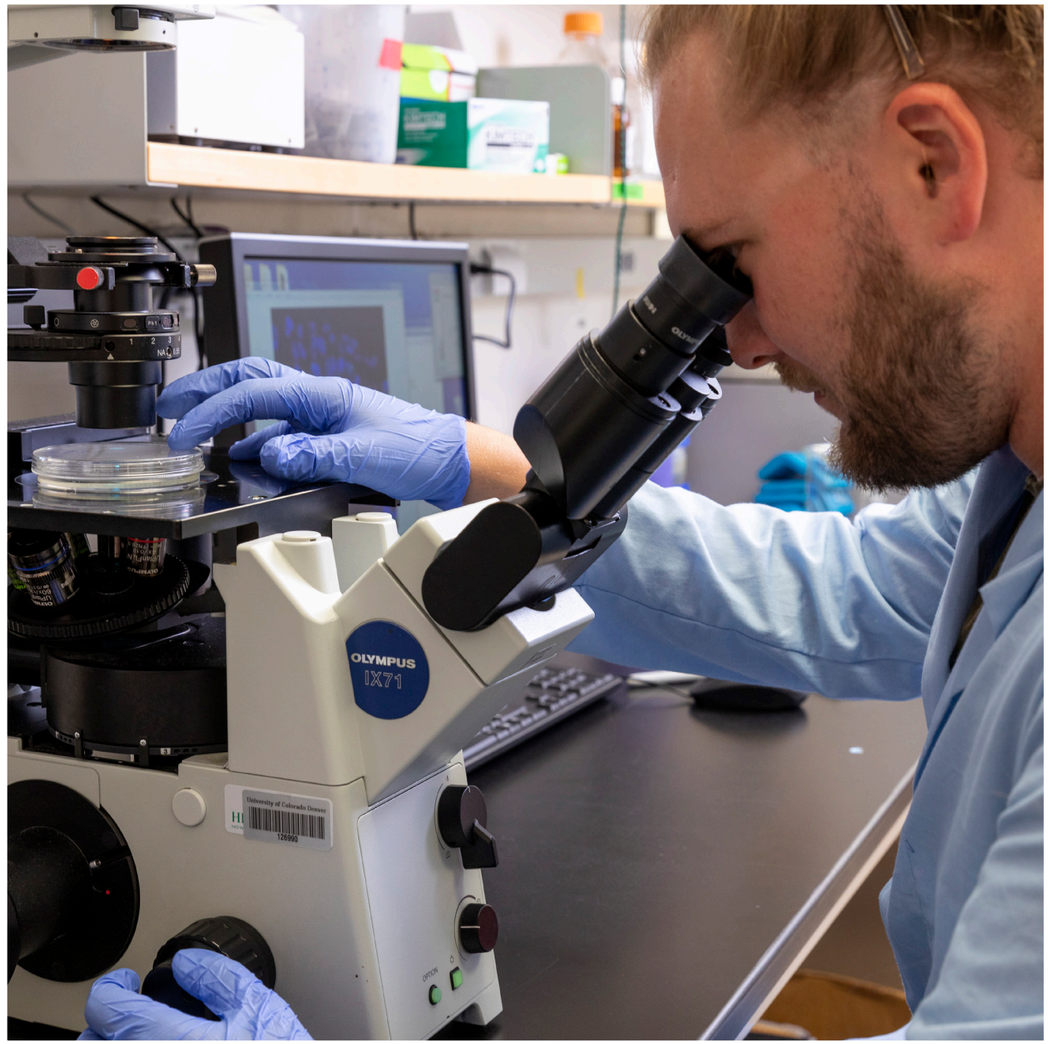
The office continues to seek faculty for committee membership. If interested, please contact the Office of Admissions at md-admissions@cuanschutz.edu.

Additional detailed information may be found at:
http://www.ucdenver.edu/academics/colleges/medicalschool/education/Admissions/Pages/admissions.aspx

Senior Program Leadership
Jeffrey R. SooHoo, MD, MBA
Assistant Dean of Admissions

Brian Dwinnell, MD
Associate Dean for Student Life

RESEARCH



Research Advisory Committee

The Research Advisory Committee (RAC) was established by the Research Strategic Plan of 2003 to advise the Dean of the School of Medicine and the campus Vice Chancellor for Research on matters related to research. The committee meets monthly. RAC deliberations during this year included a comprehensive review the institutional procurement strategy and updates on improvements, a review of campus research space guidelines, discussions around cybersecurity and future planning for the campus research community and conversations around HR topics and pain points. The group also discussed strategies to improve access to shared resources, including the multiple tissue and biobanks that are available on campus. Recommendations on these topics were provided to the Dean's Office and the Office of the Vice Chancellor for Research.

https://medschool.cuanschutz.edu/research/research-development/research-advisory-committee

Research Advisory Committee

Eric Clambey, PhD - Committee Chair
Peter Buttrick, MD
Emily Bates, PhD
Bryan Bergman, PhD
Thomas Campbell, MD
Jason Christie, PhD
James Costello, PhD
Thomas Flaig, MD
Casey Greene, PhD
Edward Janoff, MD
Thomas Jansson, PhD
Kerrie Moreau, PhD
Roberta Pelanda, PhD
Cody Rester, BS
Suzann Staal
Ron Sokol, MD
Lori Sussel, PhD
Fernando Holguin, MD, MPH
Carol Sartorius, PhD
Charles Sagerstrom, PhD

Bridge Funding

The Bridge funding program of the CU School of Medicine was established in 2006 to provide support to principal investigators while they reapply for grant funding. The Bridge Funding Committee is advisory to the Dean. Applica-tions are reviewed twice a year, typically in April and October. Between 2006 and October 2024, 263 awards have been made to 224 faculty members for a total amount of $12.9 million. From 2006 through April 2016, 136 of these awardees, who received $8.18 million in bridge awards, have gained $111.0 million in total research dollars, a more than 13.5-fold return on investment on Bridge funding grants.

https://medschool.cuanschutz.edu/research/research-development/bridge-funding

Research Advisory Committee

Raphael Nemenoff, PhD – Committee Chair
Peter Buttrick, MD
John Cambier, PhD, MS
Mair Churchill, PhD
Nancy Hadley-Miller, MD
Wendy Kohrt, PhD
Ed Melanson, PhD
Kurt Stenmark, MD
Darcy Thompson, MD, MPH

Strategic Infrastructure for Research Committee

The Strategic Infrastructure for Research Committee (SIRC), created in 2003, reviews proposals to fund research infra-structure that can be available as a core facility or program to all appropriate users on campus. One of the major bene-fits of the SIRC process is critical peer review with constructive comments that strengthens the quality and productivity of the School of Medicine's research and has improved the efficiency of the Dean's Academic Enrichment Fund (AEF). Applications for ongoing cores must include a plan for sustainability. This committee is advisory to the Dean.

SIRC applications are reviewed twice a year, typically in April and October. . Through the October 2024 review, the SIRC process has made 123 awards totaling $20.1 million. Six additional 2-to-5-year awards, totaling $7.3 million, were made to projects identified at a 2009 research retreat.

SIRC-approved research infrastructure includes:

Core facilities in high-throughput genomics and metabolomics, biomedical informatics, advanced light microscopy, tissue banking, small-animal imaging, mouse behavior, and the Clinical-Translational Research Imaging Core.

Core programs granting an MS or PhD in medical science for medical and graduate students and faculty, year-long mentorships in outcomes research, biostatistics support, patient databases in pregnancy and developmental disabilities, and a biorepository.

https://medschool.cuanschutz.edu/research/research-development/strategic-infrastructure-for-research-committee

Research Advisory Committee

Cristin Welle, PhD – Committee Chair
Lisa Brenner, PhD
Peter Buttrick, MD
Chris Gignoux, PhD
Huntington Potter, PhD
Rebecca Schweppe, PhD
Eric Pietras, PhD
Olivia Rissland, PhD
Natalie Vergara, PhD
Beth Tamburini, PhD

New Research Grants > $500,000 Awarded FY 2024

PI	Sponsor Name	Project Title
Abuogi, Lisa	National Institute of Mental Health/NIH/DHHS	Integration of a collaborative care model for mental health services into HIV care for pregnant and postpartum women in Kenya (the Tunawiri Study)
Ackert-Bicknell, Cheryl	National Institute of Arthritis & Musculoskeletal and Skin Diseases/NIH/DHHS	Identification of Gene Regulating PTH-mediated Skeletal Strength
Agrawal, Yuri	National Institute on Aging/NIH/DHHS	Clinical trial of vestibular therapy to reduce falls in patients with Alzheimer's disease
Agrawal, Yuri	National Institute on Aging/NIH/DHHS	Impact of vestibular loss on central vestibular pathways in aging adults
Allen, Larry	Patient-Centered Outcomes Research Institute	Implementation and Interaction of Clinician And Patient-facing Tools Aiming to Intensify Neurohormonal medicines for Heart Failure with reduced ejection fraction (I-I-CAPTAIN-HF)
Alvarez, Enrique	Immunic AG	Multicenter, Randomized, Double-blind, Placebo-controlled Study to Evaluate Efficacy, Safety, and Tolerability of IMU-838 in Patients with Progressive Multiple Sclerosis
Amara, Amy	Koneksa Health, Inc.	A Two Part, Observational Basket Study to Determine Usability, Validity and Biomarker Discovery for Mobile EEG, Wearable and Device Collected Objective Measurement of Disturbed Sleep and Neurologic Disorders (LEARNS)
Amara, Amy	Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD)/NIH/DHHS	Slow wave sleep as a biomarker of rehabilitation-induced cognitive improvement in Parkinson's disease
Ambardekar, Amrut	Alexion Pharmaceuticals, Inc.	A Phase 3, Randomized, Double-blind, Placebo-controlled, Multicenter Study to Evaluate the Efficacy and Safety of Amyloid Depleter ALXN2220 in Adult Participants with Transthyretin Amyloid Cardiomyopathy (ATTR-CM)
Appel, Bruce	National Institute of Neurological Disorders and Stroke/NIH/DHHS	Mechanisms of Developmental Myelination
Asturias, Francisco	Office of the Director/NIH/DHHS	Talos Arctica Electron Microscope Imaging System Upgrade
Bair, Steven	Merck Sharp & Dohme Corp	MK-2140-006-01, A Multicenter, Open-label, Phase 2 Basket Study to Evaluate the Safety and Efficacy of MK-2140 as a Monotherapy and in Combination in Participants with Aggressive and Indolent B-cell Malignancies.
Bale, Tracy	National Institute of Mental Health/NIH/DHHS	Extracellular vesicles as biomarkers of trauma and PTSD risk.
Bale, Tracy	National Institute of Mental Health/NIH/DHHS	Paternal stress epigenetic programming of offspring neurodevelopment
Bale, Tracy	Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD)/NIH/DHHS	Placental epigenetic mechanisms contributing to sex-specific impacts of maternal stress on fetal development
Barbour, Linda	Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD)/NIH/DHHS	Triglycerides as a Predictor of Newborn Subcutaneous and Liver Fat: Contributors to Fetal Fat Accretion in Obese Pregnancies
Barker, Alexander	Anymedi Inc.	Advancement and globalization of medical twin core technology based on medical images
Barlow, Linda	National Institute on Deafness and Other Communication Disorders/NIH/DHHS	The role of Kit signaling in taste bud regeneration
Barlow, Linda	National Institute on Deafness and Other Communication Disorders/NIH/DHHS	Characterization of progenitor populations in adult taste epithelium
Baumgartner, William	National Center for Advancing Translational Sciences/NIH/DHHS	State of the Art Text Mining for Translator
Bebarta, Vikhyat	Department of the Army/DOD	Dual Threat Combat Injury: Optimizing Combat Casualty Care for Combined Trauma/Shock and Chemical Attack (C4TraCe) - A Translational Combat Relevant Model
Belkind-Gerson, Jaime	National Institute of Diabetes and Digestive and Kidney Diseases/NIH/DHHS	Schwann Cell-derived neuro-gliogenesis
Benke, Timothy	National Institute of Neurological Disorders and Stroke/NIH/DHHS	Multi-site validation of biomarkers and core clinical outcome measures for clinical trials readiness in CDKL5 Deficiency Disorder
Bennett, Jeffrey	Genentech, Inc.	A PHASE III, RANDOMIZED, DOUBLE-BLIND, PLACEBO-CONTROLLED, MULTICENTER STUDY TO EVALUATE THE EFFICACY, SAFETY, PHARMACOKINETICS, AND PHARMACODYNAMICS OF SATRALIZUMAB AS MONOTHERAPY OR IN ADDITION TO BASELINE THERAPY IN PATIENTS WITH MYELIN OLIGODENDROCYTE GLYCOPROTEIN ANTIBODY ASSOCIATED DISEASE (MOGAD)
Bennett, Tellen	Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD)/NIH/DHHS	Novel Pediatric Sepsis Criteria and Clinical Decision Support Tools
Benninger, Richard	Office of the Director/NIH/DHHS	Inverted multi-photon confocal microscope
Benninger, Richard	National Institute of Diabetes and Digestive and Kidney Diseases/NIH/DHHS	Developing ultrasound contrast agents and signal processing for structural and functional imaging in type 1 diabetes
Bentley, Ann-Charlotte	National Institute on Aging/NIH/DHHS	Exosome biology in Alzheimer's disease and concussion
Bentley, David	National Institute of General Medical Sciences/NIH/DHHS	Coupling of transcription elongation and termination with pre-mRNA processing
Berge, Jerica	National Heart, Lung, and Blood Institute/NIH/DHHS	Reducing Childhood Obesity Using Ecological Momentary Intervention (EMI) and Video Feedback at Family Meals
Berge, Jerica	National Heart, Lung, and Blood Institute/NIH/DHHS	Examining Pathways Between Food Insecurity and Cardiometabolic Health in Diverse Children and Adolescents
Berge, Jerica	National Heart, Lung, and Blood Institute/NIH/DHHS	Examining How Psychosocial Stress Gets "Under the Skin" and Leads to Cardiovascular Disease Risk in Diverse Children: A Mixed-Methods Study
Bergman, Bryan	National Institute of Diabetes and Digestive and Kidney Diseases/NIH/DHHS	Effect of weight loss on intermuscular adipose tissue (IMAT) signaling
Bergman, Bryan	National Institute on Aging/NIH/DHHS	Effects of aging and exercise training on intermuscular adipose tissue (IMAT) in MoTrPAC
Bergouignan, Audrey	National Institute of Diabetes and Digestive and Kidney Diseases/NIH/DHHS	Breaking up sedentary behaviors to improve glucose control in a population at risk for developing type 2 diabetes
Bessesen, Daniel	Novo Nordisk Pharmaceuticals, Inc.	NN9838-7832: Efficacy and safety of cagrilintide 2.4 mg s.c. in combination with semaglutide 2.4 mg s.c. (CagriSema s.c. 2.4 mg/2.4 mg) once-weekly compared to tirzepatide 15 mg s.c. once-weekly in participants with obesity
Bessesen, Daniel	Eli Lilly and Company	A Master Protocol to Investigate the Efficacy and Safety of LY3437943 Once Weekly in Participants without Type 2 Diabetes who have Obesity or Overweight: A Randomized, Double-Blind, Placebo-Controlled Trial (TRIUMPH-1)
Bessesen, Daniel	National Institute of Diabetes and Digestive and Kidney Diseases/NIH/DHHS	Research Training Program in Metabolism, Obesity and Type 2 Diabetes
Betz, Marian	Advanced Technology International	Phase 2: Protective Environments: Military Community Engagement to Prevent Firearm-Related Violence
Bjornstad, Petter	Novo Nordisk Pharmaceuticals, Inc.	Type 1 Diabetes Impacts of Semaglutide on Cardiovascular Outcomes (T1-DISCO)

Bonaca, Marc	Merck, Sharp and Dohme Corp	A Phase 3 Randomized, Placebo-Controlled Clinical Study to Evaluate the Efficacy and Safety of MK-0616 in Reducing Major Adverse Cardiovascular Events in Participants at High Cardiovascular Risk (MK-0616-015-0146)
Borengasser, Sarah	Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD)/NIH/DHHS	Preconception Maternal Nutrition, Offspring DNA Methylation, and Infant Growth in Low Resource Settings
Bosque, Patrick	Ionis Pharmaceuticals	A Phase 1/2a Study to Evaluate the Safety, Tolerability, Pharmacokinetics and Pharmacodynamics of Intrathecally Administered ION717 in Patients with Prion Disease
Bradley, Cathy	National Cancer Institute/NIH/DHHS	Cancer Caregivers and Their Struggle(s) between Work and Family
Brown, Laura	Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD)/NIH/DHHS	Regulation of Fetal Skeletal Muscle Growth in IUGR
Brubaker, Lindsay	Us Army Medical Research Acquisition Act/DOD	The Department of Defense Ovarian Cancer Academy Early-Career Investigator Award
Brubaker, Lindsay	AstraZeneca AB	D8990C00001 FONTANA: A Modular Phase I/IIa, Open-label, Multi-center Study to Assess the Safety, Tolerability, Pharmacokinetics, and Preliminary Efficacy of Ascending Doses of AZD5335 Monotherapy and in Combination with Anti-cancer Agents in Participants with Solid Tumors
Bruce, Kimberley	National Institute on Aging/NIH/DHHS	Targeting Microglial Lipoprotein Lipase in Alzheimer's disease
Brush, Matthew	National Center for Advancing Translational Sciences/NIH/DHHS	A Common Dialect for Infrastructure and Services in Translator
Brzezinski, Joseph	National Eye Institute/NIH/DHHS	Mechanisms of cell fate specification and competence regulation in photoreceptors
Burnham, Ellen	National Institute on Alcohol Abuse and Alcoholism/NIH/DHHS	CoPARC: Colorado Pulmonary-Alcohol Research Collaborative
Campbell, Eric	Massachusetts Institute of Technology	Revolutionizing the oral route: delivery of electroceuticals and mRNA therapeutics for transforming health
Campbell, Thomas	University of California at San Diego	Colorado AIDS Clinical Trials Unit
Canto-Soler, Valeria	National Eye Institute/NIH/DHHS	Cell-based therapies for retinal degeneration
Cardenas, Jessica	Us Army Medical Research Acquisition Act/DOD	Platelet-Derived Extracellular Vesicles for Hemorrhage Control and Prevention of Hemorrhagic Shock
Casillas, Katherine	Colorado Department of Human Services	SafeCare? Colorado Program Intermediary Services
Catenacci, Victoria	National Institute of Diabetes and Digestive and Kidney Diseases/NIH/DHHS	Does When You Exercise Matter? A Randomized Trial Comparing the Effect of Morning versus Evening Aerobic Exercise on Weight Loss and Compensatory Behaviors
Cervantes, Lilia	National Institute of Diabetes and Digestive and Kidney Diseases/NIH/DHHS	NAVIGATE KIDNEY: A Multi-Level Intervention to Reduce Kidney Health Disparities
Chaudhry, Naveed	Biohaven Pharmaceuticals	A Phase 2/3 Multicenter, Randomized, Double-Blind, Placebo-Controlled, Study to Evaluate the Efficacy, Safety and Tolerability of Adjunctive Treatment with BHV-7000 in Subjects with Focal Onset Epilepsy
Chonchol, Michel	National Institute on Aging/NIH/DHHS	Clonal hematopoiesis, mild cognitive impairment and kidney function decline
Chonchol, Michel	National Institute of Diabetes and Digestive and Kidney Diseases/NIH/DHHS	Inspiratory muscle strength training for lowering systolic blood pressure in midlife and older adults with chronic kidney disease
Christie, Jason	Once Upon a Time Foundation	Automated head-fixed training device for mice
Christie, Jason	National Institute of Neurological Disorders and Stroke/NIH/DHHS	Organization of inhibition in the cerebellar cortex

Claw, Katrina	National Human Genome Research Institute/NIH/DHHS	Pharmacogenomic approaches to drug metabolism in American Indian/Alaska Native People
Cohen, Mitchell	National Institute of General Medical Sciences/NIH/DHHS	Mechanisms of Trauma Induced Coagulopathy
Cohen, Mitchell	ABSS Solutions, Inc. (?ASI?)	Precision Medicine Phenotypes and Prediction for Trauma Casualties
Cohen, Mitchell	ABSS Solutions, Inc. (?ASI?)	Applied systems biology for traumatic coagulopathy tailored for the combat casualty
Colborn, Kathryn	Agency for Healthcare Research and Quality/DHHS	Automated Surveillance of Postoperative Infections (ASPIN)
Colborn, Kathryn	Massachusetts General Hospital	Specialty versus Oncology Delivered Palliative Care for Patients with Acute Myeloid Leukemia
Cook, Linda	National Cancer Institute/NIH/DHHS	Improving Strategies for Cancer Reduction through Early-detection and ENgagement (I-SCREEN)
Corr, Bradley	Arsenal Biosciences, Inc	AB-1015-101 OPEN-LABEL PH 1STUDY TO EVALUATE THE SAFETY AND EFFICACY OF AB-1015 IN PATIENTS WITH PLATINUM-RESISTANT EPITHELIAL OVARIAN CANCER
Costello, James	National Cancer Institute/NIH/DHHS	Systems analysis of aggressive prostate cancer pathology
Creasy, Seth	National Institute of Diabetes and Digestive and Kidney Diseases/NIH/DHHS	Examining Time and Nutrient Dependent Effects of Aerobic Exercise on Energy Metabolism in Adults with Overweight and Obesity
Cree, Melanie	Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD)/NIH/DHHS	Role of semaglutide in restoring ovulation in youth and adults with polycystic ovary syndrome
Cripps, Michael	CSL Behring	A Prospective, Multicenter, Randomized, Double-Blind, Placebo-Controlled, Large Simple Trial Evaluating the Use of BE1116 (4-Factor Prothrombin Complex Concentrate [Kcentra(R) / Beriplex(R)]) to Improve Survival in Patients with Traumatic Injury and Confirmed or Suspected Acute Major Bleeding Predicted to Receive a Large Volume Blood Product Transfusion
Dabelea, Dana	Office of the Director/NIH/DHHS	Environmental influences on Child Health Outcomes - The Colorado ECHO Pediatric Cohort
D'Alessandro, Angelo	University of Pittsburgh	Massive Transfusion in Children II (MATIC-2)
D'Alessandro, Angelo	National Heart, Lung, and Blood Institute/NIH/DHHS	The role of ferroptosis in red cell aging in vivo and in vitro
Davidson, Jesse	Us Army Medical Research Acquisition Act/DOD	Proteomic approach to biomarker development for acute, subacute, and chronic organ injury after neonatal congenital heart disease surgery
Davidson, Jesse	National Heart, Lung, and Blood Institute/NIH/DHHS	Metabolic profiling and comprehensive metabolic pathway mapping: a systems biology approach to cardiovascular failure and organ injury following infant congenital heart disease surgery
Davila, Eduardo	American Cancer Society	Advancement of Scholars in Cancer Education aNd Training (ASCENT) program
DeCamp, Lisa	Agency for Healthcare Research and Quality/DHHS	Navigating Together for Equitable Asthma Management (Nav-TEAM) for Children in Families who Communicate in Languages other than English
DeCamp, Matthew	National Institute of Nursing Research NIH/DHHS	A mixed-methods study of the nature, extent and consequences of artificial intelligence (AI) for individualized treatment planning in end-of-life and palliative care (EOLPC)
deGruy, Frank	Colorado Department of Public Health and Environment/COLO	Four Communities addressing Health Equity through CCR

Dellacqua, Mark	National Institute of Mental Health/NIH/DHHS	L-type Ca2+ Channel Spike Regulation of Spine Structural Plasticity and Excitation-Transcription Coupling
Diamond, Jennifer	Genentech, Inc.	CO44194 A PHASE II, MULTICENTER, RANDOMIZED, DOUBLE-BLIND STUDY OF RO7247669 COMBINED WITH NAB-PACLITAXEL COMPARED WITH PEMBROLIZUMAB COMBINED WITH NAB-PACLITAXEL IN PARTICIPANTS WITH PREVIOUSLY UNTREATED, PD-L1?POSITIVE, LOCALLY-ADVANCED UNRESECTABLE OR METASTATIC TRIPLE-NEGATIVE BREAST CANCER
Diamond, Jennifer	Gilead Sciences, Inc.	GS-US-467-5643 Phase 1a/b Study to Evaluate the Safety, Tolerability, and Pharmacokinetics of GS-9716 as Monotherapy and in Combination With Anticancer Therapies in Patients With Solid Malignancies
Dixion, Kristen	Colorado Department of Human Services	Expansion of Residential Treatment for Men with Co-Occurring Disorders
Dixion, Kristen	Colorado Department of Human Services	Expansion of Behavioral Treatment Services for Adolescents and Young Adults (AYA)
Doran, Kelly	National Institute of Allergy and Infectious Diseases/NIH/DHHS	Host and bacterial mechanisms governing Group B streptococcal persistence in the female genital tract
Dreskin, Stephen	National Institute of Allergy and Infectious Diseases/NIH/DHHS	Exploiting and enhancing IgE-binding epitopes of the 2S albumins of peanuts and tree nuts
Drury, Ida	Colorado Department of Human Services	Child Welfare Training System
Eisenmesser, Elan	National Science Foundation/NSF	Directly observing the conformational changes of a serine protease
Elias, Anthony	Us Army Medical Research Acquisition Act/DOD	Androgen receptors in luminal breast cancer: effects on response to endocrine therapy and an immune-suppressive tumor immune microenvironment (TIME)
Elias, Anthony	National Cancer Institute/NIH/DHHS	NCI National Clinical Trials Network - Lead Academic Participant Sites
Elias, Anthony	Scorpion Therapeutics, Inc.	STX-478-101 First-in-Human Study of STX-478, a Mutant-Selective PI3K? Inhibitor as Monotherapy and in Combination With Other Antineoplastic Agents in Participants With Advanced Solid Tumor
Ellingson, Jarrod	National Institute on Drug Abuse/NIH/DHHS	The Effects of Cannabis Legalization and Persistent Use: A Longitudinal Study of Two Twin Cohorts
Erlandson, Kristine	National Institute on Aging/NIH/DHHS	The High-Intensity Exercise to Attenuate Limitations and Train Habits (HEALTH) in Older Adults with HIV
Ernst, Patricia	National Cancer Institute/NIH/DHHS	Escape from CAR T surveillance through lineage plasticity
Espinosa, Joaquin	National Institute of Arthritis & Musculoskeletal and Skin Diseases/NIH/DHHS	JAK Inhibition in Down Syndrome
Espinosa, Joaquin	Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD)/NIH/DHHS	Down Syndrome Connect Registry
Espinosa, Joaquin	National Institute on Deafness and Other Communication Disorders/NIH/DHHS	Multidimensional investigation of auditory dysfunction in Down syndrome
Espinosa, Joaquin	Children's Hospital of Philadelphia	Data Management and Portal for the INCLUDE (DAPI) Project
Espinosa, Joaquin	Children's Hospital of Philadelphia	DCC supplement for Experimental Models Portal and Enhanced Security
Evans, Christopher	National Heart, Lung, and Blood Institute/NIH/DHHS	Role of mucin in lung homeostasis and pathophysiology
Evans, Christopher	National Heart, Lung, and Blood Institute/NIH/DHHS	Mechanisms of lung macrophage programming by MUC5B during health and disease
Farcas, Andra	Purdue Pharma L.P.	A Pragmatic, Single Arm Trial of Prehospital Nalmefene for Treatment of Opioid Toxicity in a Population with High Fentanyl Use

Faubel, Sarah	National Heart, Lung, and Blood Institute/NIH/DHHS	Cardiac dysfunction after ischemic AKI in mice
Feuerstein, Jeanne	AbbVie, Inc.	A Phase 2 Multicenter, Randomized, Double-blind, Placebo-controlled Study of BOTOX(R) (Botulinum Toxin Type A) Purified Neurotoxin Complex for the Treatment of Upper Limb Essential Tremor
Fischer, Stacy	National Institute on Aging/NIH/DHHS	Decision trajectories of patients at the end of life: An epidemiological exploration of MAID and the impact on caregivers and clinicians
Flaig, Thomas	Merck Sharp & Dohme Corp	KEYMAKER-U04: Substudy 04B Ph 1/2 Randomized, Umbrella Study to Evaluate the Safety and Efficacy of Pembrolizumab Plus Enfortumab Vedotin (EV) in Combination With Investigational Agents Versus Pembrolizumab Plus EV, as First-Line Treatment for Participants With Advanced Urothelial Carcinoma
Ford, Heide	National Cancer Institute/NIH/DHHS	Reprogramming myogenic regulatory factors in RMS to promote differentiation and halt growth
Forsberg, Peter	Genentech, Inc.	CO43476, A PHASE I/II, OPEN-LABEL, MULTI-COHORT STUDY TO EVALUATE THE EFFICACY AND SAFETY OF CEVOSTAMAB IN PRIOR B CELL MATURATION ANTIGEN-EXPOSED PATIENTS WITH RELAPSED/REFRACTORY MULTIPLE MYELOMA
Franco, Santos	National Institute of Neurological Disorders and Stroke/NIH/DHHS	Temporal and Spatial Control of Oligodendrocyte Fate Specification
Friedman, Rachel	National Institute of Diabetes and Digestive and Kidney Diseases/NIH/DHHS	Mertk Mediated T Cell Suppression in the Pancreatic Islets During Type 1 Diabetes
Friedman, Sandra	Maternal and Child Health Bureau/HRSA/DHHS	JFK Partners Colorado LEND Program
Fritsch, Sandra	Colorado Department of Public Health and Environment/COLO	CoPPCAP; Colorado Pediatric Psychiatry Consultation & Access Program CDHS Contract
Frohnert, Brigitte	Leona M. And Harry B. Helmsley Charitable Trust	Implementation of Early Stage T1D Education and Support (ESTES)
Galbraith, Matthew	Office of the Director/NIH/DHHS	Trisomy 21 Model Atlas
Garcia, Anastacia	National Heart, Lung, and Blood Institute/NIH/DHHS	Glycosphingolipid-Mediated Cardiomyocyte and Immune Cell Dysfunction in Hypoplastic Left Heart Syndrome
Garg, Satish	Dexcom, San Diego, CA	Evaluation of the Investigational Dexcom Continuous Glucose Monitoring (CGM) Sensor in Adult and Pediatric Subjects
Gerich, Mark	AbbVie, Inc.	A Multicenter, Randomized Study to Evaluate the Safety and Efficacy of Lutikizumab for Induction and Maintenance Therapy in Subjects with Moderately to Severely Active Ulcerative Colitis
Gignoux, Christopher	National Human Genome Research Institute/NIH/DHHS	Genomic Approaches to Population Health in Multi-Ethnic Hospital Systems
Ginde, Adit	SeaStar Medical	Neutralize AKI
Ginde, Adit	Vanderbilt University Medical Center	Surveillance of Acutely Ill Adults with Respiratory Viruses, including SARS-CoV-2
Glasgow, Russell	National Cancer Institute/NIH/DHHS	Pragmatic implementation Science Approaches to Assess and Enhance Value of Cancer Prevention and Control in Rural Primary Care
Goldberg, Elizabeth	National Institute on Aging/NIH/DHHS	GAPcare II: The Geriatric Acute & Post-acute Care Coordination Program for Fall Prevention in the Emergency Department
Guthmiller, Jenna	University of Illinois	Investigating and engineering the avian and human antibody response to target emerging influenza viruses
Guthmiller, Jenna	University of Georgia/GA	Analysis of human B cells response to influenza vaccination in high-risk populations
Gutman, Jonathan	AlloVir	P-105-401, Global Registry for Long-Term Follow-up of Patients Participating in Clinical Trials with Posoleucel (ALVR105)

Haemer, Matthew	National Institute of Diabetes and Digestive and Kidney Diseases/NIH/DHHS	Family Inclusive Childhood Obesity Treatment designed for Low Income and Hispanic Families
Haendel, Melissa	Office of the Director/NIH/DHHS	All of Us Center for Linkage and Acquisition of Data (CLAD)
Haendel, Melissa	Office of the Director/NIH/DHHS	The Monarch Initiative: Linking Diseases to Model Organism Resources
Haendel, Melissa	New York University School of Medicine	Collaborative Analytics for EHR- and Other Real-World Data in N3C
Haskins, Kathryn	National Institute of Diabetes and Digestive and Kidney Diseases/NIH/DHHS	Hybrid Peptides as Autoantigens for Diabetogenic CD4 T Cells
Hayashi, Masanori	Us Army Medical Research Acquisition Act/DOD	Investigation of cell-free DNA to define MYC activity in Osteosarcoma
Hedjazi Moghari, Mehdi	National Heart, Lung, and Blood Institute/NIH/DHHS	Simulating Cardiac Surgery for Children with Severe Congenital Heart Disease
Hesselberth, Jay	National Science Foundation/NSF	MFB: Cracking the codes: understanding the rules of mRNA localization and translation
Hesselberth, Jay	National Institute on Aging/NIH/DHHS	Biochemistry at single-cell resolution: a new approach to understand functional heterogeneity
Holers, Vernon	National Institute of Arthritis & Musculoskeletal and Skin Diseases/NIH/DHHS	CU Center for the Study of Mucosal Immunobiology in Rheumatic Disease Pathogenesis
Holguin, Fernando	National Heart, Lung, and Blood Institute/NIH/DHHS	SANDIA: Supplementing L-citrulline to overweight late Asthma oNset phenotypes to increase airway L-arginine/ADMA ratio and Improve Asthma control
Holguin, Fernando	Department of the Army/DOD	Study to improve Deployment related Asthma by using L-citrulline Supplementation (SEALS)
Holien, Michel	Colorado Department of Human Services	R-02 Youth Homelessness Prevention
Hollinshead, Dana	Westat, Inc.	Chafee Strengthening Outcomes for Transition to Adulthood
Hopfer, Christian	National Institute on Drug Abuse/NIH/DHHS	Effects of High Potency Cannabis Products on Mental Health and Psychosocial Functioning
Hopfer, Christian	National Institute on Drug Abuse/NIH/DHHS	Adult Progression of Adolescent Onset Substance Use Disorder in a High Risk Sample
Horswill, Alexander	National Institute of Allergy and Infectious Diseases/NIH/DHHS	Quorum sensing, diversity and skin inflammation
Howell, David	Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD)/NIH/DHHS	Modulating Exercise Dosage to Improve Concussion Rehabilitation: A Randomized Clinical Trial
Hsieh, Wen-Yuan	Lupus Research Alliance	The genetic and immunological determinants of childhood lupus nephritis
Hsieh, Wen-Yuan	National Institute of Allergy and Infectious Diseases/NIH/DHHS	SARS-CoV-2 Vaccine Responses in children with genetic or acquired B cell deficiencies
Hughes, Ethan	National Institute of Neurological Disorders and Stroke/NIH/DHHS	In vivo three-photon microscopy of the cortical gray and white matter
Hunter, Sharon	National Institute on Drug Abuse/NIH/DHHS	Clinical Trial of Maternal Choline Supplements to Mitigate Effects of Prenatal Cannabis Exposure on Early Brain Development.
Hutchison, Kent	National Institute on Drug Abuse/NIH/DHHS	Rocky Mountain Cannabis Research Center
Hutchison, Kent	National Institute on Drug Abuse/NIH/DHHS	Novel Approaches to Opiate Use Reduction
Ingram, Susan	National Institute on Drug Abuse/NIH/DHHS	Role of lateral habenula in methamphetamine TAAR1-mediated synaptic plasticity and aversion
Irwin, David	Ohio State University	Enhancing the safety profile and efficacy of low titer group O whole blood
Irwin, David	National Heart, Lung, and Blood Institute/NIH/DHHS	The paradoxical response to iron in pulmonary hypertension of sickle cell disease
Irwin, David	National Heart, Lung, and Blood Institute/NIH/DHHS	Aerosolized therapy for hemoglobin toxicity in the treatment of hemolytic diseases
Jacobelli, Jordan	National Institute of Allergy and Infectious Diseases/NIH/DHHS	Mechanisms of regulation of lymphocyte migration by actin cytoskeletal effectors
Jagannathan, Sujatha	National Institute of General Medical Sciences/NIH/DHHS	Understanding the variability in nonsense-mediated RNA decay

Jagannathan, Sujatha	National Science Foundation/NSF	Mechanisms of NMD evasion by mammalian and viral long UTR transcripts
Jansson, Thomas	Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD)/NIH/DHHS	Development of approaches for inducible trophoblast-specific gene modulation: the role of trophoblast Lat1 in the regulation of placental function and fetal growth
Jimeno-Largo, Antonio	National Cancer Institute/NIH/DHHS	Colorado Head and Neck Cancer SPORE
Johnson, Noah	National Institute on Aging/NIH/DHHS	Investigating and targeting apolipoprotein E4 in Down syndrome-associated Alzheimer's disease
Johnson, Richard	National Institute of Diabetes and Digestive and Kidney Diseases/NIH/DHHS	Silica Nephropathy and Chronic Kidney Disease of Unknown Etiology
Jolles, Monica	Patient-Centered Outcomes Research Institute	Measuring co-creation during the engagement process in research: A pathway forward.
Jolley, Sarah	Agency for Healthcare Research and Quality/DHHS	Novel Statewide Response to Post-COVID Care Delivery
Jolley, Sarah	Duke University	RECOVER-AUTONOMIC: A Platform Protocol for Evaluation of Interventions for Autonomic Dysfunction in Post-Acute Sequelae of SARS-CoV-2 Infection (PASC)
Jolley, Sarah	Duke University	RECOVER-VITAL: A Platform Protocol for Evaluation of Interventions for Viral Persistence, Viral Reactivation, and Immune Dysregulation in Post-Acute Sequelae of SARS-CoV-2 Infection (PASC)" "Study"
Jordan, Craig	Leukemia and Lymphoma Society	Therapeutic Targeting of AML Stem Cells
Jordan, Craig	National Cancer Institute/NIH/DHHS	Therapeutic Targeting of Human AML Stem Cells
Kamdar, Manali	Genentech, Inc.	CO43805, A PHASE Ib, OPEN-LABEL, MULTICENTER STUDY EVALUATING THE SAFETY, PHARMACOKINETICS, AND EFFICACY OF MOSUNETUZUMAB OR GLOFITAMAB IN COMBINATION WITH CC-220 AND CC-99282 IN PATIENTS WITH B-CELL NON-HODGKIN LYMPHOMA
Kamdar, Manali	Genentech, Inc.	AN OPEN-LABEL, RANDOMIZED, MULTICENTER, PHASE Ib/II TRIAL EVALUATING THE SAFETY, TOLERABILITY, PHARMACOKINETICS, AND EFFICACY OF MOSUNETUZUMAB (BTCT4465A) IN COMBINATION WITH POLATUZUMAB VEDOTIN IN PATIENTS WITH B-CELL NON-HODGKIN LYMPHOMA.
Kamdar, Manali	Acerta Pharma LLC	ACE-CL-007; A Randomized, Multicenter, Open-Label, 3 Arm Study of Obinutuzumab in Combination with Chlorambucil, ACP-196 in Combination with Obinutuzumab and ACP-196 Monotherapy in Subjects with previously Untreated Chronic Lymphocytic Leukemia
Karam, Sana	V Foundation for Cancer Research, The	Overcoming therapeutic resistance to radiation therapy in pancreatic cancer with STAT3 inhibition
Karam, Sana	National Cancer Institute/NIH/DHHS	Sexual dimorphism and the immuno-modulatory role of estrogen signaling in HNSCC
Karam, Sana	Amgen, Inc.	Radiation-mediated immune suppression in HNSCC and PDAC tumors can be overcome with targeted depletion of resident CCR8 positive regulatory T cells.
Kazanjian, Michael	State of Colorado Department of Health Care Policy	Community and Public Health HCPF Contract
Kedl, Ross	National Institute of Allergy and Infectious Diseases/NIH/DHHS	Mechanisms of combined CD40/TLR adjuvant-elicited cellular immunity
Kelly, Sayuri	Insight Policy Research	Long Term Care (LTC) Survey Process Operational Support and Analysis
Kempe, Allison	National Cancer Institute/NIH/DHHS	The HPV9-10 Trial: Early Initiation of HPV Vaccination

Kendrick, Jessica	National Institute of Diabetes and Digestive and Kidney Diseases/NIH/DHHS	Efficacy and Mechanisms of Dapagliflozin in Promoting Kidney Function and Cardiovascular Health in Kidney Transplant Recipients
Kendrick, Jessica	National Institute of Diabetes and Digestive and Kidney Diseases/NIH/DHHS	Effect of Alkali Therapy on Vascular and Graft Function in Kidney Transplant Recipients
Kennedy, Matthew	National Institute of Neurological Disorders and Stroke/NIH/DHHS	Novel approaches for interrogating and manipulating synaptic function, structure and plasticity
Kerns, Suzanne	Colorado Department of Human Services	CDHS Preventing Youth Homelessness: MST R-02
Knierim, Kyle	Colo. Dept Of Health Care Policy & Financing	Train the Trainer for Value Based Payment
Knierim, Kyle	Colorado Department of Human Services	Maternal and Child Health Pilot Program
Kovacs, Elizabeth	National Institute on Aging/NIH/DHHS	Aging, Macrophage Mediators, and Burn Trauma
Krebs, Nancy	Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD)/NIH/DHHS	Leveraging the Global Network to implement health interventions to improve maternal and child outcomes in a rapidly changing environment
Kruse, Gina	National Cancer Institute/NIH/DHHS	Varenicline and mobile behavioral assistance for tobacco cessation in HIV care in India
Kumar, Tunuguntla	Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD)/NIH/DHHS	FSH Glycoforms and Ovarian Signaling Pathways
Kutateladze, Tatiana	National Institute on Aging/NIH/DHHS	Targeting acetylated histone H4 by MLL4
Kvaratskhelia, Mamuka	National Institute of Allergy and Infectious Diseases/NIH/DHHS	Ultra-potent HIV capsid inhibitors
Kvaratskhelia, Mamuka	National Institute of Allergy and Infectious Diseases/NIH/DHHS	Roles of HIV-1 capsid-binding FG-motif containing cellular cofactors in infection
Kwan, Bethany	Yale University	OPTIMUM: Optimizing engagement in discovery of molecular evolution of low grade glioma
Lam, Elaine	Genentech, Inc.	BO43936 A RANDOMIZED OPEN LABEL PHASE II STUDY OF IMMUNE CHECKPOINT INHIBITOR COMBINATIONS WITH AXITINIB IN PATIENTS WITH PREVIOUSLY UNTREATED LOCALLY ADVANCED UNRESECTABLE OR METASTATIC RENAL CELL CARCINOMA
Lam, Margaret	National Institute of General Medical Sciences/NIH/DHHS	Post-transcriptional regulations of proteomes in stress and senescence
Lau, Edward	National Heart, Lung, and Blood Institute/NIH/DHHS	Extracellular matrix turnover in pathological cardiac remodeling
Law, Amanda	Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD)/NIH/DHHS	Neuregulin/Alpha7nAChR Signaling, the GABAergic Switch and Neurodevelopmental Risk: Mechanisms of Gestational Choline Supplementation.
Leal, Alexis	Famewave Ltd.	FW-2020-1 Ph 1/2 Study to Assess the Safety, Tolerability, Pharmacokinetics, Pharmacodynamics and Efficacy of CM24 in combination with nivolumab in adults with advanced solid tumors
Leal, Alexis	Antengene Biologics Limited	ATG-031-001 First-in-Human Phase I Study of ATG-031 in Patients with Advanced Solid Tumors or B-cell Non-Hodgkin Lymphomas
Lee, Joyce	National Heart, Lung, and Blood Institute/NIH/DHHS	Defining the molecular and radiologic phenotype of progressive RA-ILD
Levin, Myron	Health Resources and Services Administration/DHHS	Ryan White HIV/AIDS Program Part D
Li, Tianjing	National Eye Institute/NIH/DHHS	Maximizing Use of High-Quality Evidence in Eye Care: Cochrane Eyes and Vision US Project
Liaw, Karen	Colorado Department of Human Services	Liaw PMHI Community Investment Submission
Lindquist, Jonathan	Astra Zeneca	D933GC00002 Phase II Single-Arm Study of Durvalumab and Bevacizumab Following Transarterial Radioembolization Using Yttrium-90 Glass Microspheres (TheraSphere?) in Unresectable Hepatocellular Carcinoma Amenable to Locoregional Therapy EMERALD-Y90

Liss, Jill	Myovant GmBH - CRO	A Phase 3, Single-Arm, Open-Label Study to Evaluate the Safety and Contraceptive Efficacy of Relugolix Combination Therapy in Women with Uterine Fibroids or Endometriosis Who Are 18 to 50 Years of Age and at Risk for Pregnancy
Little, Charles	Advanced Technology International	A modular, scalable, full capacity alternate care facility for patient surge
Liu, Andrew	Benaroya Research Institute at Virginia Mason	Systems Immunology Profiling of Respiratory Viral Infections in Vulnerable Populations Study
Lozupone, Catherine	National Institute of Allergy and Infectious Diseases/NIH/DHHS	Dietary and synbiotic strategy to limit gut microbiome dysbiosis and protect against Clostridioides difficile infection
Lozupone, Catherine	National Institute of Diabetes and Digestive and Kidney Diseases/NIH/DHHS	Gut microbiome effects on intestinal barrier function and metabolic syndrome in HIV positive men who have sex with men
Lum, Hillary	National Institute on Aging/NIH/DHHS	Effectiveness of Engaging in Advance Care Planning Talks (ENACT) Group Visits Intervention in Primary Care for Older Adults with and without Alzheimer's Dementia
Lyons, Traci	National Cancer Institute/NIH/DHHS	A SIM2s/SEMA7A Switch Drives ER+ Breast Cancer Progression
Macklin, Wendy	National Institute of Neurological Disorders and Stroke/NIH/DHHS	The role of mTOR signaling in oligodendrocyte differentiation and CNS myelination
MacLean, Paul	National Institute of Diabetes and Digestive and Kidney Diseases/NIH/DHHS	Colorado Nutrition Obesity Research Center
MacLean, Paul	National Cancer Institute/NIH/DHHS	Novel dietary interventions for reducing obesity-associated breast cancer
Magin, Chelsea	National Heart, Lung, and Blood Institute/NIH/DHHS	Hybrid Hydrogel Biomaterials Comprising Clickable Decellularized Extracellular Matrix for Engineering Dynamic 3D Models of Fibrosis
Manchaiah, Vinaya	National Institute on Deafness and Other Communication Disorders/NIH/DHHS	Emerging Service Delivery Models for Over-the-Counter Hearing Aids: A Hybrid Effectiveness-Implementation Trial
Manoharan, Niranjan	Genentech, Inc.	A RANDOMIZED, DOUBLE-MASKED, SHAM-CONTROLLED STUDY TO EVALUATE THE EFFICACY OF PERI-OPERATIVE FARICIMAB IN PATIENTS WITH NON-CLEARNING VITREOUS HEMORRHAGE SECONDARY TO PROLIFERATIVE DIABETIC RETINOPATHY
Marszowski, Risha	National Institute on Aging/NIH/DHHS	High Deductible Health Plans and Receipt of Recommended Medical Care
Matsumura, Jon	W.L. Gore & Associates, Inc	Evaluation of the GORE EXCLuDER Thoracoabdominal Branch Endprosthesis in the Treatment of Thoracoabdominal and Pararenal Aortic Aneurysms AAA 17-01
McDermott, Jessica	AbbVie, Inc.	M24-427 Phase 1 Open-Label Study to Evaluate the Efficacy and Safety of ABBV-400 in Select Advanced Solid Tumor Indications
McFarland, Elizabeth	Colorado Department of Public Health and Environment/COLO	Ryan White Part B HIV Core and Support Services
McKinsey, Timothy	American Heart Association	Phenotypic Screening, Machine Learning and New Therapeutic Targets for Human Cardiac Fibrosis
Messacar, Kevin	Leidos Biomedical Research , Inc	PANDEMIC RESPONSE REPOSITORY - MICROBIAL AND IMMUNE SURVEILLANCE AND EPIDEMIOLOGY (PREMISE): ENTEROVIRUS D68 (EV-D68) PILOT STUDY
Mestroni, Luisa	National Heart, Lung, and Blood Institute/NIH/DHHS	Elucidating the Origin of Sudden Cardiac Death in Dilated Cardiomyopathy: from Phenotype Predictors to Therapeutic Targets

Miao, Yubin	National Cancer Institute/NIH/DHHS	Combinations of Receptor-Targeted Alpha Radionuclide Therapy and Immune Checkpoint Inhibitors for Melanoma Treatment
Michels, Aaron	Leona M. And Harry B. Helmsley Charitable Trust	T and B cell Receptor Atlas Across Tissues and Stages of Type 1 Diabetes
Miyamoto, Shelley	National Heart, Lung, and Blood Institute/NIH/DHHS	Targeting Mitochondria in Single Ventricle Heart Disease
Miyazaki, Makoto	National Heart, Lung, and Blood Institute/NIH/DHHS	The transcriptional control of vascular calcification in disease
Miyazaki, Makoto	National Heart, Lung, and Blood Institute/NIH/DHHS	The role of MLKL in the regulation of vascular calcification in CKD
Montgomery, Linda	University of Colorado Hospital	COFM Expansion Slot 1
Moore, Lorna	Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD)/NIH/DHHS	Effects of chronic hypoxia and AMPK activation on uteroplacental perfusion, placental metabolism and the regulation of fetal growth
Moreau, Kerrie	National Institute on Aging/NIH/DHHS	Integrative Physiology of Aging Training Grant
Mosimann, Christian	National Heart, Lung, and Blood Institute/NIH/DHHS	Decoding the transcriptional mechanisms of pericardium formation
Mould-Millman, Nee-Kofi	Us Army Medical Research Acquisition Act/DOD	Mortality and Organ Failure Evidence to Guide Tranexamic Acid and Blood Product Resuscitation in Austere, Prolonged Care Settings
Mould-Millman, Nee-Kofi	Us Army Medical Research Acquisition Act/DOD	Early Antibiotics to Mitigate Post-Traumatic Infections: A Prospective, Multi-center Study in a Prolonged Care, High-Trauma, Austere Setting
Mueller, Noel	National Heart, Lung, and Blood Institute/NIH/DHHS	Effects of Dietary Patterns and Sodium Intake on the Gut Microbiome and Metabolome
Muramoto, Myra	National Cancer Institute/NIH/DHHS	Effect of Helpers Program On-line Training on Smoking Relapse and Social Networks
Nadeau, Kristen	National Heart, Lung, and Blood Institute/NIH/DHHS	Type 1 Diabetes Impacts of Semaglutide on Cardiovascular Outcomes (T1-DISCO)
Nadeau, Kristen	National Institute of Diabetes and Digestive and Kidney Diseases/NIH/DHHS	What Activates Type 2 diabetes in Children (WATCH)
Nease Jr, Donald	Westat, Inc.	Community-Engagement Research Alliance Against COVID-19 in Disproportionately Affected Communities (CEAL)
Norman, Paul	National Institute of Allergy and Infectious Diseases/NIH/DHHS	Insights Into Immune-Related Diseases Born from Population Genomics
Norman, Paul	National Institute of Allergy and Infectious Diseases/NIH/DHHS	Natural Killer cells and the Immunogenetics of COVID-19
Norman, Paul	National Institute of Allergy and Infectious Diseases/NIH/DHHS	Evolution and Function of Immunogenetic Diversity across the Eastern Hemisphere
Nozik, Eva	National Heart, Lung, and Blood Institute/NIH/DHHS	SOD3 regulation of redox sensitive signaling in pulmonary vascular diseases
Ong, Toan	Westat, Inc.	A Virtual Network to Investigate the Effectiveness of COVID-19 and Influenza Vaccines and Evaluate the Burden and Epidemiology of Respiratory Viruses (VISION 2.0)
Oser, Sean	Leona M. And Harry B. Helmsley Charitable Trust	PREPARE 4 AID (PRimary CarE PrAgmatic, Real World Experience for Automated Insulin Delivery)
Oser, Sean	State of Colorado Department of Health Care Policy	Behavioral Health Integration-HB1302
Oser, Sean	State of Colorado Department of Health Care Policy	Provide training, resources, and support for primary care, behavioral health, or other practices on the topics of data sharing and sustainable billing as related to integrated care
Ost, Kyla	National Institute of Allergy and Infectious Diseases/NIH/DHHS	TBD
Palmer, Brent	National Heart, Lung, and Blood Institute/NIH/DHHS	T cell Epitope Discovery in Sarcoidosis

Patil, Tejas	Takeda Development Center Americas, Inc.	CP-MVC-101-01 Ph 1/2, First-in-Human, Open-Label, Dose Escalation Study of TAK-186 (also known MVC-101), An EGFR x CD3 C0nditional Bispecific Redirected Activation (COBRA) Protein in Patients with Unresectable Locally Advanced or Metastatic Cancer
Payne, Karin	University of Colorado at Boulder/CU	A minimally invasive multimodal biomaterial approach to tissue regeneration in OA
Pearson, Chad	National Institute of General Medical Sciences/NIH/DHHS	Centriole assembly and function for centrosome and cilia biology
Pelanda, Roberta	National Institute of Allergy and Infectious Diseases/NIH/DHHS	Contribution and interplay of CXCR4 and integrins in central B cell tolerance
Peng, Anthony	National Institute on Deafness and Other Communication Disorders/NIH/DHHS	Molecular mechanisms of cochlear hair bundle mechanics
Perreault, Leigh	National Institute of Diabetes and Digestive and Kidney Diseases/NIH/DHHS	PATHWEIGH: pragmatic weight management in primary care
Person, Abigail	National Institute of Neurological Disorders and Stroke/NIH/DHHS	Circuit mechanisms of cerebellar control of reaching movements
Pietras, Eric	National Institute of Diabetes and Digestive and Kidney Diseases/NIH/DHHS	Aberrant glycolysis as a driver of mutant HSPC expansion in clonal hematopoiesis
Poleg-Polsky, Alon	National Eye Institute/NIH/DHHS	Novel experimental and machine learning - assisted techniques to assess receptive field functionality in the retina
Polsky, Sarit	Leona M. And Harry B. Helmsley Charitable Trust	SEEDS Pathway: Shared Empowerment for Early Device Success
Powell, Theresa	Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD)/NIH/DHHS	Novel Roles for Phospholipids in Regulating Placental Function and in the Delivery of DHA to the Fetal Brain.
Prekeris, Rytis	National Institute of General Medical Sciences/NIH/DHHS	Predoctoral Training Program in Molecular and Cellular Biology
Prekeris, Rytis	National Institute of Diabetes and Digestive and Kidney Diseases/NIH/DHHS	Molecular Mechanisms Regulating Epithelial Cell Apical Polarity and Ciliogenesis
Proenza, Catherine	National Heart, Lung, and Blood Institute/NIH/DHHS	Regulation of excitability in sinoatrial myocytes
Ragole, Thomas	Edgewise Therapeutics	EDG-5506-203: An Open-Label Extension Study to Access the Long-term Effect of EDG-5506 on Safety, Biomarkers, and Functional Measures in Adults and Adolescents with Becker Muscular Dystrophy
Ragole, Thomas	Argenx BVBA	Treatment of myasthenia gravis exacerbation or crisis with efgartigimod: A single arm, open label prospective cohort study
Rasouli, Neda	Novo Nordisk Pharmaceuticals, Inc.	Investigation of the safety and efficacy of once weekly NNC0519-0130 in participants with type 2 diabetes - a dose finding study
Rasouli, Neda	Lilly USA, LLC	" A Phase 3, Randomized, Double-Blind, Placebo-Controlled, Event-Driven Study to Investigate the Effect of Retatrutide on the Incidence of Major Adverse Cardiovascular Events and the Decline in Kidney Function in Participants with Body Mass Index ?27 kg/m2 and Atherosclerotic Cardiovascular Disease and/or Chronic Kidney Disease
Rasouli, Neda	Eli Lilly and Company	A Phase 3, Randomized, Double-Blind, Placebo-Controlled Study to Investigate the Effect of Lepodisiran on the Reduction of Major Adverse Cardiovascular Events in Adults with Elevated Lipoprotein(a) who have Established Atherosclerotic Cardiovascular Disease or Are at Risk for a First Cardiovascular Event - ACCLAIM-Lp(a)

Rasouli, Neda	Eli Lilly and Company	A Phase 3, Randomized, Multicenter, Open-label Study to Investigate the Efficacy and Safety of Retatrutide Once Weekly Compared with Semaglutide Once Weekly in Adult Participants with Type 2 Diabetes and Inadequate Glycemic Control with Metformin with or without SGLT2 Inhibitor (TRANSCEND-T2D-2)
Regensteiner, Judith	Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD)/NIH/DHHS	The Colorado Building Interdisciplinary Research Careers in Women's Health Program
Reis, Tania	National Institute of Diabetes and Digestive and Kidney Diseases/NIH/DHHS	Food for thought: a virus-like signal for the energetic demands of higher cognitive functions
Rennie, Katherine	National Institute on Aging/NIH/DHHS	Aging and Dysfunction in the Peripheral Vestibular System
Restrepo, Diego	National Institute on Aging/NIH/DHHS	Virus and olfactory system interactions accelerate Alzheimer's disease pathology
Reusch, Jane	National Institute of Diabetes and Digestive and Kidney Diseases/NIH/DHHS	Role of Microvascular insulin resistance and cardiorespiratory fitness in diabetes
Rewers, Marian	Juvenile Diabetes Research Foundation	Autoimmunity Screening for Kids (ASK)Program - Transition Towards a Sustainable Screening for T1D and Celiac Disease In Colorado
Rewers, Marian	University of South Florida	TEDDY USF Patient Care
Rewers, Marian	National Institute of Diabetes and Digestive and Kidney Diseases/NIH/DHHS	Natural History of Pre-Diabetic Autoimmunity (DAISY)
Richer, Jennifer	Us Army Medical Research Acquisition Act/DOD	Androgen receptors in luminal breast cancer: effects on response to endocrine therapy and an immune-suppressive tumor immune microenvironment (TIME)
Rissland, Olivia	W. M. Keck Foundation	Lost in Translation: How Cells Become Protein-Producing Factories
Roop, Dennis	Epidermolysis Bullosa Research Partnership	Adapting the induced pluripotent stem cell-based therapy for recessive dystrophic epidermolysis bullosa to an automated platform to facilitate clinical translation
Roop, Dennis	National Institute of Arthritis & Musculoskeletal and Skin Diseases/NIH/DHHS	Study of the Safety, Tolerability, and Efficacy of an iPS Cell-based Therapy for Recessive Dystrophic Epidermolysis Bullosa Delivered with a Spray on Skin Device
Roop, Dennis	National Institute of Arthritis & Musculoskeletal and Skin Diseases/NIH/DHHS	Defining the role of innate immune cells in the early stages of immune surveillance of skin cancer by using a novel model that allows in vivo imaging of the immunoediting process.
Rosenberg, Michael	National Heart, Lung, and Blood Institute/NIH/DHHS	Development of End-To-End Clinical Decision Support Tools To Prevent Cardiotoxic Drug Response
Rozance, Paul	Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD)/NIH/DHHS	Fetal glucagon links fetal metabolism with uterine blood flow and placental nutrient transfer by inhibiting placental lactogen secretion
Russo, Brian	National Institute of General Medical Sciences/NIH/DHHS	The Role of Intermediate Filaments in Inflammation
Sabourin, Katherine	National Institute of Allergy and Infectious Diseases/NIH/DHHS	The synergistic contributions of EBV and malaria to the etiology of Burkitt lymphoma
Sagel, Scott	Cystic Fibrosis Foundation Therapeutics	Promise-OB-18
Santos-Cortez, Regie Lyn	National Institute on Deafness and Other Communication Disorders/NIH/DHHS	Genetic and epigenomic determinants of hearing loss in Hispanic populations
Sartorius, Carol	National Institute of General Medical Sciences/NIH/DHHS	Hormone Receptor Regulation of RNA Polymerase III
Scherer, Laura	National Cancer Institute/NIH/DHHS	Understanding and addressing rejection of personalized cancer risk information

Scherer, Laura	National Cancer Institute/NIH/DHHS	Understanding affective processing of scientific evidence to promote informed choice for breast cancer screening
Schilling, Lisa	Agency for Healthcare Research and Quality/DHHS	An Interoperable, Reusable and Scalable Shared Decision Aid Navigator System: Supporting the 5 Rights of Patient Shared Decision-Making
Schulick, Richard	National Cancer Institute/NIH/DHHS	University of Colorado Cancer Center
Schwartz, David	Eleven P15, Inc.	Sponsored Research and License Agreement
Schwartz, David	National Heart, Lung, and Blood Institute/NIH/DHHS	Preclinical Pulmonary Fibrosis, an opportune rare disease cohort
Schwartz, David	National Heart, Lung, and Blood Institute/NIH/DHHS	Multi-Disciplinary Research Training in Respiratory Disease
Schwartz, David	National Heart, Lung, and Blood Institute/NIH/DHHS	Molecular Determinants of Usual Interstitial Pneumonia (UIP)
Schwartz, Marc	Cellectis SA	UCART22_01, Open label dose-escalation and dose-expansion study to evaluate the safety, expansion, persistence and clinical activity of UCART22 (allogeneic engineered T-cells expressing Anti-CD22 Chimeric Antigen Receptor) in patients with relapsed or refractory CD22+ B-cell Acute Lymphoblastic Leukemia (B-ALL).
Shandas, Robin	Henry M. Jackson Foundation	Self-deploying, instrumented, shape memory polymer endotracheal tubes for non-expert, autonomous emergency intubation and monitoring of thoracic Injuries in Battlefield Conditions
Shellman, Yiqun	National Institute of Arthritis & Musculoskeletal and Skin Diseases/NIH/DHHS	Study of melanocyte lineage through SASH1 and associated proteins
Sherbenou, Daniel	American Cancer Society	Drug Susceptibilities of Multiple Myeloma Subpopulations in Multi-Drug Resistant Patients
Sikora, Matthew	National Cancer Institute/NIH/DHHS	Elucidating a novel WNT4 regulatory axis as a driver of gynecologic cancer health disparities
Smith, Bradford	National Heart, Lung, and Blood Institute/NIH/DHHS	Predicting and Preventing Ventilator-Induced Lung Injury
Snell-Bergeon, Janet	Leona M. And Harry B. Helmsley Charitable Trust	Impact of Menstruation on glycemic response and exercise in females with type 1 diabetes
Snell-Bergeon, Janet	Juvenile Diabetes Research Foundation	"Efficacy and safety of once weekly semaglutide in adults with obesity and inadequately controlled type 1 diabetes using hybrid closed-loop system"
Sokol, Ronald	University of Utah/UT	Mountain States PASC Consortium
Sokol, Ronald	National Institute of Diabetes and Digestive and Kidney Diseases/NIH/DHHS	Institutional Training Grant in Pediatric Gastroenterology
Song, Kunhua	National Heart, Lung, and Blood Institute/NIH/DHHS	Regulation of gene transcription and alternative splicing by a long non-coding RNA
St John-Larkin, Celeste	Maternal and Child Health Bureau/HRSA/DHHS	Colorado PROSPER: Perinatal Resource to support Obstetric Screening, Psychiatric education, Equity and Referral
Stanley, Ian	Us Army Medical Research Acquisition Act/DOD	Firearm Safety in PTSD (FaSP): A Randomized Controlled Trial of Lethal Means Safety Counseling Among Service Members and Civilians with PTSD
Steck, Andrea	University of South Florida	TrialNet: Data Coordinating Center for Type 1 Diabetes
Stenmark, Kurt	National Heart, Lung, and Blood Institute/NIH/DHHS	Complement Mediated Remodeling in Pulmonary Vascular Disease
Stenmark, Kurt	National Heart, Lung, and Blood Institute/NIH/DHHS	Translational Pulmonary Vascular Biology Program
Stevens Lapsley, Jennifer	National Institute on Aging/NIH/DHHS	Advancing Rehabilitation Paradigms for Older Adults in Skilled Nursing Facilities
Stille, Christopher	Maternal and Child Health Bureau/HRSA/DHHS	Health System Research Network for Children and Youth with Special Health Care Needs (CYSHCNet)

Stoneback, Jason	Balmoral Medical, LLC	A Prospective, Multicenter, Single-Arm, Open-Label Study to Evaluate the Safety and Effectiveness of the Transdermal Compress Device in Participants with Transfemoral Amputations
Striebich, Christopher	Novartis Pharmaceuticals Corporation	A randomized, double-blind, parallel group, placebo[1]controlled multicenter phase 3 study to evaluate efficacy, safety and tolerability of two regimens of ianalumab on top of standard-of-care therapy in patients with systemic lupus erythematosus (SIRIUS-SLE 1)
Subramanian, Prem	Neurophth Therapeutics, Inc.	A Phase 1/2, Multi-regional, Single-Arm, Open-Label, Dose-Finding Clinical Trial to Evaluate the Safety, Tolerability and Efficacy of Gene Therapy for Leber's Hereditary Optic Neuropathy (LHON) Associated with ND1 Mutation
Sussel, Lori	National Institute of Diabetes and Digestive and Kidney Diseases/NIH/DHHS	UC Denver Diabetes Research Center
Szefler, Stanley	National Heart, Lung, and Blood Institute/NIH/DHHS	Reducing Asthma Attacks in Disadvantaged School Children with Asthma
Szefler, Stanley	Colorado Department of Public Health and Environment/COLO	Colorado AsthmaComp Expansion
Taliaferro, Jefferson	National Institute of Neurological Disorders and Stroke/NIH/DHHS	Mechanistic analysis of TDP-43-mediated RNA localization in neurons and its misregulation in ALS
Tamburini, Beth	National Institute of Allergy and Infectious Diseases/NIH/DHHS	PD-L1 reverse signaling in liver homeostasis and disease
Tamburini, Beth	National Institute of Allergy and Infectious Diseases/NIH/DHHS	Cooperation between lymphatic stroma and hematopoietic cells shapes protective immunity
Tang, Minghua	National Institute of Diabetes and Digestive and Kidney Diseases/NIH/DHHS	Dietary influence on infant growth and the gut microbiota
Tartaglia, Nicole	Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD)/NIH/DHHS	The eXtraordinarY Babies Study: Natural History of Health and Neurodevelopment in Infants with Sex Chromosome Trisomy
Taylor, Matthew	Tenaya Therapeutics	First-in-Human, Open-Label, Safety, Tolerability, Dose Finding, Pharmacodynamic and Cardiac Transgene Expression Study of TN-401, a Recombinant Adeno-associated Virus Serotype 9 (AAV9) Containing Plakophilin-2 (PKP2) Transgene, in Adults with PKP2 Mutation-associated Arrhythmogenic Right Ventricular Cardiomyopathy- Tenaya II
Taylor, Matthew	National Heart, Lung, and Blood Institute/NIH/DHHS	Integrative genomic and transcriptomic investigation of human heart failure mechanisms
Thomas, Elizabeth	National Institute of Diabetes and Digestive and Kidney Diseases/NIH/DHHS	Effects of early vs. late time restricted eating vs. daily caloric restriction on weight loss and metabolic outcomes in adults with obesity
Thompson, Darcy	National Heart, Lung, and Blood Institute/NIH/DHHS	Sleep and Obesity in Toddlers from Mexican American Families
Thurman, Joshua	National Institute of Diabetes and Digestive and Kidney Diseases/NIH/DHHS	Spatial Mapping of Proteomic and Transcriptional Signatures in Kidney Disease
Thurman, Joshua	National Institute of Diabetes and Digestive and Kidney Diseases/NIH/DHHS	Role of the Factor H Related Proteins in Kidney Disease
Tobin, Richard	U.S. Army Medical Research Acquisition Act/DOD	An unconventional pathway to melanoma development and prevention
Todorovic, Vesna	Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD)/NIH/DHHS	Novel neurosteroid anesthetics and developmental synaptogenesis
Torres, Raul	National Institute of Allergy and Infectious Diseases/NIH/DHHS	Lysophosphatidic Acid Regulation of CD8 T cell activation and function
Tregellas, Jason	Office of the Director/NIH/DHHS	3T GE SIGNA Premier XT MRI
Tregellas, Jason	National Institute of Mental Health/NIH/DHHS	Development of Psychopathology, Psychobiology, & Behavior

Tregellas, Jason	National Institute of Diabetes and Digestive and Kidney Diseases/NIH/DHHS	Neuronal and behavioral effects of an implicit priming approach to improve eating behaviors in obesity
van Dyk, Linda	National Institute of Allergy and Infectious Diseases/NIH/DHHS	Therapeutic targets in gammaherpesvirus infection
Vandivier, Richard	National Heart, Lung, and Blood Institute/NIH/DHHS	Airway Basal Progenitor Dysfunction in the Detection, Progression and Pathogenesis of Early COPD
Veress, Livia	Department of Health and Human Services/DHHS	Advanced Development of Altephlase as a Medical Countermeasure for Pulmonary Injury Associated with Sulfur Mustard Inhalation - Proof of Concept in a Swine Model
Vladar, Eszter	National Heart, Lung, and Blood Institute/NIH/DHHS	Canonical to noncanonical Wnt signaling switch in airway epithelial health and disease
Wani, Sachin	National Institute of Diabetes and Digestive and Kidney Diseases/NIH/DHHS	A Multicenter Randomized Controlled Trial of Surveillance versus. Endoscopic Therapy for Barretts Esophagus with Low-grade Dysplasia: The SURVENT Trial
Way, Gregory	Gilbert Family Foundation	Improving image assays and analysis for NF1 organoids
Way, Gregory	Alex's Lemonade Stand	Pediatric cancer cell painting to reveal death mechanisms
Weinberg, Adriana	National Institute of Allergy and Infectious Diseases/NIH/DHHS	PERSISTENCE OF IMMUNE RESPONSES TO THE RECOMBINANT ZOSTER VACCINE IN IMMUNE COMPROMISED HOSTS WITH END-STAGE RENAL DISEASE WITH AND WITHOUT KIDNEY TRANSPLANTATION
Weinstein, Elena	AbbVie, Inc.	A Phase 3b/4 Randomized, Double-Blind, Double-Dummy, Active Comparator-Controlled Study, Comparing the Efficacy and Safety of Upadacitinib Versus Adalimumab in Subjects with Moderate to Severe Rheumatoid Arthritis on a Stable Background of MTX and who had an Inadequate Response or Intolerance to a Single TNF Inhibitor (SELECT-SWITCH)
Weinstein, Elena	Novartis Pharmaceuticals Corporation	A randomized, parallel-group, double-blind, placebo-controlled, multicenter Phase III trial to investigate the efficacy and safety of secukinumab 300 mg and 150 mg administered subcutaneously versus placebo, in combination with a glucocorticoid taper regimen, in patients with giant cell arteritis (GCA) (GCAptAIN)
Weir, Richard	National Institute of Neurological Disorders and Stroke/NIH/DHHS	Optimization of a Minimally-Invasive Bidirectional Optogenetic Peripheral Nerve Interface with Single Axon Read-in & Read-out Specificity
Weiser-Evans, Mary	National Heart, Lung, and Blood Institute/NIH/DHHS	Reprogramming of mature SMCs to vascular progenitor cells: Focus on Vascular Fibrosis
Weiser-Evans, Mary	National Heart, Lung, and Blood Institute/NIH/DHHS	PTEN promoter hypermethylation underlies vascular disease progression
Welle, Cristin	National Institute of Neurological Disorders and Stroke/NIH/DHHS	Vagus nerve stimulation drives plasticity through inhibitory interneurons
Wherry, Sarah	Wake Forest University, School of Medicine	Exercise and Bisphosphonate Use to Minimize Weight Loss Associated Bone Loss among Older Adults
Wiktor, Arek	Us Army Medical Research Acquisition Act/DOD	Prevention and treatment of frostbite infection with antimicrobial pharmacokinetic analysis
Wilky, Breelyn	BioAtla LLC	BA3011-001 PH 1/2 DOSE ESCALATION AND DOSE EXPANSION STUDY OF BA3011 IN PATIENTS WITH ADVANCED SOLID TUMORS
Wilson, Cara	National Institute of General Medical Sciences/NIH/DHHS	Medical Scientist Training Program

Wilson, Patrick	National Heart, Lung, and Blood Institute/NIH/DHHS	Understanding the role of bilevel positive airway pressure (BPAP) in pediatric acute asthma exacerbations: A prospective, randomized, double blind, controlled trial
Wong, Shale	Colorado Health Foundation	Advancing Advocacy and Justice with Communities of Color / CUF# D-0060152
Wright, Franklin	The Metis Foundation	Antibiotic wound prophylaxis pharmacokinetics during transfusion: A prospective, multicenter study
Yu, Liping	University of South Florida	Core Clinical Laboratory for Type 1 diabetes Research Trials
Zhao, Rui	National Institute of General Medical Sciences/NIH/DHHS	The molecular mechanism of pre-mRNA splicing
Zheng, Hongjin	National Heart, Lung, and Blood Institute/NIH/DHHS	Mechanistic studies of human transporter Sialin
Zhu, Yuwen	Dynamicure Biotechnology LLC	Targeting Druggable Protein-Protein Interactions for Cancer Treatment through Advanced Screening Techniques
Zuscik, Michael	National Institute of Arthritis & Musculoskeletal and Skin Diseases/NIH/DHHS	Studies on gut microbiome-joint connections in arthritis

Office of Grants and Contracts

University of Colorado Denver | Anschutz Medical Campus

Award Trands - Fiscal Year 2023 and 2024

		2023			2024			
School/College/Chancellor's Office	Department/Division/Center	Direct Costs	Indirect Costs	Total Costs	Direct Costs	Indirect Costs	Total Costs	% of FY 23 Funding
D0014 -- D-BUS-DEAN OF BUSINESS		110,025	45,429	155,455	804,896	176,582	981,478	631%
D0015 -- D-SEHD-SCHOOL OF EDUC&HUMANDEV		7,274,012	579,359	7,853,371	7,701,294	754,654	8,455,948	108%
D0016 -- D-CEDC-DEAN OF ENGINEERING		7,206,433	1,718,920	8,925,353	4,528,670	1,204,375	5,733,045	64%
D0017 -- D-SPA-DEAN OF PUBLIC AFFAIRS		310,700	7,144	317,844	1,857,917	610,921	2,468,838	777%
D0018 -- D-CLAS-DEAN OF LIBERAL ARTS &		6,375,497	1,702,030	8,077,526	7,440,858	2,078,801	9,519,660	118%
D0019 -- D-CAP-DEAN-ARCHITECTURE & PLAN		1,111,801	42,068	1,153,869	1,171,699	202,769	1,374,468	119%
D0020 -- D-CAM-DEAN OF ARTS & MEDIA					3,700	1,300	5,000	
H0002 -- H-SOM-SCHOOL OF MEDICINE	H0021 -- H-SOM-DEAN'S OFFICE	249,808	35,051	284,860	218,340	42,598	260,937	92%
	H0028 -- H-SOM-BARBARA DAVIS CENTER	18,939,891	5,028,595	23,968,487	22,204,747	5,526,071	27,730,817	116%
	H0029 -- H-SOM-CC CANCER CENTER	36,565,478	10,500,434	47,065,910	27,302,453	7,818,734	35,121,186	75%
	H0033 -- H-SOM-WEBB-WARING CENTER	480,095	227,359	707,454	385,731	165,620	551,351	78%
	H0035 -- H-SOM-BIOCHEMISTRY	11,100,662	4,914,411	16,015,073	13,799,395	5,167,212	18,966,607	118%
	H0036 -- H-SOM-CELL&DEVELOPMNTL BIOLOGY	6,643,839	2,583,863	9,227,702	6,621,324	2,903,645	9,524,969	103%
	H0041 -- H-SOM-PATHOLOGY	3,418,855	1,308,933	4,727,788	5,647,375	2,487,911	8,135,286	172%
	H0043 -- H-SOM-PHARMACOLOGY	11,167,249	4,206,997	15,374,246	8,012,742	3,608,042	11,620,784	76%
	H0045 -- H-SOM-PHYSIOLOGY	4,426,681	2,135,338	6,562,019	7,078,000	2,966,781	10,044,781	153%
	H0048 -- H-SOM-ANESTHESIOLOGY	4,482,437	2,154,891	6,637,329	4,704,655	1,225,659	5,930,315	89%
	H0049 -- H-SOM-DERMATOLOGY	8,230,797	3,749,013	11,979,809	3,752,823	989,856	4,742,679	40%
	H0050 -- H-SOM-FM-FAMILY MEDICINE	6,277,379	780,804	7,058,183	7,929,376	1,133,282	9,062,658	128%
	H0051 -- H-SOM-MEDICINE	100,145,539	33,019,332	133,164,872	109,223,463	35,177,525	144,400,982	108%
	H0070 -- H-SOM-NEUROLOGY	24,594,619	7,550,488	32,145,105	17,502,163	5,364,027	22,866,192	71%
	H0072 -- H-SOM-OPHTHALMOLOGY	4,340,979	1,077,401	5,418,380	4,699,713	1,335,587	6,035,302	111%
	H0073 -- H-SOM-ORTHOPEDICS	5,205,374	1,184,891	6,390,265	7,254,941	2,930,090	10,185,032	159%
	H0074 -- H-SOM-OTOLARYNGOLOGY	2,996,855	1,110,435	4,107,289	3,959,919	1,098,761	5,058,679	123%
	H0075 -- H-SOM-PEDIATRICS	68,286,125	18,184,947	86,471,071	72,106,418	17,717,830	89,824,249	104%
	H0078 -- H-SOM-PSYCHIATRY	26,175,133	6,780,651	32,955,784	24,687,659	6,275,312	30,962,971	94%
	H0080 -- H-SOM-RADIATION ONCOLOGY	1,118,720	395,554	1,514,274	1,712,445	544,411	2,256,856	149%
	H0081 -- H-SOM-RADIOLOGY	2,016,393	726,222	2,742,615	2,771,585	776,404	3,547,988	129%
	H0083 -- H-SOM-REHAB MEDICINE	3,892,231	674,003	4,566,234	3,901,737	656,740	4,558,477	100%
	H0084 -- H-SOM-SURGERY	6,768,876	2,489,821	9,258,698	14,728,564	5,852,214	20,580,778	222%
	H0095 -- H-SOM-NS-NEUROSURGERY DEPT.	2,169,563	753,385	2,922,948	1,988,495	504,265	2,492,760	85%
	H0103 -- H-SOM-EMERGENCY MED	16,479,617	4,737,978	21,217,596	16,819,677	5,445,514	22,265,191	105%
	H0107 -- H-SOM-GME	150,000	0	150,000	219,713	9,090	228,803	153%
	H0381 -- H-SOM-COLORADOHLTHOUTCOMESCTR	21,116,711	6,336,550	27,453,261	33,169,050	7,329,147	40,498,197	148%
	H0395 -- H-SOM-CENTER OF BIOENGINEERING	6,805,269	1,897,185	8,702,455	6,831,621	1,684,979	8,516,601	98%
	H0396 -- H-SOM-DEPRESSION CENTER	103,337	9,737	113,074	92,712	11,096	103,808	92%
	H0400 -- H-SOM-HEALTH&WELLNESS CENTER	1,831,005	827,854	2,658,859	2,881,596	1,233,544	4,115,140	155%
	H0417 -- H-SOM-LINDA CRNIC INSTITUTE	4,286,867	1,688,675	5,975,542	4,782,667	1,570,923	6,353,590	106%
	H0422 -- H-SOM-CTR FORCHILDREN'SSURGERY	6,672	1,334	8,006	6,947	1,389	8,336	104%
	H0429 -- H-SOM-DEAN EDUCATION OFFICE	537,593	35,230	572,823	1,466,883	94,155	1,561,038	273%
	H0435 -- H-SOM-IMMUNOLOGY MICROBIOLOGY	17,024,497	6,821,491	23,845,988	14,555,631	5,449,998	20,005,629	84%
	H0436 -- H-SOM-OBSTETRICS AND GYNECOLGY	7,843,836	2,574,694	10,418,530	6,994,877	2,640,957	9,635,835	92%
	H0543 -- H-SOM-BIOMEDICAL INFORMATICS	19,267,407	6,642,310	25,909,716	43,322,627	5,231,790	48,554,416	187%
H0115 -- H-SDM-SCHOOL OF DENTAL MEDICIN		3,936,718	1,079,432	5,016,150	3,444,766	1,287,361	4,732,127	94%
H0132 -- H-CON-COLLEGE OF NURSING		6,186,428	976,453	7,162,881	6,736,274	1,154,388	7,890,662	110%
H0155 -- H-SOP-SCHOOL OF PHARMACY		11,994,791	5,281,632	17,276,423	12,660,673	5,166,868	17,827,542	103%
H0176 -- H-GS-GRADUATE SCHOOL		95,000	0	95,000				0%
H0401 -- H-CSPH-CO SCHOOL OF PUBLIC HLT		49,402,915	11,888,437	61,291,350	43,289,685	10,975,758	54,265,443	89%
U0006 -- U-ADM ADMINISTRATN AND FINANCE	U0009 -- U-ADM AVC FACILITIESMANAGEMENT	250,000	0	250,000	6,672,612	0	6,672,612	2669%
U0028 -- U-ADM VC FOR RESEARCH	20696 -- ADM AVCRC EH&S ANSCHUTZ	155,243	0	155,243				0%
	21389 -- ADM VCR CCTSI SPPGM/GIFTS				7,739,180	2,192,972	9,932,152	
	U0121 -- U-ADM AVC CREST				44,802	11,289	56,091	
U0067 -- U-ADM-VC HEALTH AFFAIRS ADMIN	20868 -- ADM VCHA CENTER ON AGING	3,313,030	1,244,525	4,557,555	2,514,287	1,354,891	3,869,178	85%
	H0189 -- H-ADM VCHA-COLORADO AHEC	0	22,600	22,600	970,390	17,564	987,954	4371%
	H0447 -- H-ADM VCHA COMPASS	139,700	39,026	178,726	120,635	31,365	152,000	85%
U0075 -- U-VCASA/EVC ACAD &STDNT AFFRS	30026 -- VCASA/EVCASA ACADEMIC&STDNT AF	277,579	8,254	285,833	699,855	3,898	703,753	246%
	30040 -- VCSSLS-STRATENRLL&STDNTSUCCESS	272,699	24,674	297,373	267,100	21,368	288,468	97%
	30054 -- VCASA/EVCASA-INTERNAT'L BUSCTR	296,296	23,704	320,000	587,726	48,799	636,525	199%
	30124 -- LS-LIB LIBRARY	33,262	0	33,262	30,762	0	30,762	92%
	D0036 -- D-VCSSLS-ACADEMIC ACHIEVEMENT	13,502	2,498	16,000	13,502	2,498	16,000	100%
	U0079 -- U-VCSSLS-AVC STUD&COMMENGAGMNT	248,303	15,335	263,638	256,455	15,909	272,364	103%
	U0100 -- U-VCSSLS-HEALTH&WELLNESSADVSUP	565,369	112,893	678,262	677,700	145,322	823,022	121%
U0109 -- U-ADM-CHANCELLOR ANSCHUTZ	21706 -- ADM CHAN ANSCHUTZ INNOVATION	3,930,134	981,878	4,912,011	2,261,898	1,256,630	3,518,527	72%
	H0181 -- H-ADM-EVC CAO STRAUSS LIBRARY	241,265	57,854	299,119				0%
	H0531 -- H-ADM-DIVERSITY EQ INC&COM ENG	3,515,412	836,125	4,351,537	482,649	114,985	597,634	14%
	U0104 -- U-ADM CHAN-MARCUSINSTBRAINHLTH	749,394	400,464	1,149,858				0%
	TOTAL	563,151,897	170,236,588	733,388,484	616,318,049	171,802,427	788,120,473	107%

	FY 2023			FY 2024		
	Direct Cost	Indirect Cost	Total Cost	Direct Cost	Indirect Cost	Total Cost
Anschutz Medical Campus	539,056,419	165,954,280	705,010,698	590,275,915	166,535,231	756,811,142
Denver Campus	24,095,478	4,282,309	28,377,786	26,042,134	5,267,196	31,309,331
	563,151,897	170,236,588	733,388,484	616,318,049	171,802,427	788,120,473

The Office of the Dean proudly presents the

2024-2025 Dean's Distinguished Seminar Series

All seminars will be held on the Anschutz Medical Campus, (unless otherwise noted),
In the Research 1 North building, Hensel Phelps West Auditorium, 3:00-4:00pm.
Lecture topics will be announced prior to each seminar.
Please follow the hyperlinks below to learn more about our speakers and their field of expertise
For questions about the series, contact Judy Sherman, 303-724-5375, judy.sherman@cuanschutz.edu

Tuesday, September 10, 2024
BRUCE A. FREEMAN, PHD
Irwin Fridovich Distinguished Professor and Chair
Pharmacology and Chemical Biology
University of Pittsburgh

Tuesday, October 8, 2024
NEVAN KROGAN, PHD
Professor, Cellular Molecular Pharmacology
Director, Quantitative Biosciences Institute
Senior Investigator, Gladstone Institute of Data
Science and Biotechnology
University of California, San Francisco

Tuesday, November 12, 2024
GABRIELA CHIOSIS, PHD
Member and Principal Investigator
Chemical Biology, Sloan Kettering Institute
Attending Chemist
Department of Medicine, Memorial Hospital
Professor, Tri-Institutional Program
in Chemical Biology
Professor, Program in Pharmacology
Weill Graduate School of Medical Sciences
Professor, Gerstner Sloan Kettering Graduate School

Tuesday, January 14, 2025
DAVID LYDEN, MD, PHD
Stavros S. Niarchos Professor
in Pediatric Cardiology
Professor, Cell and Developmental Biology
Weill Cornell Medical College
Cornell University

Tuesday, February 11, 2025
ARTURO CASADEVALL, MD, PHD
Bloomberg Distinguished Professor
Alfred and Jill Sommer Professor and Chair
Molecular Microbiology & Immunology
Bloomberg School of Public Health
Johns Hopkins University

Tuesday, March 11, 2025
HELEN MAYBERG, MD
Professor
Neurology, Neurosurgery, Psychiatry
and Neuroscience
Mount Sinai Professor
Of Neurotherapeutics
Director, Center of Advanced Circuit Therapeutics
Icahn School of Medicine at Mount Sinai

Tuesday, April 8, 2025
E. ANTONIO (NINO) CHIOCCA, MD, PHD FAANS
Harvey W. Cushing Professor of Neurosurgery
Harvard Medical School
Neurosurgeon-in-Chief and Chairman,
Department of Neurosurgery
Brigham and Women's Hospital

Tuesday, May 13, 2025
MEGAN A. COOPER, MD, PHD
Professor of Pediatrics
Division of Rheumatology/Immunology
Department of Pathology/Immunology
Washington University School of Medicine in St. Louis

School of Medicine
UNIVERSITY OF COLORADO
ANSCHUTZ MEDICAL CAMPUS

CENTERS, INSTITUTES, AND PROGRAMS

Adult and Child Center for Outcomes Research & Delivery Science – ACCORDS

ACCORDS is a nationally recognized research powerhouse across the T3-T4 research continuum, including health services, implementation, and translational research carried out in real-world settings. We are supported by the University of Colorado School of Medicine and Children's Hospital Colorado via the Colorado Child Health Research Institute. We provide consultations, education, and mentoring to faculty in the School of Medicine to create highly competitive T3-T4 studies/grant applications. Thirteen methodological Cores support researchers through idea inception, grant submission/re-submission, grants management, study implementation, and dissemination. We are also an incubator for research leadership in the T3-T4 space by training new investigators through our several career development/fellowship training programs.

Mission: The mission of ACCORDS is to improve health, both locally and nationally, by supporting state-of-the-art outcomes and community translational research to guide clinical practice and policy.

Leadership: In January 2024, **Jerica Berge, PhD, MPH, LMFT, CFLE** was hired as director, succeeding Allison Kempe, MD, MPH, who led the center for over a decade. She is supported by a leadership team including **Mark Gritz, PhD** director of operations; Jana Smilanich-Rose, director of finance and administration; Kayla Ross, director of human resources; and methodological Core directors (listed below).

ACCORDS Cores	Core Director
Biostatistics & Analytics Core	Kathryn Colborn, PhD, MSPH
Colorado Program for Patient-Centered Decisions	Dan D. Matlock, MD, MPH
Community Engagement and Outreach Program	Don Nease Jr., MD
Dissemination & Implementation Science Program	Russ Glasgow, PhD
Economic Analysis Core	Liza Creel, PhD
Education Program	Sarah Brewer, PhD, MPA
Learning Health System	Katy Trinkley, PharmD, PhD
Mobile Health (mHealth) & Informatics Core	Susan L. Moore, PhD, MSPH
Practice-Based Research Network Core	Sean O'Leary, MD, MPH
Pragmatic Research and Trials Core	Mark Gritz, PhD
The Prevention Research Center for Family & Child Health	Mandy Allison, MD
Qualitative & Mixed Methods (QM2) Research Core	Brooke Dorsey Holliman, PhD
Training, Education and Mentoring (TEaM) Core	Amy Huebschmann, MD, MS & Jacinda Nicklas, MD, MPH, MA

Initiatives:

1. Dissemination and Implementation + Health Equity + Community Engagement Framework. Our Dissemination and Implementation Core's trailblazing work in creating a framework that blends dissemination and implementation research with health equity and community engagement resulted in two NIH R01 applications with perfect 10 scores (i.e., 1st percentiles) (Jolles & Huebschmann).
2. New State-of-the-Art Cores. To ensure we provide pace-setting research approaches for T3-T4 science, ACCORDS continually updates and adds new methodological cores. The Learning Health System (LHS) Core and Pragmatic Research and Trials Core fully launched this year to expand offerings to investigators.

Accomplishments:
Grant Submissions and Prime Awards in FY 24:

- ACCORDS submitted 103 grants supporting 58 School of Medicine faculty across 29 different departments/divisions/sections in 2023-2024, a 13% increase over the prior year.
- Research total award funding for FY24 was $41,154,150, of which 45% was pediatric focused.
- 38 new Primary Awards were received in FY24 – a 37% success rate, 54 total awards received (primary & secondary – i.e. including subcontracts).
- Total research awards (primary & secondary) funded in FY24 spanned 20 School of Medicine Departments/Divisions/Sections.
- A total of 17 career development proposals were submitted, 50% of which were PEDS-related, and 5 new career development awards were received by ACCORDS PIs, for a 1:3 funding rate.
- ACCORDS funded grants will contribute $33M in total NIH award dollars to School of Medicine's overall Blue Ridge Rankings from FY24 – FY28.

Educational Offerings, Attendance by Topic Area:

The D&I Science Graduate Certificate program graduated its 27th researcher in May 2024, with 42 researchers enrolled in D&I classes in the 2023-24 academic year and 16 accepted for Fall 2024.

Attendance at ACCORDS educational activities exceeded 1,400 participants from the Anschutz Medical Campus, local affiliates, and national and international researchers.

Educational Activity:	Attendance
Dissemination & Implementation (D&I) Science: Workshop & Webinar	203
Qualitative & Mixed Methods: Workshop	113
Biostatistics & Analytics – Seminar Series – 9 events:	514
Community Engagement - Seminar Series – 4 events:	269
Shared Decision Making: Seminar Series - 6 events	255
Colorado Pragmatic Research in Health Conference (COPRHcon)	216
Total Educational Event Attendance	1457

Mentoring:

- Total of 71 Anschutz Medical Campus faculty, fellows, and students mentored in FY24 across 32 Departments/Divisions/Sections in the SOM, with 17 Pediatric-focused mentees.

Consultations:

- Our methodological Cores conducted 637 consultations across 44 Departments/Divisions, plus 15 Partners (broader Anschutz Campus, other CO Universities & Medical Groups)
  - 39% of consultations were Pediatric-related

Collaborations: Multidisciplinary collaborations are key to ACCORDS growth and supporting investigators across the Anschutz Medical Campus. We collaborate across the SOM, the Colorado School of Public Health, the Skaggs School of Pharmacy and Pharmaceutical Sciences, School of Dental Medicine, and the College of Nursing as well as campus affiliates including Denver Health, the VA, and numerous community organizations. Integration is a key component of Berge's vision for ACCORDS, and she is actively seeking opportunities to meet with leaders from these collaborating organizations to work on increased collaboration, metric development, and scaling up services with ACCORDS.

University of Colorado Alzheimer's and Cognition Center

Mission: The University of Colorado Alzheimer's and Cognition Center (CUACC) is designated by the Colorado Legislature as the "University of Colorado School of Medicine's Dementia Diseases and Related Disabilities Treatment and Research Center." Our vision is: "Healthy Brain Aging Starts Here®." The CUACC provides standard and innovative clinical care to patients while advancing research on early diagnostics, preventions, treatments, and, ultimately, cures for AD and other neurodegenerative diseases and conditions, thus serving as a premier, comprehensive AD center. In the CUACC Neurobehavior and Memory Disorders Clinic, we assess and care for aging patients with late-onset AD, younger patients with early-onset AD, patients with non-memory/atypical AD, patients with related dementias, and patients with developmental disorders such as Down syndrome.

Leadership: CUACC director Huntington Potter, PhD, is the Kurt N. and Edith von Kaulla Memorial professor of neurology and director of the Alzheimer's Disease (AD) Program for the Linda Crnic Institute for Down Syndrome. Delia Bakeman Do, is the director of the Neurobehavior and Memory Disorders Clinic. Samantha Holden, MD, is the vice chair of outpatient neurology services for the Department of Neurology and clinical director of outpatient neurology for UCHealth. She is the director of the CU Behavioral Neurology & Neuropsychiatry fellowship, with associate directors Bakeman and Tara Carlisle, MD, PhD Carlisle is the medical director of the new Advanced Therapy in Neurodegenerative Disorders (ATND) Clinic that provides novel therapies for neurodegenerative conditions, namely the recently approved anti-amyloid therapies for people with AD. Brianne Bettcher, PhD, is director of neuropsychology research. Victoria Pelak, MD, is vice chair of faculty affairs for the Department of Neurology and is serving as interim section chief for Behavioral Neurology since the retirement of Christopher Filley, MD, in June 2024. Brice McConnell, MD, PhD, is director of the sleep research program. Additional cognitive and behavioral neurologists include Jessica Solomon Sanders, MD, and Morgan Farley, MD, The Neurobehavior and Memory Disorders Clinic team also includes a clinical fellow, two advanced practice providers, two clinical nurses, a nurse infusion navigator, and clinical coordinators. We now have UCHealth facilities in Boulder and will add Lone Tree.

Initiatives: The Neurobehavior and Memory Disorders Clinic interacted with 4,220 unique patients from 7/1/23–6/30/24, including 24% new patients, and had 684 clinical research visits. Our clinic has several unique subspecialty clinical models, including a Healthy Brain Aging Clinic for patients with subjective cognitive concerns or early mild cognitive impairment, directed by Avani Shah, PA. Solomon Sanders directs the Neurodevelopmental Disabilities Clinic, caring for adults transitioning out of pediatric care. Pelak directs the Behavioral Neuro-Ophthalmology Clinic, focusing on posterior cortical atrophy (PCA), the visual variant of AD, and oversees the Biogen-sponsored clinical trials EMBARK and ENVISION, which are studying the FDA approved AD drug aducanumab. Bakeman is also developing a multidisciplinary Neurorecovery Clinic, partnering with Neurosurgery, Rehabilitation, and Neuropsychology to care for people with moderate to

severe traumatic brain injuries. UCHealth has been selected by CMS to participate in the GUIDE program pilot, focused on care navigation services and caregiver training for people living with dementia. This program will be led by Hillary Lum, MD, PhD, in the Division of Geriatric Medicine, partnering with our Neurobehavior and Memory Disorders Clinic team. The University of Colorado has been a Lewy Body Dementia Association Research Center of Excellence since 2017, with Holden serving as the site principal investigator, Pelak as co-principal investigator, and Ece Bayram, MD, PhD, as a site investigator. Cumulatively, the Cognitive and Movement Disorders Clinics at CU cared for 1,593 patients with Lewy body dementia in 2023-2024, 35% of whom were new patients. We were a top enrolling site for two international industry-sponsored clinical trials for dementia with Lewy bodies, SHIMMER, and RewinD-LB.

The CUACC three-week clinical trial to assess the safety and efficacy of GM-CSF/sargramostim as a treatment for mild-to-moderate AD showed that it was safe and improved memory and blood biomarkers of brain damage, leading to a new longer efficacy trial for GM-CSF/sargramostim led by Potter and Peter Pressman, MD, and funded by a $7.5 million NIH grant. The study has enrolled and randomized 12 participants and has had five participants complete. A published study led by Md. Mahiuddin Ahmed, PhD, shows that treatment with GM-CSF improves memory/learning in animal models of Down syndrome and normal aging, which led to another NIH-funded clinical trial in young adults with Down syndrome. Ahmed is also determining the effects of GM-CSF on neuropathology and behavior in a rat model of AD and in mouse models of autism spectrum disorder. The laboratories of Kenneth Tyler, MD, and the CUACC also showed that GM-CSF treatment reduces mortality in a mouse model of West Nile virus infection. CUACC collaboration with Lon Kendall, DVM, PhD, and Angela Bosco-Lauth, DVM, PhD, at Colorado State University also showed that GM-CSF treatment increases the immune response, decreases viral load, and reduces mortality in a mouse model of COVID-19. Athena Wang, PhD, is investigating GM-CSF as a possible treatment for type-2 diabetes.

Accomplishments and Collaborations: CUACC scientists published over 60 research papers in peer-reviewed journals with funding from the NIH, the DoD, the Alzheimer's Association, the State of Colorado, the CCTSI, and generous philanthropists. CUACC members presented their research findings at numerous international scientific meetings (e.g., Alzheimer's Association International Conference, American Academy of Neurology Annual Meeting, Annual Meeting of the Society for Neuroscience). This year, CUACC members had one patent issued, submitted three new patent applications, and have three other patent applications under review by the U.S. Patent and Trademark Office; the CUACC also holds several trademarks.

Anschutz Health and Wellness Center

The CU Anschutz Health and Wellness Center (AHWC) collaborates with campus partners to develop and deliver programs and services targeting physical activity, nutrition, and mental wellbeing to enhance the lives of people who come here. The AHWC serves as a campus resource that provides support and a space for innovation and collaboration for researchers, clinicians, patients, students, campus employees, and community members. More information on each of our programs, services and offerings can be found at anschutzwellness.com.

Mission: To utilize the power and science of movement, nutrition, and mental well-being to enrich the health and wellness of our community.

Leadership: Director **Daniel Bessesen, MD**; Director of Research, **Paul MacLean, PhD**; Medical Director, **Vicki Catenacci, MD**, and Director of Finance and Administration, **Luciana Smith, MSO, MCPH**.

Initiatives:
Research: The AHWC is the clinical home of the NIH-funded Colorado Nutrition Obesity Research Center (NORC) which has over 100 investigators conducting research that spans basic science to population science. NIH funded studies at the AHWC are

examining the effectiveness of alternate day fasting and time-restricted eating for weight loss as well as the adaptive responses to weight loss that promote weight regain. Studies are being done on the effect of weight loss on the natural history of polycystic kidney disease, breast cancer, and on the best time of day to exercise. The AHWC has an active clinical trials group that is doing studies on the next generation of highly effective antiobesity medications including retatrutide and semaglutide/cagrilintide that will dramatically change the way we treat obesity and the health problems associated with it.

Fitness: The 30,000 sq ft AHWC Fitness Center features state of the art Technogym aerobic and resistance exercise equipment along with 50 weekly group exercise classes, personal training services, massage, acupuncture, an exercise pool, sauna and stream rooms and motivational support for nearly 3,000 members from the campus and the surrounding community. The fitness team supports wellness programs for a wide range of campus and community groups with yoga and massage.

CU Medicine Weight Management and Wellness Clinic: The AHWC offers multi-disciplinary weight management and wellness services, including provider directed weight management; evidence-based lifestyle programs; nutrition consultations with registered dietitians; behavioral health services; and body composition, metabolic assessment, and diagnostic testing. The clinic also supports the training of medical students and residents in obesity treatment and hosts the Colorado Obesity Medicine fellowship program which is training the next generation of obesity medicine specialists.

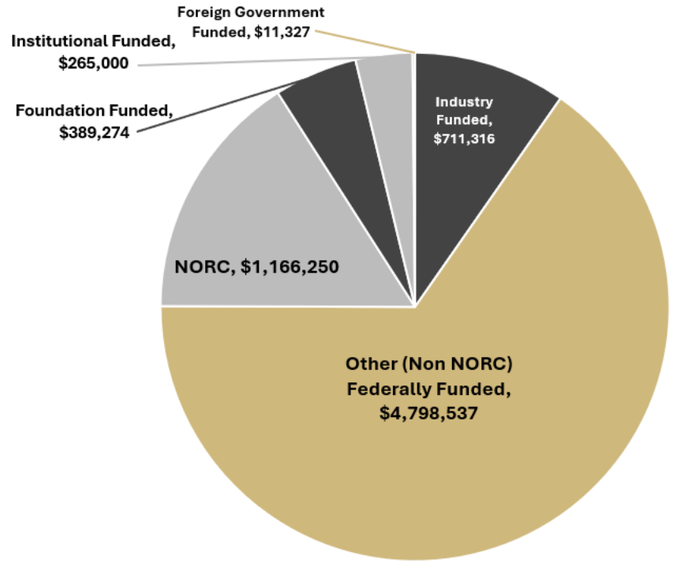
Community Nutrition Programs (CNP) The CNP is a team of registered dietitians and culinary educators offering nutrition programming to campus and community partners. The metabolic and demonstration kitchens at the AHWC are the hub for in-person programming paired with multiple virtual offerings and tabling events. The CNP team focuses on providing research-based, best-practice nutrition and culinary education to campus and community partners. In FY24, the CNP team provided programming to more than 15 campus and community groups and interacted with over 1,100 participants with nearly 100 classes, presentations, and educational events. The CNP team provides medical students hands-on and virtual experiences in community nutrition through the new SOM's nutrition elective.

Clinical Populations (CP): The AHWC provides exercise programs tailored to the needs of people with health issues. The BfitBwell Cancer Exercise Program is the flagship of these programs. Having worked with over 1,000 cancer survivors since being established in 2013, it is a collaboration between the University of Colorado Cancer Center, UCHealth, and the AHWC. This program conducts research and provides clinical services for people living with cancer. The CP program also provides exercise support for people being treated at CeDAR and those who have undergone metabolic and bariatric surgery at UCHealth.

Accomplishments: 2023-24 was a year of growth and increasing impact for the AWHC. We will highlight accomplishments in 3 areas.

Research: The AHWC has provided infrastructure for studies being done on 7 x R01's, an R56, 2 x K01's, 3 Foundation grants and 6 industry sponsored trials. AWHC faculty member Dr. Vicki Catenacci was recently awarded a K24 in recognition of her research and mentoring, and Dr. Ryan Marker received a new R01 for his work optimizing exercise interventions for cancer survivorship.

The AHWC is home to research (sponsored projects), which secured $7.342 million in annual funding in direct and indirect funds.



Clinic: As highly effective anti-obesity medications have become more widely available, the CU Weight Management and Wellness Clinic saw a 34% increase in patient volume going from 8,174 annual visits in FY 2023 to 10,960 visits in 2024. Total clinical revenue in FY24 was $2.798m up from $1.65m in FY23.

Community Support: AHWC supports the Aurora community. The DAWN Clinic, which provides medical student education and health services to underserved populations in Aurora, began providing primary and specialty care to patients at the AHWC in March 2023. The Community Nutrition team with support from the UPL program began work providing nutrition education in support of the new Aurora Wellness Community which will open their new clinic this year.

Collaborations: Collaborating with campus partners is a central goal of the AHWC. Each area of the center has multiple active collaborations. A few of these are listed here:

Fitness:

- The VA Gerofit program: exercise for older veterans; Marcus Institute for Brain Health: exercise for veterans with traumatic brain injuries; Children's Hospital Colorado: Project Search exercise program for students with significant disabilities.
- Yoga, group fitness, massage have all supported wellness events for the School of Public Health, School of Dental Medicine, OB/GYN APPs and nurses during National Nurse's Week.

Clinic:

- CU Medicine Cosmetic Surgery; The Marcus Institute for Brain Health; The DAWN Clinic.

Clinical Populations:

- Cancer Center; Latino Cancer Task Force of the Colorado Cancer Coalition; Metabolic and Bariatric Surgery Program at UCHealth; CeDAR

Community Nutrition:

- Aurora Science and Tech Middle School; Graduate School Postdoctoral Association; Child Health Associate/ Physician Assistant Program; Office of Student Health Promotion; CU Anschutz Alumni Relations

Barbara Davis Center for Diabetes

The Barbara Davis Center for Diabetes (BDC) is one of the largest centers in the world specializing in type 1 diabetes research and care for children and adults. Clinicians, clinical researchers, and basic biomedical scientists work at the BDC to find the most effective treatment, prevention, and cure for type 1 diabetes.

Initiatives:

Clinical Care

The center provides state-of-the-art care for over 7,600 children and adults with diabetes. Barbara Davis Center clinics offer extensive education and support for patients and their families, as well as specialized programs such as the Pregnancy and Diabetes Clinic, the Hispanic/Latino Diabetes Care Program, and a model telehealth program. The Barbara Davis Center provides type 1 diabetes care for Children's Hospital Colorado diabetes and endocrine program, currently ranked No. 4 in the country by U.S. News & World Report.

- BDC serves >90% of Colorado children diagnosed with type 1 diabetes.
- Patients from 46 U.S. states receive care at the BDC.
- Patients from over 33 countries receive care at the BDC.
- 96% privately insured & 83% Medicaid patients use continuous glucose monitors
- 75% privately insured & 69% Medicaid patients use hybrid closed loop pump systems
- BDC clinics accept >600 new patients annually.

Research

BDC research includes investigation of the causes of type 1 diabetes, the early detection of autoimmunity, prevention, and early introduction of novel technology in treatment of the disease. BDC clinical faculty members are developing new strategies and treatments for improved outcomes of care including prevention of acute and long-term complications of diabetes. BDC investigators receive >$20 million per year in competitive grant funding. They are currently directing >240 active sponsored research projects and publish over 150 peer-reviewed papers in high-profile journals every year.

Clinical Research Highlights:

BDC investigators continue to increase the body of knowledge around the identification, cause, treatment, and outcomes of type 1 diabetes. Recent contributions include:

- BDC clinical trials pivotal for FDA approval of therapies and devices including: the first hybrid closed-loop system to automate insulin dosing; insulin FiAsp; nasal glucagon (Baqsimi); and Control IQ hybrid closed loop system for patients ≥ 14 yrs and for patients 6-13 yrs.
- SGLT adjunctive therapy improves outcomes in type 1 diabetes patients.
- Autoimmunity Screening for Kids (ASK) study finds 1% of children in Denver have early type 1 diabetes and 2% have undiagnosed celiac disease. Screening and monitoring of high-risk children prevents 90% of diabetic ketoacidosis at diagnosis of diabetes.

- Clinical trial results have been translated into the first FDA approved treatment of early type 1 diabetes that delays insulin dependency by 3 years.

Basic Science Research Highlights:
In the Basic and Translational Research Division, the recruitment of two new faculty in 2024 with expertise in islet biology has further diversified the research base at the BDC. The Basic and Translational Research Division has grown to 12 faculty. Seven faculty (Davidson, Friedman, Jacobelli, Michels, Nakayama, Smith and Yu) are focused the autoimmune component of the disease with research investigating all aspects of the immune system contributing to autoimmunity, including T cells, B cells and macrophages. Four faculty (Benninger, Sussel, Wortham, Yu) are investigating the immune targeted pancreatic beta cells with the goal of learning to protect or replace the insulin producing cells. We have also recently recruited an expert computational biologist (Wells) who leads a team that assists with analyzing many of the large datasets generated by the research teams.

Active areas of investigation include:
- the role of all components of the immune system in the destruction of pancreatic beta cells
- use of novel high throughput technologies to characterize the immune subpopulations responsible for initiating the autoimmune attack
- understanding the role of the pancreatic beta cells in contributing to the disease process and developing methods to protect the beta cells from autoimmune attack.
- using human stem cells to model human T1D in a dish and develop novel cell replacement therapies.

Education
The BDC provides an outstanding training environment for developing physician-scientists, clinicians, and basic science researchers. Faculty members provide laboratory and clinical research training opportunities for young investigators from around the world including participants in the highly successful T32 Pediatric Endocrinology Fellowship Training Program, K12 Pediatric Endocrinologist Career Development Program, and a newly established T32 Interdisciplinary Bioengineering Research Training in Diabetes. The annual Keystone Conference remains the center's flagship in continuing medical education in management of diabetes, regularly selling out with over 600 participants.
The Barbara Davis Center is led by **Marian Rewers, MD, PhD**, executive director; **Paul Wadwa, MD**, director of pediatric diabetes division; **Satish Garg, MD**, director of adult diabetes division; **Lori Sussel, PhD**, director of basic and translational research division; and **Janet Snell-Bergeon, PhD**, director of clinical epidemiology division.

Accomplishments:
- Sussel received the Albert Renold Award Lecture from the European Association for the Study of Diabetes (EASD)

- Jacobelli was a recipient of a Gates Grubstake Fund Award
- In a recent bibliometric analysis of publications on pediatric type 1 diabetes, the BDC was ranked as the top most productive organization and the third most impactful organization
- Based on promising rodent preclinical studies, Benninger has initiated a clinical trial to use ultrasound imaging to detect alterations in the islet that could predict presymptomatic T1D

Collaborations:
- The BDC Research Division is partnering with the University of Michigan and Columbia University Diabetes Centers in the Concordia Coalition – a new national consortium to foster collaborative diabetes research and train the next generation of leaders in diabetes and metabolism research.

www.barbaradaviscenter.org

Brain and Behavior Innovation Center

The Brain and Behavior Innovation Center (BBICen) was born from the vision of Dr. C. Neill Epperson, Chair of the Department of Psychiatry, who recognized the urgent need for new, innovative approaches to address the current mental health crisis. BBICen is made possible by generous support and leadership from the Chancellor's office, including initial five years of seed funding for its establishment and development. BBICen fosters innovation in mental and behavioral health treatment and care delivery, aiming for "Brain Health for all, for life" to enhance the well-being of patients, their families, and communities in the greater Rocky Mountain region and beyond. This mission is achieved by advancing innovations in mental and behavioral health through its three pillars of Technology, Novel Therapeutics, and Care Redesign within the Department of Psychiatry and across the CU Anschutz campus. BBICen fosters internal and external collaborations across academia, government, industry, and the community.

Mission: BBICen's mission is to advance innovations in mental and behavioral health through the three pillars of technology, therapeutics, and care.

Goals:

- Create, develop, implement, and evaluate mental health innovations.
- Foster a department workforce and culture to advance innovations.
- Partner with internal and extramural collaborators in academia, industry, government, and community.
- Promote departmental, institutional, intellectual, and fiscal resources.

Leadership:

- Senior Scientific Advisor: Neill Epperson, MD
- Executive Director and Chair of Innovations: Jay Shore, MD
- Director of Technology: Dr. Allison Dempsey, PhD
- Director of Novel Therapeutics: Scott Thompson, PhD
- Acting Director of Care Redesign: Tiffany Love, PhD
- Program Manager: Tereza Guedes, PhD

Initiatives:

- 34 projects in the Center Portfolio
- 13 projects ongoing or completed in the Technology Pillar
- 5 projects ongoing or completed in the Therapeutics Pillar
- $ 8 million Investiture ($5 million from Chancellor & $ 3 million from external funding)

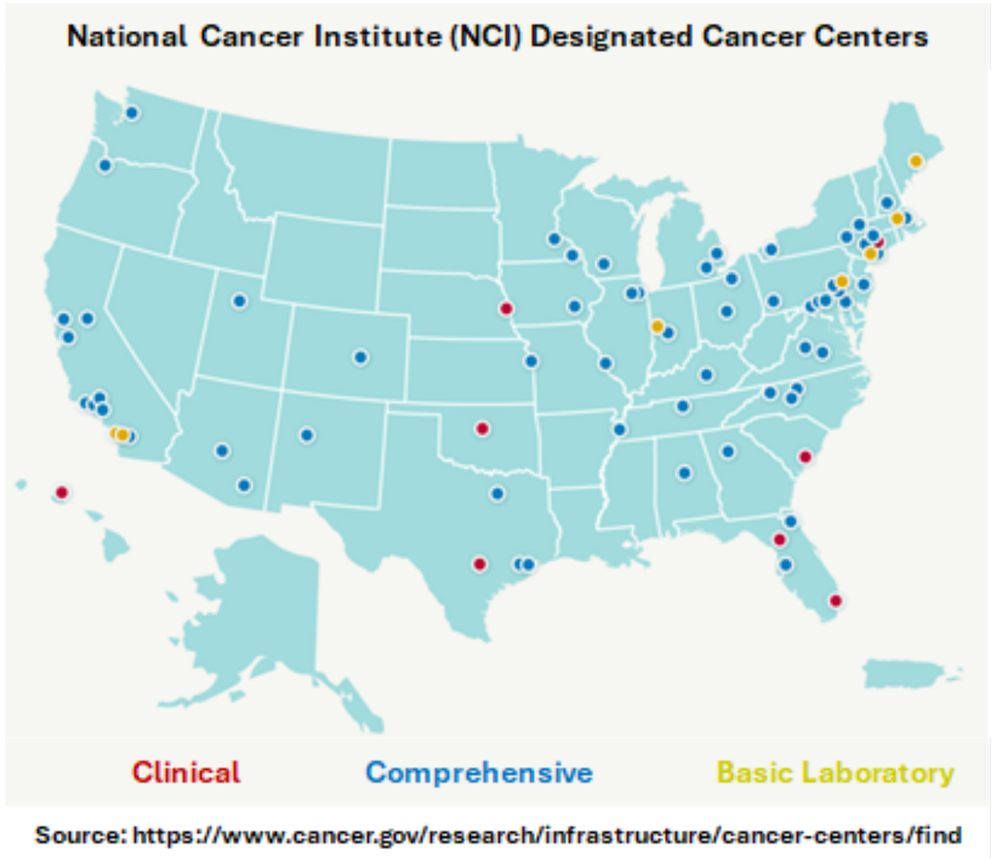
Accomplishments:

- Health Rhythms is a remote patient monitoring that combines traditional symptom checklists/screeners with AI passive monitoring behavioral data from mobile device to detect worsening of symptoms and enhance care delivery. Working with DOP/UCH/CUI we are engaging in cycles of iterative refinement to enhance widescale implementation.
- The mission of the Avielle Foundation is to build compassion and prevent community violence. Through our annual Seed Grant Initiative, we support brain health research across all stages of the translational science spectrum, and the Jeremy Richman Award offers a summer internship in which students have the opportunity to engage in mentored research and evaluation exploring the causes of violence and ways to foster compassion.
- The use of psychedelic compounds to treat a wide range of difficult-to-treat psychiatric conditions heralds a potential revolution in our ability to offer fast-acting relief of debilitating symptoms. While there is great excitement about promising early clinical trial results, there is still much that remains uncertain and unknown. Faculty in the Department of Psychiatry are making important contributions to advance our understanding of how to safely deliver these powerful compounds and assess their efficacy.

Collaborations: BBICen is working with Beth Israel Deaconess Medical Center to launch a new program in our digital clinic. This initiative will integrate mindLAMP, a mental health application indexed by the World Health Organization's Digital Health Atlas, into a telehealth treatment program for depression and anxiety. The aim of this initiative is to enhance patient monitoring and improve treatment outcomes through tech-enabled care.

University of Colorado Cancer Center

Vision: Prevent and conquer cancer. Together.
Mission: Uniting our community to overcome cancer through innovation, discovery, prevention, early detection, multidisciplinary care, and education.

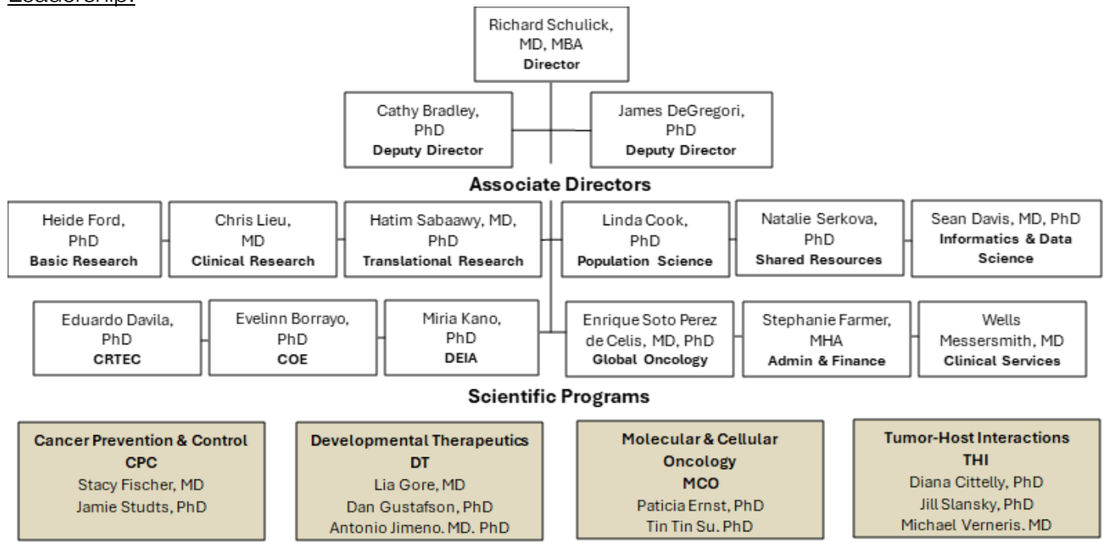


Source: https://www.cancer.gov/research/infrastructure/cancer-centers/find

The University of Colorado Cancer Center (CU Cancer Center) is the only National Cancer Institute (NCI)-designated comprehensive cancer center in Colorado. The CU Cancer Center stands as a unique organization and resource in Colorado and the surrounding region in cancer research, prevention, clinical care, and outreach. CU Cancer Center was initially designated by NCI in 1988 as a Clinical Cancer Center. In 1997, the center was designated as an NCI Comprehensive Cancer Center, indicating that it met stringent research-focused metrics in basic, clinical, translational, and population science research. In 2013, the center was elected as a member of the National Comprehensive Cancer

Network (NCCN), an alliance of the nation's leading cancer centers working to establish and deliver the gold standard in cancer clinical guidelines. In February 2015, the CU Cancer Center joined the Oncology Research Information Exchange Network (ORIEN), a research partnership among top U.S. cancer centers designed to facilitate discoveries in precision medicine.

Leadership:



Acronyms: CRTEC – Cancer Research Training and Education Coordination; COE – Community Outreach and Engagement; DEIA – Diversity, Equity, Inclusion, and Access

Initiatives:

Accrual of Minorities

Goal 1 – Increase access and accrual of under represented minorities to CU Cancer Center clinical trials.
Goal 2 – Increase community engagement and partnership to build awareness and knowledge of clinical trial availability and cancer research.
Results – Through increased investments by CU Cancer Center and UCH leadership we have increased accrual of Hispanics on intervention treatment trials from 8% when we started to over 16% in FY24.

Fostering Science

The CU Cancer Center leverages a variety of programs to foster cancer research. In addition to Cancer Center's own pilot grants, the center works closely with philanthropic organizations such as Cancer League of Colorado, Golfers Against Cancer, and Wings of Hope to promote the early stages of science and research.

The Center is an active participant in programs like AB Nexus, which is a collaborative grant opportunity between the Anschutz Medical Campus and the Boulder campus to promote cooperative cancer research using expertise from each campus.

The Cancer Center also partners with the CU Aspire program to promote large, cancer, team-science grants such as Program Project Grants (PPG), and Specialized Programs of Research Excellence (SPORE) grants.

Fiscal Year	# Pilot Awards	$s Awarded UCCC	$s Awarded Inst'l	$s Awarded Total	Return on Investment (ROI) # Grants	Return on Investment (ROI) Total DC $	Return on Investment (ROI) # Pubs
2021	30	1,286,676	405,000	1,691,676	9	7,311,387	6
2022	19	979,980	212,500	1,192,480	3	1,177,273	4
2023	23	1,134,656	155,000	1,289,656	-	-	1
2024	23	1,106,721	209,964	1,366,685	-	-	-
Total	95	4,508,033	982,464	5,540,497	12	8,488,660	11

Table 1. Center-level Pilot Grants Awarded and the ROI to Date

Over the past four years, the Cancer Center has awarded 95 pilot grants for a cumulative investment of $5.5M, 80% of which were awarded to investigators in the School of Medicine (Table 1).

Collaborations: The Cancer Center's membership comprises faculty from CU Anschutz, CU Boulder, CU Denver, Colorado State University, and National Jewish Health. Members are categorized as Full, Mentored, Affiliate, or Clinical.

Full members total 216, with 152 from the School of Medicine (SOM), accounting for 70%. Mentored members number 59, with 49 from SOM, making up 83%. Affiliate members total 157, with 86 from SOM, making up 55%. Clinical members number 86, with 74 from SOM, accounting for 86%. Overall, the cumulative total of all member types is 518, with 361 from SOM, constituting 70%.

As of the December 1, 2023, report to the NCI, Full and Mentored members held $102,343,405 cancer-focused total cost funding across 630 research awards. Of these funds, $82,276,345 from 553 awards went to members in the School of Medicine. During this same reporting period, Full and Mentored members produced 637 cancer-related publications, 27% of which were in journals with an impact factor >=10.

ColoradoCancerCenter.org

Cardiovascular Institute

Mission: The scientific goals of the institute are to understand the genetic basis and specific molecular mechanisms responsible for heart muscle disease and heart failure, and to produce new diagnostic techniques and treatments for patients. By integrating the effort of those committed to curing heart muscle disease and heart failure, the collaborative nature of the institute encourages sharing findings and data across both the Boulder and the Anschutz campuses, which translates into improved diagnosis and therapies for patients. Trainees supported by a collaborative NIH grant are encouraged to rotate across both campuses.

In molecular genetics, the mission of the institute is to investigate and identify genetic contributors to heart muscle disease and heart failure and in pharmacogenomics, our mission is to identify and develop therapies that favorably affect pathologic myocardial gene expression or the clinically important consequences of variant gene products. The institute has always placed high value of the development of novel intellectual property that leads to partnerships with biotech and industry that links to advances in clinical care.

Leadership: The University of Colorado Cardiovascular Institute is co-directed by **Peter M. Buttrick, MD**, and **Leslie Leinwand, PhD**, with a focus on the integration of cardiovascular research, treatment, and discovery through a collaboration of the University of Colorado Anschutz Medical Campus and the University of Colorado Boulder. Michael R. Bristow MD, PhD, is the director of the pharmacogenomics section and Matthew R.G. Taylor MD, PhD, and Luisa Mestroni, MD, are co-directors of the molecular genetics section. Timothy A. McKinsey, PhD, provides leadership in both sections.

Accomplishments: Faculty associated with the CUCVI have launched multiple start-up companies based on novel IP, including Myogen, MyoKardia and ARCA, which collectively have been purchased by pharmaceutical companied for more than $16 billion.

Cardiovascular Institute members have published over 50 peer-reviewed papers, have secured numerous funding awards, and have launched several clinical trials this past year. CVI members hold leadership positions or committee memberships in the National Institutes of Health, American Heart Association, Heart Failure Society of America, and the International Society for Heart Research.

https://medschool.cuanschutz.edu/cardiovascularinstitute

Center for Bioengineering

The Center for Bioengineering and the Department of Bioengineering respectively represent the research and academic components of the bioengineering program at the University of Colorado Denver | Anschutz Medical Campus. Built to improve patient care by integrating engineering principles of design with biological systems and biomedical technologies, the program was founded in 2010 and currently employs 13 tenure # track faculty, in addition to research and teaching faculty. More than 100 CU Anschutz, Denver, and Boulder faculty have affiliate appointments with the Center for Bioengineering. The Department of Bioengineering is part of the College of Engineering, Design and Computing at CU Denver and is an ABET-accredited program that offers graduate and undergraduate degrees.

Mission: The Center for Bioengineering aims to support, catalyze, and grow research, training, and entrepreneurship at the intersection of clinical medicine and engineering on the Anschutz Medical Campus.

Leadership: Department Chair/Center Director: **Kristyn Masters, PhD**
Graduate Program Chair: Emily Gibson, PhD
Undergraduate Program Chair: Kendall Hunter, PhD

Promotions: Chelsea Magin, PhD, and Bradford Smith, PhD, were promoted to the rank of Associate Professor with tenure in Summer 2024. Richard Benninger, PhD, was promoted to the rank of Full Professor in Spring 2024.

Initiatives: Research: Overarching research themes within the Center for Bioengineering include neural engineering, biomaterials and tissue engineering, assistive technologies, medical devices, and biomechanics. Research labs in the Center for Bioengineering are primarily located in Bioscience 2 and Bioscience 3, with additional research space located in the Barbara Davis Center, Research 1 North, Research 2, and the Research Institute at the Children's Hospital Colorado.

Specific examples of research projects that were awarded to BIOE faculty in FY24 include:

- Richard Benninger, PhD, is PI on a new R01 entitled, "Developing ultrasound contrast agents and signal processing for structural and functional imaging in type 1 diabetes" in which he will apply novel imaging techniques to diagnose and track type 1 diabetes progression
- Kristyn Masters, PhD, is PI on a new R01 entitled, "Engineered models of age-related biochemical, biophysical, and hormonal changes to elucidate mechanisms of aortic valve disease onset" in which she will use tissue engineering to mimic heart valve aging, sex differences, and disease mechanisms.
- Emily Gibson, PhD, is co-PI on a new NSF grant entitled, "Modified two-photon microscope with high-speed electrowetting array for imaging voltage transients in cerebellar molecular layer interneurons" in which she will help develop a revolutionary microscope for studying the brain's neural activity.
- Keith Neeves, PhD, is co-I on a new R01 entitled "Endothelial Dysfunction and Restoration in Trauma Induced Coagulopathy" in which he will study how to restore endothelial cell health following traumatic injury.

Education and Outreach: In our undergraduate and graduate programs, bioengineering students learn how to apply engineering skills and knowledge to solve clinical problems. The Bioengineering BS degree underwent successful re-accreditation in 2023-24. We also continue to lead several pre-college programs, such as the BioEngineering Empowerment Program (B.E.E.P.), which focuses on expanding opportunities for underrepresented students in bioengineering and related STEM disciplines and the Bioengineering Opportunities and Leadership Training (B.O.L.T.) summer camp, which is focused on introducing high school and middle school students to bioengineering.

Accomplishments:
Grants:

- BIOE faculty brought in approximately $8M in extramural research funding in FY24

Honors:

- Keith Neeves, PhD, and Cathy Bodine, PhD, were elected to the AIMBE (American Institute of Medical and Biological Engineering) College of Fellows. This is an honor bestowed upon the top 2% of bioengineers in the country.
- Chelsea Magin, PhD, was awarded the CU-Denver Award for Excellence in Research and Creative Work by Tenured/Tenure-Track Faculty

Collaborations: Faculty membership is representative of the diverse and translational research projects that bridge engineering and medicine, and our program collaborates with more than 100 faculty in the CU School of Medicine. The Center for Bioengineering has active research collaborations with the Colorado Translational Research Imaging Center, the neuroscience program, the Barbara Davis Center for Diabetes, Data Science to Patient Value, the Division of Pulmonary Sciences and Critical Care Medicine, the Ludeman Family Center for Women's Health Research, Gates Center for Regenerative Medicine, Hemophilia and Thrombosis Center, Center for Cancer and Blood Disorders, Developmental and Behavioral Biology, Orthopedics, Geriatrics, Physical Medicine and Rehabilitation, the Linda Crnic Institute, the Clinical Translational Research Center, Organoid and Tissue Modeling program and the iPSC Core at the CU School of Medicine.

Local extramural collaborations include the VA medical center, National Jewish Health, CU Boulder, Colorado State University, and Colorado School of Mines. The Department of Bioengineering and the Center for Bioengineering also collaborate with the Colorado Bioscience Institute as well as with many local industry partners, including Medtronic, Securisyn, EndoShape, Inc., EnteroTrack, LLC, Stryker, AlloSource, Inc., Couragion Corporation, mindSpark Learning and Aurora Public Schools, Sharklet Technologies, Inc.,

Point Designs, National Seating and Mobility, NuMotion, BenchMark Advanced Manufacturing, and Google.

The center features strong and successful programs in medical device innovation and entrepreneurship. Faculty and students have started 12 companies, several in collaboration with School of Medicine faculty. Several technologies have been invented at the center, and over 110 patents or patent applications have been generated.

https://medschool.cuanschutz.edu/bioengineering

Center for Children's Surgery

The Center for Children's Surgery (CCS), a multi-disciplinary center housed within the School of Medicine, was established in 2011 to represent faculty who specialize in providing surgical care to children. The CCS promotes the continued growth and development of CCS members to fulfill the multiple missions of the School of Medicine and Children's Hospital Colorado (CHCO). The center's focus on strengthening and deepening the partnership and synergies between the school and hospital supports the advancement of the Anschutz Medical Campus.

The CCS is comprised of the following pediatric divisions/ sections: adolescent and pediatric gynecology, pediatric cardiothoracic surgery, pediatric neurosurgery, pediatric ophthalmology, pediatric orthopedics, pediatric otolaryngology, pediatric surgery, pediatric plastic surgery, pediatric urology, pediatric transplant surgery, pediatric dentistry, and pediatric dermatology. The center's members include over 115 MD/DDS faculty and 90 APPs. Key service areas include the Research Outcomes in Children's Surgery and Medical Media teams.

Leadership: CCS faculty leadership includes **Duncan Wilcox, MBBS, MD**, director and surgeon-in-chief at Children's Hospital Colorado; Michael Handler, MD, FACS, FAAP, associate surgeon-in-chief; Jill Kaar, PhD, director of outcomes research; Cindy Barrett, MD, MPH, chief of surgical quality and safety; Daniel Wood, MD, director of transitional care and Jay Albright, MD, director of surgical operations for the network of care. Staff leadership includes Sandra Talley, MPH, director of finance and administration, and CHCO partners, Garrett Risley, MBA, director of perioperative services, and Sarah Riggs, MBA, VP of service lines.

Accomplishments: In FY24, the CCS welcomed 14 new MD/DDS faculty members across several departments. We also made significant progress on our goals and initiatives, including formalizing the Biobank and Database for Patients with Craniofacial Differences, successfully recruiting new fellows for our surgical APP fellowship program, making significant strides surgical psychology outcomes research, strengthening our Quality and Patient Safety team, expanding our robotic surgery program as well as increasing our surgical volume by 14%.

Center for Health Artificial Intelligence

The Center for Health Artificial Intelligence (CHAI) seeks to foster a thriving community of researchers on the Anschutz Medical Campus who are inventing and deploying advanced analytical approaches. CHAI was founded in 2020 to make the Anschutz Medical Campus a leader in translating data and artificial intelligence (AI) methods into advances in research practice, healthcare delivery, and population health and scaling these to provide nationwide benefits through innovative technologies. In its first phase, CHAI focused on building the infrastructure and capability to successfully launch a Department of Biomedical Informatics in the School of Medicine. Now housed within this department, CHAI aims to provide avenues to translate research advances to the point of care.

Mission: CHAI seeks to bring AI to the point of care in ways that positively transform the patient experience from interactions to outcomes.

Leadership:

- **Casey Greene, PhD,** Director
- Tell Bennett, MD, MS, Senior Advisor
- Ivana Yang, PhD, Senior Advisor
- Audrey Wen, MS, Director of Finance and Administration

Initiatives:

- Implementation of ML/AI Strategies to Address Clinical Needs: CHAI continues to emphasize the importance of developing practical ML/AI strategies that address critical clinical needs. For example, modern criteria for pediatric sepsis and septic shock suitable for deployment across data-rich to data-limited settings has remained a gap. A team led by Tell Bennett, MD, MS, a CHAI senior advisor, used ML-based approaches, paired with a deep understanding of the unique challenges of the task, to develop new criteria that can be applied all over the world.
- Communication, Community, and Stakeholder Engagement: CHAI leadership has been actively communicating on advances in AI for healthcare, including at a Transforming Healthcare event held in April and the Colorado Clinical and Translational Sciences Institute (CCTSI) 2024 CU-CSU Summit, which focused on Research Innovations in Health AI. CHAI is currently assigned 9,700 square feet of space in the Anschutz Health Sciences Building, which currently houses faculty from the Departments of Biomedical Informatics and Medicine. CHAI uses space, break rooms, and other elements to enhance communication and collaboration with other nearby units, such as CU Innovations. CHAI has contributed to the growth of both the faculty and student communities working in these areas, contributing to the recruitment of multiple faculty in recent years, including Gregory Way, PhD; Arjun Krishnan, PhD; Janani Ravi, PhD; and Joanne Cole, PhD. These faculty, now housed in DBMI, are building collaborations with the Skaggs School of Pharmacy and Pharmaceutical Sciences, Colorado Center for Personalized Medicine, the Department of Medicine, the Department of Microbiology and Immunology, the Department of Orthopedics, and more. CHAI has also supported additional trainees in the Computational Biosciences PhD program, with an emphasis on supporting trainees at the intersection of AI and healthcare.
- Expanding Software Engineering Capacity: CHAI formed its software engineering team in 2021 with the goal of improving software reliability, robustness, and availability for practitioners in advanced analytics. The team members played critical roles in developing the Exploring Cancer in Colorado (ECCO) software with the University of Colorado Cancer Center. The team has also established a blog that provides software engineering tips for investigator teams on campus. Example posts include one on using graph database technologies for advanced analysis and another on automated testing strategies to ensure software reliability. A member of the team, Dave Bunten, was also awarded a BSSw Fellowship, a prestigious recognition for scientific software developers.

Accomplishments:

- Research: CHAI Senior Advisor, Tell Bennett, MD, MS led an international task force to define criteria for pediatric sepsis. The task force implemented a data-driven approach that relied on machine learning to include high-performing measures while ensuring that the criteria could be widely deployed.
- Research Funding: Among multiple awards to faculty initially recruited by CHAI is one from the Gilbert Family Foundation to Gregory Way, PhD. This award focuses on combining a new microscopy assay with an AI-based analysis pipeline to develop treatments for Neurofibromatosis 1 (NF1).
- Software: CHAI's software engineering team provided critical support that enabled the University of Colorado Cancer Center to launch Exploring Cancer in Colorado (ECCO). More broadly, the team also created a "wall of software" along the entryway to the CHAI space in the Anschutz Health Sciences Building and virtually to recognize research software created by the team or Department of Biomedical Informatics labs.
- Community Engagement: CHAI leadership worked in concert with campus leadership for an event in the Transforming Healthcare series. This event, held in April 2024, highlighted advances in developing and deploying AI that are saving lives today at CU Anschutz. The event was an opportunity for experts from CHAI, UCHealth, Ophthalmology, and the Center for Bioethics and Humanities to engage with the community – sharing advances and answering questions.

Collaborations:

- Office of Research Education: CHAI has collaborated with the Office of Research Education in the School of Medicine to increase the number of training opportunities for PhD students in the Computational Bioscience Program with a particular emphasis on students working at the intersection of AI and healthcare.
- Office of Information Technology: CHAI has provided insight into computing needs at the intersection of AI and healthcare, contributing to the development of a model that can support researcher and unit-level additions to high-performance computing through the Alpine supercomputer. This paves the way for a sustainable environment for high-performance computing that meets the needs of AI researchers on campus.

Center for Surgical Innovation

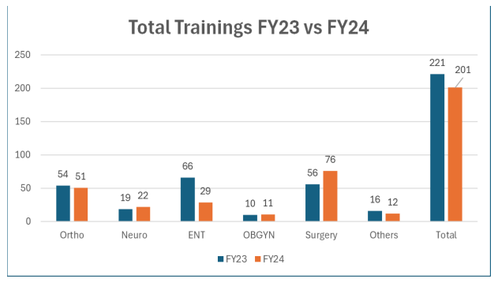
CSI was created in 2007 and is supported and overseen by five surgical departments on the University of Colorado Anschutz Medical Campus. The participating departments are surgery, neurosurgery, orthopedics, obstetrics and gynecology, and otolaryngology.

Mission: The Center for Surgical Innovation's (CSI) mission is to provide cutting-edge surgical training courses aimed to train medical affiliates in the latest surgical techniques and technology locally, regionally, nationally, and globally, and to study surgical and procedural educational methods to advance how surgical procedures are learned and taught.

Leadership: The CSI leadership team is **Thomas Robinson, MD,** medical director, **Sarah Massena, MBA,** business director, **Alexandra Hay, BS,** lab manager, two lab coordinators, and two lab techs.

Accomplishments: CSI moved into their new lab in Bioscience 3, 2115 N. Scranton St., Suite 1035, Aurora. The new state-of-the-art facility has multiple conference rooms and a larger lab with over 8,000 square feet of space.

CSI hosted 201 training events in Fiscal Year 2024, consisting of medical affiliates, medical students, residents and mid-career surgeons from around the world. The number of participants that trained in CSI in Fiscal Year 2024 was 4107.



Colorado Nutrition Obesity Research Center

The Colorado Nutrition Obesity Research Center (NORC) is funded by NIH/NIDDK grant P30 DK048520 with $1.4 million annually and has secured ~$6 million through 2025 to promote interdisciplinary, translational research, and develop young investigators interested in nutrition and obesity research. The NORC's research base utilizes three biomedical research cores that facilitate the advancement of science of nutrition and obesity at basic, preclinical, and clinical levels: Clinical Intervention and Translation Core directed by Janine Higgins, PhD; Energy Balance Assessment Core directed by Wendy Kohrt, PhD; Molecular Cellular Analytic Core directed by Bryan Bergman, PhD.

Mission: The Colorado NORC's mission is to advance the science of nutrition and obesity by facilitating interdisciplinary, collaborative, translational research and by fostering the development of the next generation of scientists in the Rocky Mountain region. We pursue our mission by supporting the work of our research base with events and workshops that enhance the research and training environment and three research cores that facilitate the advancement of science of nutrition and obesity at basic, preclinical, and clinical levels.

Leadership: Senior leadership includes **Paul MacLean, PhD**, Director, **Daniel Bessesen, MD**, Associate Director, and recently appointed Associate Director, **Darleen Sandoval, PhD**. The NORC research base includes over 130 funded faculty members and 60 affiliated trainees, educators, and researchers, with a research portfolio of $50 million of nutrition-and obesity-related research across five campuses in the Rocky Mountain region.

Initiatives: Our members are supported with a variety of journal clubs, events and workshops that enhance the research and training environment through our enrichment program, directed by Ed Melanson, PhD.

We support new investigators with projects relevant to nutrition or obesity who have no independent NIH (or comparable) funding through the annual Pilot Program. The goal of the program is to help junior investigators perform studies that will help them build their independent research program and support their efforts to acquire a career development award (K01, K08, K23, VA CDA2 or similar award) or their first independent R01 award.

The NORC holds an annual NORC Awards Program in December, which recognizes outstanding individuals in our research community who have a significant impact on the NORC's research and training environment. We engage our entire research base in identifying technical staff, trainees, and faculty members that we acknowledge with these awards each year.

Accomplishments: A few highlights from the past year include a renewal of a NIH U54 team science grant and a successful Indirect Calorimetry Workshop in July 2024 that drew

over 80 participants. The Colorado NORC also secured philanthropic funds from a donor who is very interested in nutrition research and the "Food as Medicine" concept. These funds have helped expand the reach of our pilot and feasibility program.

Collaborations: The NORC has strong collaborative partnerships with its cores and programs in the Anschutz Health and Wellness Center, Colorado Clinical Translation Science Institute (CCTSI), University of Colorado Cancer Center, and the Colorado Diabetes Research Center. Other significant partnerships that help to facilitate interdisciplinary, collaborative and translational research in the areas of nutrition and obesity include The Centers on Aging, Centers for American Indian & Alaska Native Health (CAIANH), LEAD Center, Ludeman Center for Women's Health Research, Office of Laboratory Animal Research (OLAR) and the Perinatal Research Center among others.

More information about the Colorado NORC can be found at www.cunorc.org.

Colorado Sickle Cell Treatment and Research Center

The Colorado Sickle Cell Treatment and Research Center, established 51 years ago, is the primary source in Colorado of specialty expertise for children and adults living with hemoglobinopathies. The Sickle Cell Center brings together a team of health care and academic professionals who provide clinical care, research advances, education and technical support across Colorado. The center's clinical faculty provides specialty healthcare services to individuals with sickle cell disease within the Children's Hospital Colorado (CHCO) and University of Colorado Health (UCHealth) system. These experts also actively educate and consult to hematology, primary care, and other providers in other sites of care to promote evidence-based best practices. Basic, clinical and health services research conducted by the center and its collaborators serves to elucidate the pathophysiology of sickle cell disease, develop and implement therapies, and improve systems of care that prevent or minimize complications to prolong and improve the quality of life. The center also holds a long-standing contract with the state to coordinate short-term follow-up of statewide newborn screening (NBS) for sickle cell disease. Finally, a center-based transition program serves 12- to 26-year-olds to facilitate self-advocacy and health system navigation skills as youth move from pediatric to adult health care throughout Colorado. The center is located on the University of Colorado's Anschutz Medical Campus and is administratively housed in the School of Medicine.

Mission:

- Assure the provision of evidence-based comprehensive care to all persons with sickle cell disease and other hemoglobinopathies wherever they seek care
- Conduct research to elucidate the pathophysiology of and therapies for sickle cell disease
- Facilitate systems of care that minimize complications, prolong and improve the quality of life
- Provide education, training and resources about sickle cell disease and other hemoglobinopathies to healthcare providers, trainees, healthcare systems/insurers, policy makers, and the community at large

Leadership: **Kathryn Hassell**, **MD**, Professor of medicine, division of hematology, is the Sickle Cell Center's Director who oversees its programs, with the assistance of Rachelle Nuss, MD, associate center director and professor of pediatrics-heme/onc. These senior academic clinicians have provided more than 30 years of direct clinical care to those living with sickle cell disease; they currently mentor Christopher McKinney, MD, associate professor of pediatrics-heme/onc and Gemlyn George, MD, Assistant Professor of Medicine, Division of Hematology who have assumed leadership of clinical care programs for children and adults with sickle cell disease at CHCO and UCHealth, respectively.

Initiatives: Sickle Cell Center faculty continue to provide comprehensive specialty sickle cell care as well as consultative support to other specialists and primary care providers in the management of individuals with the disease. With the FDA's approval of gene therapy for sickle cell disease in December 2023, the center has convened a gene therapy review board to guide the implementation of this potentially curative therapy in Colorado, assisting with the selection of candidates as well as engaging healthcare systems and insurers to ensure access to this treatment. The center physicians are also actively involved in quality improvement projects to drive evidence-based, high-quality and equitable care in the CHCO and UCHealth systems.

The Center's Transition Program serves over 70 individuals each year between the ages of 12-26 years. Program director Michael Regier, MSW, works directly with youth within and outside of the clinical setting to facilitate self-advocacy and health system navigation skills as youth move from pediatric- to adult-oriented healthcare across Colorado. This past year the center conducted 2 community-based transition workshops for youth and their families, providing coaching, resources and tools regarding higher education and vocational rehabilitative services. More than 90% of youth in the program successfully transfer from pediatric- to adult-oriented care, with ongoing support thereafter as needed until age 26. Leveraging this expertise, center staff contribute to the development of institutional transition programs at CHCO, UCHealth, Kaiser Permanente Colorado and other healthcare systems across the state and region. Through this program, sites of care for adults living with sickle cell disease have been identified and subsequently supported by the Center's experts.

The Sickle Cell Center participates in Phase I-III multicenter pharmaceutical-sponsored clinical research trials, national registries, and observational studies, coordinated by full-time Research Program Administrator Julie McAfee, and research support staff at CHCO. Potentially curative stem cell (bone marrow) transplantation and gene therapy research protocols are offered to children and young adults at CHCO.

Accomplishments:

1. Direct contributions to improvements in systems of care at CHCO and UCHealth, including improved ED pain management for children with sickle cell disease, implementation of EPIC tools (Agile MD pathway) and development of a structured approach to inpatient adult sickle cell care.
2. Successful renewal, based on performance, of several year-by-year annual sources of funding, including from the CU Medicine UPL Medicaid program, the Pacific Sickle Cell Regional Collaborative, and the Sickle Cell Data Collection CDC Surveillance Program

Collaborations: The Sickle Cell Center partners with several state, regional and national programs:
- Sickle Cell Regional Collaboratives Program: The Sickle Cell Center represents Colorado in the Pacific region of this national HRSA program which funds activities to improve access to high-quality evidence-based care for individuals with sickle cell disease and collaboration with community-based organizations and resources.
- Sickle Cell Data Collection (SCDC) Surveillance Program: The Sickle Cell Center is a major contributing partner to a CDC grant to design and implement a surveillance system for sickle cell disease in Colorado, using the data to identify gaps in services and identifying opportunities to fill them.
- CU Medicine Upper Payment Limit (UPL) Medicaid Program: The Sickle Cell Center has received funding (renewed annually) from this program since 2019 to improve the quality of healthcare and transition services for Colorado Medicaid members with sickle cell disease, including expansion of capacity for care through partnerships with and education of providers, community outreach and education.
- Colorado Sickle Cell Association: This community-based organization (CBO) serves the sickle cell population in the Denver metro area. Monthly virtual meetings are held between the Center and the CBO to maintain effective communication and coordinate support for mutual activities to serve the sickle cell population.

Eugene S. Farley, Jr. Health Policy Center

Eugene S. Farley, Jr. Health Policy Center

UNIVERSITY OF COLORADO **ANSCHUTZ MEDICAL CAMPUS**

The Farley Health Policy Center is a team of primary care and behavioral health providers, public health and policy professionals, economists, scientists, educators, and learners. We focus on policy research and develop skills of health professionals to analyze and advance evidence-based policy for health equity.

Farley Center education initiatives by the numbers:

*Fellows, residents, doctoral students in medicine and psychology, master's students, undergraduates, and high school interns

Mission:

Mission: Develop and translate evidence to advance policies and integrate systems that improve health, equity, and wellbeing.
Vision: Whole health for all.

Leadership:

- **Shale Wong, MD, MSPH,** executive director, professor of pediatrics and vice chair for policy and advocacy
- **Emma Gilchrist, MPH,** deputy director, senior instructor of family Medicine
- **Larry Green, MD,** Senior Advisor, distinguished professor of family Medicine
- **Mark Gritz, PhD,** director of operations, associate professor and head, division of health care policy and research
- **Lauren Hughes, MD, MPH, MSc, MHCDS, FAAFP,** state policy director, associate professor of family medicine
- **Susan Mathieu, MPP**, Medicaid policy director, senior instructor of family medicine

Initiatives:

Connecting the Campus and the Capitol: The Farley Center facilitates bidirectional, shared learning between the Anschutz Medical Campus and state policymakers. Activities include:

- **Designing Health Policy for Coloradans:** A health policy “boot camp” for bipartisan freshman legislators and those active in health-related committees ahead of the opening of the General Assembly. This informational session offers explanations of health systems and insights on payment and structural barriers that impact equity and access to care.
- **Legislative Updates:** Legislative activity monitoring and regular updates for interested campus participants during the General Assembly session. These monthly presentations offer education on the procedure and movement of introduced bills to increase awareness about state policies that have the potential to impact clinicians, researchers, staff, and the communities they serve.
- **Strengthening Connections:** Through contracted partnerships with state agencies, the Farley Center provides analytics and population-based policy research.

Policy Research, Dissemination and Consultation: The Farley Center offers policy services with the goal of helping Anschutz Medical Campus researchers achieve even greater impact of their work by reaching audiences beyond fellow clinicians and the scientific community, including patients, policymakers, and the broader public. This work has involved creating training sessions and tools to help research teams understand how to generate policy-relevant research questions; how to conduct policy mapping to analyze issues from multiple angles and identify relevant stakeholders and decision makers; how to effectively translate data and evidence to a wide variety of audiences; and how to plan for and implement strategic dissemination of research findings.

Accomplishments:

- Recognized as national leaders in primary care policy: Lauren Hughes is serving as co-chair of the National Academy of Medicine Standing Committee on Primary Care; Stephanie Gold was selected as the James C. Puffer/National Academy of Medicine fellow for 2023–2025; the Farley Center is an active member of the Primary Care Centers Round Table.
- Conducted sponsored policy and research projects, awarded $2,166,000 (topics include primary care and behavioral health integration, payment reform, rural health, Medicaid policy, and medical-legal partnerships).
- Continued development of education program and fellowships: developed and implemented a core health policy curriculum; initiated a new infrastructure for Learners in Residence program; will host a new National Academy of Medicine state policy fellowship beginning September 2024.

Collaborations: The Farley Center has active partnerships with 10 campus schools, departments, and centers; 10 Colorado state agencies and organizations; 36 local community partners; and 27 national and international organizations. A few that are representative of our work include:

- **Campus:** The Firearm Injury Prevention Initiative, the Injury and Violence Prevention Center, and the Climate & Health Program at the School of Medicine-- the Farley Center studies what policies exist, how they are implemented, and what effects they have, as well as providing training on policy topics for researchers and learners.

- **Community:** The Moving AHEAD project, in partnership with Cleo Parker Robinson Dance and funded by the Colorado Health Foundation, is a collaborative initiative to bring the arts and artists together with community leaders from multiple sectors to generate civic engagement and positively influence health and equity.
- **Statewide:** Department of Health Care Policy and Financing (HCPF), Colorado's Medicaid agency, contracts data analytical support to inform policy decisions and revisions. Additionally, partnering with the Colorado Rural Futures coalition will develop a "policy roadmap" to support rural hospitals.
- **National:** Partners include the National Academy of Medicine, the Graham Health Policy Center, and multiple other universities and academic institutions for policy research and educational programs.

Learn more at http://farleyhealthpolicycenter.org/

Gates Institute

Gates Institute, led by Executive Director **Terry Fry, MD**, is a world-class research institute with biomanufacturing capabilities through the Gates Biomanufacturing Facility (GBF). The institute supports researchers and clinicians through the process of translating laboratory discoveries to human clinical trials and novel medical therapies. The institute officially launched in 2023 through a partnership between the Gates Frontiers Fund and University of Colorado Anschutz Medical Campus, which together made a $200 million commitment to transform the Gates Center for Regenerative Medicine and the GBF into a hub of investigation, discovery, and patient impact. The institute focuses on cellular and gene therapies (CGTs), along with manufacturing protein products, and emphasizes moving scientific discoveries from the lab to the clinic in a comprehensive, efficient, and consistent manner.

The institute works with research collaborators across the Anschutz Medical Campus by providing translational and regulatory expertise, offering robust funding, and fostering collaboration opportunities with commercial partners. Our membership includes leading researchers from the Anschutz Medical Campus, CU Boulder, CU Denver, Colorado State University, Colorado School of Mines, National Jewish Health, and private industry partners.

Mission: We positively transform patient lives by advancing science through discovery, development, and delivery of cell and gene therapies.

Initiatives:

Research funding

The Gates Grubstake Fund has awarded over $11 million to scientists since its inception in 2014. The program, funded by private philanthropy, seeks to support translational development of promising CGT and regenerative medical research into patented, clinic-ready products for patients in need.

In 2023, Gates Grubstake Fund announced awards to these researchers:

- Mayumi Fujita, MD, PhD, professor of dermatology: Modified CD4+ T Cells Expressing IL-37
- Jordan Jacobelli, PhD, associate professor of immunology and microbiology: Engineered CAR T Cells for Improved Solid Tumor Rejection
- Joshua Thurman, MD, professor of medicine: C3d Targeted CAR T Cells for the Treatment of Solid Tumors
- Sujatha Venkataraman, PhD, associate research professor of pediatrics: Next-Generation CAR T-Cell Therapy for Diffuse Intrinsic Pontine Glioma

The program provided a second-tranche award:

- Ganna Bilousova, PhD, and Igor Kogut, PhD: Induced Pluripotent Stem Cell Services as a Platform for Clinical Research

Research support
Membership benefits include access to core labs, patent-pending cell-production platforms, the Gates Biomanufacturing Facility, regulatory and clinical trial support, and affiliation with undergraduate and graduate education programs.

Gates Institute subsidizes and provides discount access to six core facilities on the Anschutz Medical Campus to provide Gates members with cutting-edge equipment and technology. The core facilities are:

- Flow Cytometry Core
- Genomics Core
- Human Immune Monitoring Shared Resource
- Histology (Morphology and Phenotyping) Core
- Organoid Core
- Stem Cell Biobank and Disease Modeling Core

Education
The Gates Summer Internship Program (GSIP) celebrated its 10-year anniversary in 2024. To date, 206 interns - from the U.S. and abroad - representing 98 colleges and universities have participated in the program, along with 61 Gates Institute members across campus who have served as their mentors. The program combines lab work, seminars focused on science and medicine, workshops focused on ethics, communications and professional development, and extracurricular activities. Philanthropic funding enables Gates Institute to place interns in members' labs at no charge, providing a valuable boost to their research portfolios.

Seminars
A key component of Gates Institute's mission to foster collaborations among its research members is the John S. Gates Seminar Series, named for a benefactor of the institute who was the son of our namesake, Charles C. Gates. The seminar series features presentations by leading researchers involved in cell and gene therapy and regenerative medicine. Presentations take place at 1p.m. on the fourth Tuesday of the month; the schedule is at gates.cuanschutz.edu/seminars.

Accomplishments:
Our unwavering commitment to patient impact is evident in our work. Through August 2024, Gates Institute and our hospital partners have treated 37 patients with investigational CAR T-cell therapy at the CU Anschutz Medical Campus with cells manufactured at the Gates Biomanufacturing Facility. Our treatments have traveled well beyond the Colorado border, meeting the growing needs of patients with high-risk diseases with limited treatment options across the United States.

Active clinical trials
- Opened 2020 at UCHealth: 21-2578: Phase 1 study of feasibility and safety of UCD19 CAR T cells in adult patients with relapsed and/or refractory B-cell non-Hodgkin lymphoma (B-NHL); 10 patients enrolled and treated.
- Opened 2021 at Children's Hospital Colorado: 18-2424: Phase 1/2 dose escalation and preliminary efficacy study of UCD19 CAR T cells in pediatric patients with relapsed and/or refractory B-cell acute lymphoblastic leukemia (B-ALL) and B-NHL; 10 patients enrolled and treated. One additional patient was treated off-study on an expanded access protocol for emergency use.
- Opened 2022 at UCHealth: 21-2578: Phase 1/1b study of bispecific CD19x22 CAR T cells in adolescent and adult patients with relapsed and/or refractory B-NHL; 8 patients treated. One additional patient was treated off-study on an expanded access protocol for emergency use.
- Opened 2023 at UCHealth: 22-0054: Phase 1 safety and tolerability trial of CD19 CAR T cells in adult patients with B-cell acute lymphoblastic leukemia (B-ALL) with minimal residual disease positive at first complete remission; 7 patients treated.

Collaborations:
Hospital partners
Gates Institute partners with Children's Hospital Colorado and UCHealth University of Colorado Hospital to provide support for Phase I clinical trials of cell and gene therapies.

CU Innovations
We collaborate with CU Innovations on the administration of the Gates Grubstake Fund as well as the Startup Toolbox, which provides microgrants to pay for regulatory support, market analysis, public relations management, and business development. Since its creation in 2018, it has guided the incorporation of three start-ups of Grubstake awardees:

- Ceria Therapeutics (Kenneth Liechty, MD)
- Validus Cellular Therapeutics (Steven Dow, DVM)
- Perla Therapeutics (Traci Lyons, PhD)

Between the Gates Grubstake Fund and Startup Toolbox, 21 Small Business Innovation Research (SBIR)/Small Business Technology Transfer (STTR), Colorado Advanced Industry Accelerator (AIA) Grants, Anschutz Accelerator Initiative (AAI), and Advanced Research Projects Agency for Health (ARPA-H) have been received with subawards to the university, 12 pre-IND/IND/IDEs are in prep or filed, four clinical trials have started, and over $89 million has been received in follow-on funding.

CellSight
Gates Institute provides funding to *CellSight*, the ocular stem cell and regeneration research program in the Department of Ophthalmology. Gates Institute researchers are working in partnership with *CellSight* to translate new therapies for eye diseases and produce stem cell and drug-based discoveries at the scale and quality required to initiate clinical trials.

Gates.CUAnschutz.edu
GatesBiomanufacturing.com

Helen and Arthur E. Johnson Depression Center

Mission: The mission of the Helen and Arthur E. Johnson Depression Center (JDC) is to improve the lives of people with depression, bipolar disorder, anxiety, and related disorders through clinical excellence, innovative care models, community engagement, research, and workforce development. The three primary goals of the JDC are to 1) Promote mental health as key to healthy living for all Coloradans; 2) Develop, provide, and disseminate effective care for people with depression and bipolar disorder; and 3) Eliminate barriers to quality care and healthy communities.

Leadership:
Neill Epperson, MD, Executive Director
Matt Mishkind, PhD, Deputy Director
Christopher Schneck, MD, Medical Director
Dana Steidtmann, PhD, Assistant Clinical Director
Alex Yannacone, MA, Director of Education and Community Programs
Lisa Jones, Clinic Manager
Anthony Pfaff, Business Services Program Director
Elizabeth Peros, Board of Directors Chair

Initiatives and Accomplishments:
Clinical Excellence and Innovative Care Models. The JDC clinicians form a multi-disciplinary team of therapists and psychiatric providers delivering care to patients across the lifespan and family system. The center has deep expertise in providing services to individuals with mood and related disorders, developing and implementing integrated care models both in-person and virtually, and integrating other technology-based solutions with traditional care models. The JDC completed nearly 15,000 outpatient visits during the past year, and over 80,000 since 2009. In addition, a JDC Intensive Outpatient Program (IOP) is currently being developed with a planned launch date late this year. With the IOP, the JDC will be able to provide a higher level of outpatient care to people struggling with depression and bipolar disorders.

The JDC has continued to build a neuromodulation treatment program that now includes transcranial magnetic stimulation (TMS) and an esketamine clinic. Both programs are for patients suffering from treatment-resistant depression (TRD). The TMS program began in May 2022 and has expanded clinical services rapidly. The JDC continues to partner with The Brain and Behavior Innovation Center on novel therapeutic treatments within the Department of Psychiatry.

The JDC has continued to build the CU STEADY Program (**ST**abilizing **E**merging **A**ffective **D**isorders for **Y**outh to Adults), an integrated program providing expert treatments for individuals with recently diagnosed bipolar disorder, and those at elevated risk for developing bipolar disorder. The STEADY team is composed of psychiatrists, psychologists, licensed therapists, and researchers collaborating to offer standardized diagnostic evaluation and early intervention for individuals on the bipolar spectrum.

Innovative Research. The center conducts research for the purpose of improving the identification and treatment of depression, bipolar, anxiety and related disorders, preventing suicide, and developing sustainable integrated care models. Center faculty are committed to developing best practice solutions for care delivery. The clinic is uniquely positioned to evaluate implementation of these solutions. JDC research activities focus on the interactions between basic science, innovated care models, and standard of care practices.

As a charter member of the National Network of Depression Centers (NNDC)—a consortium of 21 major academic centers from around the country—the JDC partners with world-renowned academics and clinicians to better understand and treat mood disorders. Programs and task groups that the JDC actively participates in includes the Mood Outcomes Program (a national patient registry of mood, anxiety, and suicidality ratings) the Bipolar Task Group, the Ketamine/Esketamine Task Group and the Pediatric Mood Disorders Task Group. In addition, the JDC continues to evaluate the benefits of integrated care delivery systems and provides nationwide leadership by disseminating integrative care best practices.

The STEADY program, described above, is also part of the Child Bipolar Network (CBN), a consortium of five universities across the country (CU, UCLA, University of Pittsburgh, University of Cincinnati and Virginia Commonwealth University) investigating the best ways to treat children or adolescents who are showing the first signs of bipolar disorder, whether the illness can be prevented (or at least minimized in severity), and what combinations of psychosocial treatments, medications and lifestyle interventions lead to optimal outcomes. In addition, the CBN program was just awarded a grant to study the effects of using a ketogenic diet to help manage mood swings in adolescents and young adults suffering from bipolar disorder.

Community Engagement. The JDC's community and education programs are designed to extend the reach of the center to communities across the state and nationally through diverse educational offerings to increase understanding of depression, bipolar, anxiety, and related disorders, reduce stigma, prevent suicide, and increase access to quality mental health care. Educational offerings are delivered to communities, in schools, businesses, and to professional groups including health care professionals, and university faculty, staff, and students.

The JDC community and education programs has trained close to 12,000 individuals in fiscal year 2024. Over the past several years, the JDC has expanded their VitalCog: Mental Health and Suicide Education programs. It now offers trainings for the workplace, construction, throughout athletics, and peer support. The VitalCog program includes over 600 trainers across the nation, implementing the suicide prevention programs within their

own communities. The JDC has also expanded their community program efforts and now offers 21 mental wellness education programs.

In addition, due to the generosity of several donors, the JDC launched the Colorado Bipolar Education Program (CoBE) in May 2022. CoBE is dedicated to educating patients, families, and providers about bipolar disorder in order to improve the lives of those affected by the illness. The CoBE mission includes disseminating knowledge and providing education on the fundamentals and complexities of the disease based on the most effective and evidence-based treatments for bipolar disorder. CoBE includes a community lecture series given in the spring and fall of each year, educational outreach programs for providers, website resources and use of innovative technologies (such as interactive avatar scenarios) to educate medical professionals.

Workforce Development. The JDC has provided supervision for 12 social work and psychology graduate students and psychiatry residents interested in delivering outpatient mental health services, integrated care, and community programs.

www.coloradodepressioncenter.org

University of Colorado Hemophilia and Thrombosis Center

The University of Colorado Hemophilia and Thrombosis Center (CUHTC) is recognized and funded through an award from the U.S. Department of Health and Human Services, Maternal Child Health Bureau (HRSA-MCHB) to provide access to comprehensive care for people with bleeding and clotting disorders. Serving more than 2,000 pediatric and adult patients in Colorado, Wyoming, Montana, and surrounding states, the CUHTC integrates clinical care, research, teaching, and advocacy to develop the specialized care needed for our patients. Led by **Michael Wang, MD**, the HTC's Director and Principal Investigator of the HRSA-MCHB sub-award, the CUHTC's multidisciplinary team partners with patients to establish national standards through participation in registries and surveillance projects, clinical trials, investigator-initiated research, and quality improvement. Emerging out of the pandemic, the CUHTC refocused its Mission, Vision, and Values on patients. Providing high-quality care for bleeding and clotting disorder patients is our primary mission, and we see clear evidence of our growing impact on the patient community that we serve. As a result of these efforts, our patients have experienced improved outcomes, more convenient and timely access to care, and lower cost.

The CUHTC was founded with a gift from the Colorado Chapter of the National Hemophilia Foundation in 1972 given to the University of Colorado School of Medicine (CUSOM) to establish specialized care for bleeding disorder patients in Colorado. In 1973, Governor John Vanderhoof signed into Colorado law a statute establishing and partially funding a Hemophilia Treatment Center (HTC) within the CUSOM ensuring that bleeding disorder patients had access to care, and giving the responsibility to support (clinical care, research, education, advocacy) an academic HTC to the Dean of the University of Colorado School of Medicine in perpetuity. In 1974, the CUHTC was one of the first six HTCs designated by the current HRSA-MCHB award. The CUHTC was the regional recipient of the award for 38 years. In 2012 we transitioned our responsibility for regional leadership, and we are now a sub-awardee.

The CUHTC is a financially self-sustaining "Coagulation Center of Excellence". By virtue of the HRSA-MCHB federal grant status, the CUHTC is a covered entity with an onsite 340B HM (Comprehensive Hemophilia Treatment Center) pharmacy to maximize the limited federal grant funding from HRSA-MCHB. Program income generated from the CUHTC 340B HM pharmacy provides the necessary funding for operations that benefit all CUHTC patients. Importantly, federal grant guidance and regulations require that Program Income derived from the federal grant is restricted and must be reinvested back into patients with hemophilia and other bleeding and clotting disorders, ensuring that federal funds supporting the CUHTC reach their intended patients.

Mission:

- We give our best today to create hope for a better tomorrow.

Vision

- To be trusted partners in the journey of well-being for patients and families with bleeding and clotting disorders.

Values

- With the conviction to attain our Mission and determination to reach our Vision, we pursue excellence.
- Together we uphold trust, respect, integrity, equity, inclusion, curiosity and humility, to create a professional collaborative environment that will make a difference in the lives of those we serve.
- We believe this starts with trust, compassion and care for each other.

Statement of purpose

- The University of Colorado Hemophilia & Thrombosis Center strives to provide unparalleled access to the highest quality care, education, research, community engagement, and pharmacy services for patients with bleeding and clotting disorders in the Rocky Mountain region through teamwork, partnership with patients and families, and focus on continuous improvement.
- The HTC will be a regional, national, and international leader in defining best clinical outcomes for patients, while integrating changes in the health care system, and forwarding research and education.

Leadership: HTC Director- **Michael Wang, MD**; Director of Clinical Services- Kathryn Hoeft, MSHSA, BSN, RN, NE-BC; Finance Manager- Steven Powell, MBA; Pharmacy Manager- Desiree Hill, RPh, PharmD; Scientific Director- Keith Neeves, PhD; Clinical Director- Tyler Buckner, MD, MSc.

Key leadership advancements at the CUHTC: Keith Neeves, PhD- Scientific Director; Beth Warren, MD- Clinical Research Program Leader; Tyler Buckner, MD- Clinical Director; Kate Hoeft, MSHSA- Director of Clinical Services.

Initiatives: The therapeutic landscape rapidly changes and innovative therapies such as gene therapy, non-factor replacement, re-balancing agents, and innovative work in biomechanics have moved into the clinic. We have strategically developed a multifunctional space within the CUHTC to: deliver innovative therapies clinically (infusion center) and study them in human phase 1-4 research trials (clinical research center); expand PT therapy services and motion analysis for translational research (PT gym/laboratory); and develop CLIA/CAP-certified coagulation testing (laboratory) starting with platelet phenotyping and functional analysis. We continue to grow our Pain Management and Women with Bleeding Disorders clinical and research programs.

Accomplishments:

- CUHTC 340B HM Pharmacy Program
- Full Accreditation from Utilization Review Accreditation Commission (URAC) in Specialty Pharmacy
- URAC recognition as the “Pioneer in Performance Measurement”

Accomplishments:

- CUHTC 340B HM Pharmacy Program
- Full Accreditation from Utilization Review Accreditation Commission (URAC) in Specialty Pharmacy
- URAC recognition as the “Pioneer in Performance Measurement”
- Michael Wang, MD: author in two NEJM articles reporting results from Hemophilia A and B licensure trials
- Michael Wang, MD: “Community Leadership Award” from the National Bleeding Disorders Foundation, Colorado Chapter
- Marilyn Manco-Johnson, MD: “Esteemed Career Award” from the International Society of Thrombosis & Haemostasis
- Kaylee Dollerschell, MS-GC: “Genetic Counselor of the Year”, National Bleeding Disorders Foundation
- Host of the “1st Annual Hemophilia Alliance Physical Therapy Conference”
- Authorship in leading journals: New England Journal of Medicine (2), Blood (2), J. Thrombosis and Haemostasis (3), Haemophilia (3), PNAS (1), Blood Advances (1), Plos One (1), European J. of Hematology (1), JCO Global Oncology (1), Sem. in Thrombosis and Hemostasis (1), J. of Pediatric and Adolescent Gynecology (1), TH Open (1), Thrombosis Update (1), Advanced Intelligent Systems (1)
- Current Grant funding: HRSA-MCHB HTC Sub-Award (1); National Institutes of Health, Principal Investigator & Co-Investigator- RO1 (2), R33 (1), R21 (2), R25 (1) PO1 (1), K23 (1); CUHTC HRSA-MCHB Restricted Research Award (14 projects funded); Hemophilia Alliance (2); Sponsored projects (19)

Collaborations: We are active members and serve in leadership positions within: HRSA-MCHB, Mountain States Regional HTC Network, American Thrombosis and Hemostasis Network, NIH Zimmerman Program Project Grant, CDC Community Counts, Foundation for Women and Girls with Bleeding Disorders, National Bleeding Disorders Foundation, International Prophylaxis Study Group, Hemostasis Thrombosis Research Society, International Society on Thrombosis and Haemostasis, World Federation of Haemophilia, American Society of Hematology, American Heart Association, Hemophilia Alliance, and additional clinical, research, and advocacy partners at CUAMC and around the globe. We also support an international pediatric hematology fellowship with St. Jude Children’s Research Hospital.

medschool.cuanschutz.edu/hemophilia-thrombosis

JFK Partners

Mission: Since 1965, JFK Partners' mission has been to promote the independence, inclusion, contribution, health, and well-being of people with developmental disabilities and their families through consumer, community, and university partnerships. Central to the mission is a commitment to the lived experience through family and person-centered, community-based, culturally responsive programs and services. This mission of JFK Partners is to lead the way in evidence-based interdisciplinary clinical care, education, research, and community partnerships to enrich the lives of children, youth, and adults with Intellectual/Developmental Disabilities and special health care needs. JFK Partners includes faculty and trainees in the disciplines of audiology, developmental behavioral pediatrics, education/special education, family, nutrition, occupational therapy, physical therapy, psychology, public health, rehabilitation counseling, social work, speech-language pathology, self-advocacy, and family of individuals with intellectual/developmental disabilities.

Leadership: **Sandra Friedman, MD, MPH,** assumed leadership of the interdisciplinary program in July 2015, directing the merger of JFK Partners with Section of Developmental Pediatrics. The merger included the integration of diagnostic assessment and treatment services with those of Developmental Pediatrics at Children's Hospital Colorado. As a life-span program, JFK Partners continues to serve adults at the Anschutz Medical Campus. **Judy Reaven, PhD** serves as associate director of JFK Partners, as well as director of research.

Initiatives: JFK Partners' programs are supported by federal training and research grants, clinical income, and various contracts. In 2023-24, project funding totaled $4,571,622 with 77% from federal sources, 9% state sources, and 14% contracts, fee for service or foundations. Two core grants, consisting of 29% of funding in 2023-24, include the competitively awarded Administration on Intellectual and Developmental Disabilities, University Center for Excellence in Developmental Disabilities (UCEDD) and the Maternal and Child Health Bureau, Leadership Education in Neurodevelopmental Disabilities (LEND) programs. JFK Partners is a part of a national network (www.AUCD.org) of 68 UCEDD's university-based centers and 60 LEND programs in all US states and territories. The 60 university-based LEND programs have collectively made significant strides toward improved screening and diagnosis of autism among younger children and helped train a variety of healthcare professionals who treat a number of different developmental and intellectual disabilities. By continuing to meet the growing demand for these services, LENDs are reducing wait times for diagnostic evaluation and entry into intervention services. LENDs target underserved populations and their efforts are also helping to address disparities in early identification of autism and other developmental disabilities. Across the network, expertise is provided in almost every topic that might impact the lives of people with disabilities such as healthcare, education, vocational support, advocacy, collaboration with community partners, disaster preparedness and response, and more.

As disability is a natural part of the human condition at any age, our work supports families, organizations, and stakeholders in all Colorado communities.

Accomplishments: JFK Partners' accomplishments for 2023-24 include:

(1) Preservice Training - 19 long-term trainees/fellows in 10 disciplines were trained in a comprehensive curriculum of coursework, clinical and other practicum experiences in the disciplines of Audiology (2), Developmental Behavioral Pediatrics (1), Family (3), Occupational Therapy (1), Physical Therapy (1), Psychology (5), Public Health (2), Self-Advocacy (2), Speech Language Pathology (1), and Social Work (1). In addition, 30 intermediate trainees participated in coursework, clinical practica, and other supervised projects, 7 of whom were advanced intermediate trainees. In addition, 1,403 shorter-term trainees in various Anschutz Medical Campus schools (dentistry, medicine, nursing, physician assistant, genetic counseling, and physical therapy programs) who were exposed to IDD content in Disability Dialogues series, university courses, lectures, and short-term clinical experiences.

(2) Continuing Education and Community Training included 26 events or webinars for 2,799 total participants.

(3) Clinical Services - JFK Partners' clinical services for individuals and/or their families included: a) 73 multi-disciplinary team evaluations and single discipline evaluations; b) 141 young children, each of whom received multiple home visits; and, c) 46 individuals (children and parents) received school consultations and various other interventions.

(4) Community Collaboration - Faculty reported a total of 59 consultations, technical assistance, and capacity building activities, with 396 participants. JFK Partners also serves as a resource for policymakers representing Colorado. Other partners in implementation of our goals, objectives and activities include: a) leading advocacy agencies, such as Alliance (statewide provider organization), The Arc of Colorado, The Arc of Central Mountains, the Autism Society of Colorado, Family Voices Colorado, Parent to Parent of Colorado, PEAK Parent Center, and Speaking for Ourselves; b) Colorado state agencies, such as the Departments of: Behavioral Health, Early Childhood, Education, Health Care Policy and Financing, Human Services, Labor and Employment, Division of Vocational Rehabilitation, and Public Health and Environment, and; d) other statewide and local community agencies, as well as Colorado families and individuals with developmental disabilities. Collaboration continued to focus on Colorado residents who currently are underserved, primarily due to continuing lack of capacity (trained providers/multilingual providers), rural residence, policy and system barriers, and inadequate funding to support services. These population groups include: children eligible for Part C; persons with autism; youth with AS/ID and co-occurring anxiety disorders; transition-aged youth with disabilities; and, individuals with disabilities who are seeking to enter the workforce. The support of the JFK Partners Community Advisory Council (CAC) remains instrumental in informing and evaluating the UCEDD program in 2023-24.

(5) Research included 13 active projects that have research (or demonstration) as the primary purpose, as well as additional exploratory investigations for which funding is being sought. Faculty successfully applied for 3 new research grants in 2023-24.

(6) Dissemination - During 2023-24, JFK Partners' faculty, staff, trainees, and fellows authored 77 products. The products included: conference and poster presentations (35), Peer-reviewed publications in scholarly journals (11), pamphlets, brochures, or fact sheets (11), distance learning modules (6), academic course development (4), web-based products (3), newsletters (3), book chapter (2), and reports and monographs (2).

For information about these and other JFK Partners projects please visit www.jfkpartners.org.

The Kempe Center for the Prevention and Treatment of Child Abuse and Neglect

For over 50 years, the Kempe Center for the Prevention and Treatment of Child Abuse and Neglect has worked to improve the well-being of children and families and strengthen the communities that serve them worldwide. Founded in 1972 by the University of Colorado Chair of Pediatrics, C. Henry Kempe, MD, the Kempe Center was the first academic center in the world focused on preventing and treating child abuse and neglect. The center continues to lead the field in providing evidence-informed services, transformative research, learner-centered education, and effective advocacy, all through an equity lens. With over 80 Kempe faculty and staff working to improve the lives of children, families, and the systems that serve them, the team is committed to honoring and recognizing the Kempe vision: A world without child maltreatment.

Mission: The Kempe Center aims to transform lives through a JEDI-centered approach. Additionally, the Center serves as a resource hub for future professionals, fostering research and skill development in child abuse and neglect. The center's seven Impact Areas - Justice, Equity, Diversity & Inclusion (JEDI), Pediatric Law, Policy & Ethics ("Advocacy"), Clinical Services, Evidence-Based and Research-Informed Approaches, Transformative Research, Workforce Training & Innovation, and Connecting with Communities - provide a strategic framework to guide its mission of safeguarding children and strengthening families.

Leadership: The leadership team continues its work in implementing the five-year strategic plan by making strides in reframing the Kempe Center organizational structure to meet its vision and mission through multidisciplinary approaches that include experts in medicine, behavioral health, social work, and law and policy. Led by the Executive Director, **Kathryn Wells, MD**, the Leadership Team includes the Director of Operations, **Ron Mitchell, MSW**, Advocacy Director, **Warren Binford, JD, EdM**, Director of Justice, Equity, Diversity and Inclusion (JEDI), **Michelle Davis, MS, LPC**, Director of Integrated Healthcare Operations and Services, **Antonia Chiesa, MD**, Director of Transformative Research, **Suzanne Kerns, PhD**, Director of Educational Innovation and Advancement, **Gwyn E. Barley, PhD,** Business Manager, **Rob Murchison, MEPM**, and Center Coordinator Liaison, **Maya Bajayo**, **B.EMS.**

Initiatives:

- **Leadership and Global Engagement:** The Kempe Center has assumed prominent roles in our field, with several faculty (co-)chairing influential international conferences (John Fluke, PhD – International Society for the Prevention of Child Abuse and Neglect/ISPCAN Congress; Warren Binford, Co-Chair, International Law Weekend 2024 and Co-Chair, A Global Scientific Conference in 21st Century Child Abuse) and organizations (Suzanne Kerns, PhD – elected president of the Society for Implementation Research Collaboration/SIRC; Warren Binford, Co-Chair, International Law Association's Children's Rights Committee). Notably, the center's work has reached 184 countries and 23 states this past year.

- **Clinical Services**: The center provided 1,235 clinical consultations, and 772 children received clinical services.
- **Grant and Program Development:** Last year alone, the Kempe Center secured $6.9 million in grants and contracts, for key initiatives, including the Child Welfare Training System ($4 million) and Fostering Healthy Futures/Rocky Mountain MST ($1.5 million).
- **Collaborative Partnerships:** The center has cultivated a robust network of domestic and international collaborators, such as UNICEF USA, UNICEF HQ, Child USA, We Protect Global Alliance, Childlight, and the International Society for the Prevention of Child Abuse and Neglect/ISPCAN.
- **Research and Dissemination:** The center has demonstrated a strong commitment to research, evidenced by 93 publications, including 56 peer-reviewed articles and 4 books/book chapters. Kempe faculty served on 9 editorial boards and delivered 35 research presentations. Notably, research presentations were delivered in 11 countries outside the United States.
- **JEDI Initiatives:** The research team published a compelling open-access JEDI-focused research paper that has been downloaded 1,000+ times in just two months. In addition, we offer the RQ-Race Intelligence™ coaching program, which provides services to help individuals, groups, and teams build the capacity to understand their relationship with race as a construct and reveal, recognize, and reconcile conscious and unconscious mindsets, attitudes, behaviors, and belief systems that enable racialized oppression.
- **Advocacy Efforts:** The center's advocacy efforts partner with researchers and clinical providers to provide legislative testimony in Colorado, roundtables in DC, a White House visit, and numerous meetings on Capitol Hill. Kempe's faculty and staff also conduct podcast interviews on Radio Kempe and draft blogposts in their areas of expertise, both are disseminated on Kempe Center's new website.
- **Education/Training:** The center performed 1,231 training sessions involving 16,512 participants with 158,716 learner hours. An additional 883 people received coaching services.
- **External Engagement:** The center has actively participated in many aspects of child abuse and neglect policy and practice work through involvement in 104 external (local, state, regional, national, and international) committees and workgroups.

Accomplishments: In October 2023, the Kempe Center hosted its fourth International Virtual Conference: A Call to Action to Change Child Welfare. This is the fourth year of this conference, the first child welfare conference of its kind, organized to create community, connections, and relationships to encourage curiosity and challenge traditional structures and ideas. Participants join an international community of changemakers to share knowledge and innovative ideas that re-envision child protection systems as we know them. Some highlights of the conference were the following:

- Over 2,000 participants from 20+ countries attended, striving to change child welfare
- 500+ global presenters addressed issues of justice, social inequality, race equity, family leadership, and oppression in the child welfare and allied systems.
- 250+ sessions were offered over four days that spanned 17 hours each day.
- A Kempe team of 15+ faculty and staff collaborated over six months to create the conference agenda.

The 2024 conference will expand the international community with a projected participation of 2,500 changemakers, including 500+ speakers from over 25 countries on October 7-10, 2024.

For the next 50 years, the Kempe Center will continue its pursuit to advance the health and well-being of children and families through the ongoing provision of comprehensive expert medical care, leading ground-breaking research, delivering effective education to child-serving professionals, focusing attention on systemic inequities, and engaging in timely advocacy. "We embrace the challenging work that lies ahead and look forward to partnering with people with lived experience and the many organizations we work with. Together, we will be catalysts for positive change and improve the lives of children and families," says Kathryn (Kathi) Wells, MD.

Learn more about Kempe and its programs at kempecenter.org.

Linda Crnic Institute for Down Syndrome

Mission: We are on a mission to improve the lives of people with Down syndrome. We use state-of-the-art, transformational research platforms to decipher the unique biology and clinical profile of people with Down syndrome. Our goal is to enable precision medicine approaches to improve health outcomes in Down syndrome, including the development of new diagnostic and therapeutic tools.

$122M
Funding received from the National Institutes of Health

1
Unifying Goal

$37M
Philanthropic support received

Leadership: Founded in 2008, the Crnic Institute is led by **Joaquin Espinosa**, PhD executive director, and **Huntington Potter**, PhD director of the Alzheimer's Disease Program. The intramural faculty includes professors Kelly Sullivan, PhD, Michael Yeager, PhD, Matthew Galbraith, PhD, Lina Patel, PsyD and Angela Rachubinski, PhD, all of whom are supported by an expert administrative team. The Crnic Institute is a collaborative, joint venture between the University of Colorado School of Medicine, the University of Colorado Boulder, Children's Hospital Colorado, the Global Down Syndrome Foundation, and the Anna and John J. Sie Foundation funded by a synergistic mix of donor gifts and sponsored awards, such as from the National Institutes of Health (NIH).

Initiatives: Each year, the Crnic Institute awards grants to qualified University of Colorado investigators from a wide variety of fields who want to apply their expertise to advance our understanding of Down syndrome. These Grand Challenge Grants are meant to support investigators across the CU system until they can obtain independent funding for their Down syndrome research. Since this program's start in 2013, the Crnic Institute has granted CU researchers 128 awards totaling over $7 million. The Crnic Institute also supports training in Down syndrome research through the Blumenthal Fellowship program, which funds pre-doctoral and post-doctoral trainees throughout the CU system.

The Crnic Institute is also home to the most comprehensive cohort study of people with Down syndrome, called the Human Trisome Project (www.trisome.org). Launched in 2016, this project fuels a multi-dimensional biobank serving Crnic Institute investigators and its collaborators and enables large pan-omics studies of Down syndrome. In 2020, the Crnic Institute team used the Human Trisome Project platform in collaboration with the School of Medicine and the Office of the Vice Chancellor for Research to create a sister project studying COVID-19, called the COVIDome Project (www.covidome.org). To date, the Human Trisome Project has recruited 1,200+ research participants, administered 35,000+ biospecimens, and supported 50+ research projects, having led to 20+ publications since 2016.

Altogether, the Crnic Institute's intramural and extramural faculty and programs comprise the largest academic home for Down syndrome research in the world. Crnic Institute investigators hold more NIH awards for Down syndrome research than any other organization in the United States. By mid-2024, this group of investigators secured just over $122 million in NIH funding for the study of Down syndrome.

Furthermore, in close collaboration with NIH, our investigators and administrative staff are co-leading the INCLUDE Project Data Coordinating Center – the first and only centralized platform for data sharing and analysis designed to accelerate Down syndrome research.

200+ Crnic Institute Members

30+ departments/divisions

20+ active NIH awards

Collaborations: The Crnic Institute prides itself in being a key member of a network of affiliate organizations working together to serve people with Down syndrome, including the Anna and John J. Sie Center for Down Syndrome at Children's Hospital Colorado and the Global Down Syndrome Foundation.

To learn more, visit us online at www.crnicinstitute.org • www.trisome.org • Facebook, Twitter(X) and LinkedIn @CrnicInstitute

Ludeman Family Center for Women's Health Research

The Ludeman Family Center for Women's Health Research was founded in 2004 to champion and conduct scientific research that will change the future for all women. The Ludeman Center is committed to pursuing a vision where all women are healthy and thriving. The center's focus is on conditions that present differently, more often, or only in women, due to sex or gender differences. While women's health has long been understudied, the Ludeman Center is working to close the knowledge gap and address health inequities. 2024 marks the Ludeman Center's 20th anniversary, demonstrating an outstanding commitment to women's health and sex and gender differences research. The Ludeman Center is at an inflection point, poised to build on 20 years of success and invest in more scientists and outstanding research in the coming years.

Mission: The Ludeman Center envisions a future where all women are healthy and thriving. To achieve this far-reaching goal, the Ludeman Center:

- Performs leading-edge research in women's health and sex and gender differences across the lifespan in cardiovascular disease, diabetes and mental health.
- Mentors, trains and funds the next generation of scientists to promote and sustain careers in women's health research.
- Educates women, their families and healthcare providers, on the latest evidence-based knowledge so that they can make informed healthcare decisions.
- Shapes women's health research by building powerful partnerships, providing leadership and closing gaps in the field.

Leadership: The Ludeman Center was founded by **Judy Regensteiner**, PhD, JoAnn Lindenfeld, MD, and Lorna Moore, PhD. Today, the center is directed by Regensteiner and Associate Directors **Wendy Kohrt**, **PhD**, and **Jane Reusch**, **MD**; Laura Brown, MD, C. Neill Epperson, MD, Anne Libby, PhD, Amy Huebschmann, MD, and Tracy Bale, PhD, all serve as senior faculty. Colleen Church, MPA, is the deputy director.

Initiatives: Since 2006, the Ludeman Center has awarded over $2.9 million in seed grants through internal peer-review processes to 112 scientists. These researchers have in turn been awarded over $182 million in external funding. For every $1 in seed grants, Ludeman Center scientists have been awarded $69 from external sources. In addition to the extensive funding record, Ludeman Center researchers have produced more than 4,000 peer-reviewed publications. Over 24,000 patients are seen every year by Ludeman Center physician-scientists at adult and children's hospitals and clinics in metro Denver. Many of these patients are seen in clinics founded by Ludeman Center scientists. In total, 25 clinics have been created by our faculty.

The Ludeman Center is also the home of the Building Interdisciplinary Research Careers in Women's Health (BIRCWH) NIH K12 program focused on mentored career development of early-stage investigators in women's health and sex differences research.

The Women's Health Innovation Scholars (WHINS) Program is funded by philanthropic supporters of the Ludeman Center and is designed to foster the career development of early-career MD and PhD faculty who wish to develop independent careers focused on women's health or sex and gender differences research. Current WHINS Scholars are Christina Metcalf, PhD, Suet Nee Chen, PhD, and Ester Oh, PhD.

Accomplishments:

First Lady Dr. Jill Biden Visits Ludeman Center: On April 20, First Lady Jill Biden toured research labs and met with researchers at the Ludeman Family Center for Women's Health Research at the University of Colorado Anschutz Medical Campus. Following the lab visit, an audience of 60 people listened as a panel of researchers informed Dr. Biden about research being conducted by the Ludeman Center scientists.

Congresswoman Diana DeGette Visits Ludeman Center: Congresswoman Diana DeGette toured labs, participated in a panel and received a glimpse of the diverse and multidisciplinary work taking place at the Ludeman Family Center for Women's Health Research.

Women's Health Research Day: This annual event features a nationally recognized keynote speaker and a poster session for campus researchers. Sarah Temkin, MD, Associate Director for Clinical Research at the NIH Office of Research on Women's Health, joined the Ludeman Center to deliver the 15th annual keynote talk on Sex and Gender Considerations Relevant to the Health of Women.

Women's Health Symposium: This annual half-day CME-accredited training is an opportunity for health professionals to learn the most recent evidence-based guidelines and treatments relevant to women's health and sex and gender differences. This past year we included topics such as women's mental health, pre-conception counseling, Alzheimer's disease, new weight loss therapies and more.

Annual Community Event: As the Ludeman Center's signature outreach event, the Annual Community Event focuses on educating the community about important health issues, providing evidence-based information and highlighting women's health and sex and gender differences research. The 2023 keynote speaker was Shankar Vedantam, the New York Times bestselling author of *The Hidden Brain*.

Collaborations:

Community & Business Partnerships: The Ludeman Center is proud to partner with several community organizations and companies to regularly provide education and healthcare programs including the Center for African American Health, Vuela for Health, Arrow Electronics, UCHealth and more.

Let's Talk: In partnership with UCHealth, the Ludeman Center organizes this quarterly community education series that bridges research to care. By providing evidence-based

information to the community, through talks given by faculty members, attendees can make more informed healthcare decisions for themselves and their families.

Girls Career Day: To encourage girls to pursue careers in science, we offer an annual one-day hands-on experience at the CU Anschutz Medical Campus for high school-aged girls. The May 2024 event featured CU Anschutz faculty in orthopedics and ophthalmology and hands-on experiences at UCHealth University of Colorado Hospital, the Center for Surgical Innovation and the School of Dental Medicine.

Neurotechnology Center

Mission: The University of Colorado School of Medicine Neurotechnology Center (NTC), directed by Mark Dell'Acqua, PhD, celebrated it fifth anniversary on July 1, 2024. The NTC missions are: 1) To support core facilities that provide School of Medicine investigators access to key, cutting-edge technologies that are essential for neuroscience research at CU Anschutz; and 2) To work with School of Medicine departments to jointly recruit additional neuroscience-focused faculty to CU Anschutz who emphasize development and application of novel technologies, with a goal of building strong collaborative, cross-disciplinary research teams. Nine School of Medicine departments have joined the NTC as members, representing basic science (Cell & Developmental Biology, Pharmacology, Physiology & Biophysics) and clinical programs (Anesthesiology, Neurology, Neurosurgery, Ophthalmology, Pediatrics, Psychiatry).

`Initiatives: The NTC also engages in educational and outreach activities by hosting/co-hosting and administering research seminars, retreats, and symposia in partnership with the Neuroscience Graduate Program. In October 2023, the NTC hosted its first inaugural symposium: *"Neurotechnology: New advances in recording, imaging and manipulating nervous system function".* The NTC symposium featured invited speakers from the University of Pennsylvania, the University of California Berkley, the University of Southern California, Brown University, Columbia University, and CU Anschutz was attended by over 120 scientists from CU Anschutz and other institutions including CU Boulder and the University of Michigan. In addition, the NTC sponsored and supported the NIH R25-funded NCORE summer research program that provides neuroscience research internships on the campus for Colorado undergraduate students from groups historically underrepresented in science.

Leadership:
NTC Director: **Mark Dell'Acqua, PhD**
NTC Administrator: Paula Robinson
NTC IT Specialist/Web Support: Matthew Witt

Accomplishments:
Faculty Recruiting:
Working with the Department of Pharmacology in 2023, the NTC completed a joint faculty recruitment of Justin O'Hare, PhD, a postdoctoral fellow and K99/R00 awardee from Columbia University. O'Hare, is a neuroscientist whose research program employs a cutting-edge combination of electrophysiological recording, fluorescence imaging, and behavioral monitoring to study neuronal dendritic calcium signaling dynamics during behavior time-scale synaptic plasticity that underlies hippocampal place cell formation during spatial learning and memory. He joined the Department of Pharmacology as an assistant professor July 1, 2024.

Working with the Department of Anesthesiology in 2024, the NTC completed a joint faculty recruitment of Alberto Cruz-Martin, PhD, an NIH-funded Assistant Professor at Boston University. Cruz-Martin's researchis focusedon understanding how immune genes and inflammation affect brain connectivity during development and in neurodegenerative diseases. His laboratory uses advanced techniques such as in vivo imaging with mini-scopes, super-resolution microscopy, electrophysiology, and machine learning to unravel mechanisms underlying synaptic plasticity and pathology in disorders like schizophrenia and Alzheimer's Disease. He joined the Department of Anesthesiology as an associate professor in June 2024.

NTC Cores:
The NTC manages six cores operating as three service-oriented core clusters that provide investigators with powerful transformative tools to incorporate cutting-edge approaches.

Core Cluster 1-Advanced Light Microscopy Core (ALMC): Richard Benninger, PhD (Director); Radu Moldovan, PhD (ALMC Manager); Dominik Stich, PhD; Carol Mirita

ALMC 23-24 Highlights:
-Total usage of the core: 5,704 hours
-Total number of laboratories that used the core: 117
-Number of new users of the core: 104
-Number of papers published that used the core instruments and services: 44
-New Instrumentation: Abberior Infinity Line STED super-resolution microscope with 3-color, 3D, live cell imaging capabilities (purchased with support from the NTC and the Departments of Physiology and Biophysics and Pharmacology)
-New Instrumentation: Olympus VS200 automated high throughput slide scanner (purchased with support provided by the SIRC and 9 SOM departments/centers)
-New Grant Awarded: NIH S10 Shared Instrumentation Grant to purchase a Zeiss LSM980 confocal/2-photon microscope with Picoquant Fluorescence Lifetime Imaging-FLIM (purchase in progress, will arrive FY 2025}

Core Cluster 2- Neural Engineering – Optogenetics (ONE) Core, (IDEA) Core, and the Neuroscience Machine Shop: Gidon Felsen, PhD (Director); Andrew Scallon, MS (ONE Core manager); Ryan Williamson, PhD (IDEA Core manager); Ryan Mettetal, PhD (Neuroscience Machine Shop manager)

ONE Core 23-24 Highlights:
- Worked with 23 research laboratories on 56 projects
Project highlights:
-Designed and fabricated a fully adjustable and minimalistic stereotaxic surgery system for caudal anesthesia access.
-Built customized computers for acquiring and analyzing large quantities of specialized electrophysiological and imaging data.

-Pioneered a service using custom virtual machines (via Google Cloud) to perform high-level cloud computing (via Google Cloud).
-Designed and 3D printed ~70 parts for users in various laboratories.

IDEA Core 23-24 Highlights:
- Worked with 8 users in 5 research laboratories from 3 SOM Departments.
Project highlights:
- Tactile threshold measurement device to evaluate the sensation of controlled vibrations through prosthetic limbs having either traditional attachment mechanisms or surgical implants.
-Fear Conditioning assay in which a single computer manages four behavior chambers for fear conditioning in rats.
- Deep Brain Stimulation (DBS) OCD Monitor - A touchscreen-based GUI and apparatus for imaging patients in an outpatient clinic with chronic DBS implants, aligning camera acquisition with implanted electrodes via TENS stimulation.

Neuroscience Machine Shop 23-24 Highlights:
- Worked with 43 research laboratories on 145 projects.
Project highlights:
-Fabricated a wide range of research equipment, including animal enclosures, behavior mazes, recording chambers, Faraday cages, rolling lab benches, microscope stage adapters, probe holders, and more. We also provided maintenance and repair services for existing and damaged equipment.
-Contributed to the "Crystal Skull" project by machining graphite molds to form softened cover glass into the shape of a mouse skull, enhancing brain visibility through larger windows.
-Expanded our capabilities with the addition of advanced equipment, including the Wazer CNC, Water Jet, and Lisa X Plastic Sintering 3D Printer, enabling the production of more complex parts with intricate geometries.

Core Cluster 3-Animal Behavior Core (ABC) and In Vivo Neurophysiology Core (IVNC): Michael Mesches, PhD (Director); Nicolas Busquet, PhD (ABC manager); Connie Brindly, MS; Jessica Carlsen, MS

Animal Behavior and In Vivo Neurophysiology Core (AB-IVNC) 23-24 Highlights:
-Total usage of the core: 3,010 hours
-Total number of laboratories that used the core: 33 from 15 CU Anschutz departments
-Number of papers published or submitted that used the core instruments and services: 9
-Helped research teams design, plan, and perform long-term and short-term behavioral studies.
-Expanded Zebrafish behavioral testing.
-Instituted new behavioral testing paradigms (Hole Board, operant conditioning)

NTC website: https://medschool.cuanschutz.edu/neurotechnologycenter

Perinatal Research Center

The Perinatal Research Center at the University of Colorado Anschutz Medical Campus (CU-AMC) is dedicated to advancing our understanding of maternal, fetal, and neonatal health through innovative research. Our work encompasses a wide range of studies, from the molecular and cellular mechanisms of fetal development to clinical applications aimed at improving outcomes for neonates.

Mission: Our mission is to investigate and elucidate the physiological, biochemical, and molecular processes that underpin fetal and neonatal growth and development. We aim to translate our findings into clinical practices that enhance the health and well-being of mothers and their babies.

Leadership:
Paul J. Rozance, MD - Scientific Director of the PRC
Director of the T32 Training Program in Perinatal Biology and Medicine
Director of Ovine Research Program

Laura D. Brown, MD - Director of the PRC. Mass Spec and HPLC Analytical Program

Eileen Chang, PhD - Director of Surgical Innovation and Training Program

Evgenia Dobrinskikh, PhD - Director of PRC Histology, Imaging and Analysis Program

Stephanie R. Wesolowski, PhD - Director of the PRC Molecular and Cellular Biology Program

Clyde J. Wright, MD - Director of the PRC Murine Research Program

Accomplishments: In Fiscal Year 2024, the Perinatal Research Center has achieved significant milestones. Between 2020 and 2024, we secured over $6 million in grant funding, supporting a wide array of research projects. Within the last fiscal year, we have obtained new grants including an R01 and two F32 grants as well as local Pilot and Career Development Awards. Our faculty made groundbreaking advancements in understanding fetal and neonatal metabolism and development as well as placental physiology, providing critical insights into the impacts of perinatal insults on long-term health outcomes. Additionally, we are proud to have four R01-funded faculty members who are leading innovative research initiatives. Our center has also been instrumental in training numerous graduate students, postdoctoral fellows, and clinical trainees, many of whom have received prestigious awards and moved on to successful careers in academia and research.

Collaborations: The Perinatal Research Center thrives on robust collaborations both locally and nationally. Locally, we work closely with the Ludeman Faculty Center for Women's Health Research, and the NIH-funded Colorado Diabetes Research Center, Nutrition and Obesity Research Center, and the Colorado Clinical and Translational Sciences Institute. Our interdisciplinary approach involves collaborations with various departments within CU-AMC, including OB/GYN, Cardiology, and Critical Care. We have established collaborations with scientists from around the world. Faculty at the Perinatal Research Center have held leadership positions in prestigious organizations such as the Western Society for Pediatric Research, the Perinatal Research Society, the Fetal and Neonatal Physiological Society, and the Society for Reproductive Investigation. These roles highlight our commitment to advancing the field and fostering a collaborative scientific community.

Rocky Mountain Taste and Smell Center

The Rocky Mountain Taste and Smell Center includes scientists who work on studies of the chemical senses including taste, smell, and chemical irritation of the oral and respiratory passageways. The goal of the center is to facilitate research by providing communal resources and by bringing together productive investigators in the chemical senses and allied senses of hearing and balance. The center, under the leadership of **Diego Restrepo, PhD,** and **Thomas Finger, PhD,** embraces work from 16 laboratories in five departments of the School of Medicine, including the Departments of Cell and Developmental Biology, Physiology & Biophysics, Otolaryngology – Head & Neck Surgery, with affiliates at the University of Pennsylvania and Wake Forest University. While the center provides a focus for interactions and journal club, the underlying research is supported by more than 25 research and training grants from the National Institutes of Health totaling over $5 million. Investigation of disorders of the senses of taste and smell is enhanced by cooperation and collaboration with the sinus clinic of UCHealth University of Colorado Hospital.

Webb-Waring Center

The Webb-Waring Center (WW) has a long, remarkable, and storied history. WW was founded by Gerald B. Webb, MD who is often called “the Father of Immunology” and James J. Waring, MD who was the first Department of Medicine Chair. The original purpose of WW was to find a cure for tuberculosis. Many people with tuberculosis came to find a cure for their tuberculosis in the high altitude of Colorado.

Mission: Today, Webb-Waring Center (WW) conducts basic and translational investigations focusing on inflammation and immunologic mechanisms that contribute to health and disease. This unifying focus fits well the stated mission of the WW which is “…to conduct and teach innovative biomedical research that improves understanding, treatment and prevention of diseases worldwide.” This became the WW mission after drugs were developed to treat tuberculosis.

Leadership: Led by **John E. Repine, MD,** the James. J. Waring Professor of Medicine, Pediatrics, and Surgery, WW’s integrated research projects are gaining a better understanding of the causes, diagnosis, treatment, and prevention of significant disorders like the acute respiratory distress syndrome (ARDS), diabetes, multiple sclerosis, atherosclerosis, traumatic brain injury, fatty liver disease, the metabolic syndrome, macular degeneration, and the metabolic syndrome. The clinical entity of ARDS was originally described at WW many years ago. Many of the WW efforts are also directed to learning about the importance and finding ways to combat the effect of aging on health and disease progression.

Initiatives and Accomplishments: WW’s research endeavors are concentrating on developing translational discoveries that have more immediate application to human health care. This orientation has led to patenting and developing several innovations by Dr. Repine that are being supported recently by the Knoebel and Bonfils-Stanton Foundations. David Wagner, PhD, has secured competitive grants from the NIH SBIR and the Gates Grubstake programs to advance new technologies that deal with treating and preventing diabetes, multiple sclerosis, and other autoimmune disorders.

WW has highly competitive training programs for undergraduate and medical students who are interested and want to gain training and experience in biomedical research. The WW Colorado Undergraduate Summer Program (CUSP), founded and directed by Repine, has become nationally prominent. Usually, more than 100 exceptional undergraduate students from universities nationwide apply to the annual CUSP summer program. Following a highly competitive selection process, about 15 interns—half of them meeting diversity designations—are selected from Princeton University, University of Notre Dame, University of California San Diego, Stanford University, Williams College, Baylor University, University of Denver, University of Colorado, University of Oregon, Colorado State University, and other colleges. CUSP is supported by Repine’s five-year undergraduate diversity training grant from the NIH, Brian Fitzgerald, some of the colleges,

and generous donors. In addition, about 10 emerging second-year Colorado medical students from diverse backgrounds are supported by the Department of Medicine DREAM Program, also led by Repine. They also participate in a WW summer research training program. At the end of the summer, all students present research in a formal campus-wide poster session. Many of these students view research favorably after this experience and subsequently continue to conduct biomedical research during their future training and careers.

Collaborations: WW scientists collaborate with a multi-disciplinary groups of CU scientists and scientists world-wide. One of the projects involves investigations to learn about a “super rat” developed by Repine which innately manifests the TRIAD of healthy longevity including (1) longer lifespan, (2) reduced disease, and (3) maintained function. The hope is that new knowledge gained from this unique rat can be used to achieve healthy longevity in humans. Dr. Wagner is developing a new pharmaceutical agent that may limit the health consequences of individuals with autoimmune disorders.

https://medschool.cuanschutz.edu/webb-waring-center

VICE CHANCELLOR FOR HEALTH AFFAIRS

Colorado Area Health Education Center Program

The Area Health Education Center (AHEC) program was developed by Congress in 1971 to recruit, train, and retain a health professions workforce committed to rural and underserved populations in the United States. The Colorado AHEC system was established in 1977. All AHECs are funded by HRSA AHEC Model grants which are renewed in 5-year grant cycles to attend to the overall mission of AHECs in the US. COAHEC receives additional matched funds as required by HRSA from the CU SOM Vice Chancellor for Health Affairs. The AHEC system in Colorado is organized into six separate regional centers overseen by the COAHEC Program office on the Anschutz Medical Campus (AMC). Our six regions are: Centennial, Front Range, San Luis Valley, Southeastern Colorado, Southwestern Colorado, and Western Colorado. The six regional AHEC offices work under the grant directives in collaboration with the COAHEC Program Office, which provides governance and guidance in meeting all the grant and program deliverables.

Mission: Our goals are defined by HRSA's Triple Aim for AHECs in the US: promoting and enhancing the **diversity** of the healthcare workforce, facilitating the equitable **distribution** of this diverse workforce, and facilitating **practice transformation** among providers and communities to enhance health equity. This then defines our mission: "We work towards ensuring health equity in Colorado. We increase the diversity and distribution of the healthcare workforce to address healthcare disparities in this state. We support practice transformation throughout Colorado to ensure high-quality healthcare delivery for everyone. We serve as the link between Coloradans, state resources, and the resources of Anschutz Medical Campus to help healthy people thrive in healthy communities."

Leadership: The COAHEC Director is **Josina Romero O'Connell**, MD. Her position is housed in the Department of Family Medicine where she is an Assistant Professor. She is also supervised by the Vice Chancellor of Health Affairs. She is a 2009 graduate of the CU SOM, and now a COMPASS Guide at the CU School of Medicine.

Initiatives: COAHEC manages a range of initiatives aligned with HRSA's "Triple Aim" goals. Key pipeline programs aim to enhance opportunities for secondary, college, and health professions students from underrepresented, educationally disadvantaged, and rural backgrounds to pursue careers in the health professions. Two primary high school pipeline programs, H.O.P.E. (Health Occupations Promoting Equity Program) and CADAVERS (COAHEC Anatomy and Discourse on Arts, Values, Ethics, and Respect in Science), saw record participation in 2023-24. The H.O.P.E. program brings URM students from all over Colorado to attend didactics and discourse on select Monday evenings throughout the academic year. This leads these students to participate in the H.O.P.E. Institute, a week-long, free health career exploration camp at University of Colorado Colorado Springs and Anschutz Medical Campus designed to expose participants to healthcare careers within a university setting. The CADAVERS program offers high school students a unique experience in exploring anatomy, medicine, arts, and ethics through both classroom and hands-on laboratory activities.

The AHEC Scholars Program provides educational opportunities for undergraduate, graduate, and certificate-seeking students across HRSA's eight core focus areas: virtual learning, telehealth, connecting communities and supporting health professionals, interprofessional education, behavioral health integration, social determinants of health, cultural competency, practice transformation, and current and emerging health issues. The program aims to prepare students for healthcare careers by ensuring a well-rounded education with a focus on underserved populations.

In 2023-24, COAHEC hosted several significant events, including Advisors Day, the Mini Med program, the 2024 NEAR Conference, and several community health screens in remote Colorado. COAHEC continues its long-standing partnership with the National Western Stock Show, providing health screens as part of this large annual event.

Accomplishments: COAHEC does profoundly important work and we have so many top accomplishments. These three only scratch the surface.

- Educated 125 AHEC Scholars, with 93 graduates all receiving specialized instruction in HRSA's 8 core topics. Participants include health professions students from Nursing including CNA's, BSN-RN, and NP students, PHARMD, EMT, PT, PA, and both BPH and MPH programs.
- Provided healthcare career exposure to 125 students across Colorado in the HOPE Program, including 56 students who attended a week-long, free health career camp the HOPE Institute, at AMC and UCCS and engaged 308 students in the CADAVERS Program, with 226 participants from underrepresented minority (URM) communities and schools.
- In 2024, schools submitted 695 away rotations, facilitating 19,556 nights of housing, surpassing the goal of 18,000 nights. Of 340 survey responses, 83% agreed that the housing program enhanced their clinical experience, and 63% expressed a strong likelihood to request another clinical rotation in a rural, frontier, or medically underserved area (MUA).

Collaborations: COAHEC is a master partner maker, collaborator, and networker. Our list of partnerships throughout the state of Colorado in our work addressing health inequity would be pages long. To highlight, just a few, we are members and partners in the National AHEC Organization. We partner with Anschutz Medical Campus schools in providing safe housing for clerkships over 40 miles from CU SOM students home campuses. We partner with Anschutz Medical Campus and UCCS Faculty and departments, including the State Anatomical Board, in our pathway initiatives. Our PI serves on the Gov Jared Polis HCPF Council, the AHA's Lifesaver Committee, and the ARPA-H Advisory Board. We have decades long enduring partnerships too numerous to mention but include health systems all over Colorado. Other more recent partners include the CU Cancer Center, ARPA-H, Multidisciplinary Center on Aging at the AMC, The AHA, Adams State, UCCS, Clifton Library, the Center for Bioethics and Humanities, CDPHE, the Colorado School of Public Health, the Patient Navigator Training Center, ECHO Colorado, ODEI, and many others.

CU Center for Bioethics and Humanities

The Center for Bioethics and Humanities generates unique opportunities to create transformational learning, groundbreaking scholarship, thought-provoking art and inclusive conversations for Colorado health professionals, students, patients and communities.

Mission: Supporting compassionate, competent, respectful and just health care.

KEY GOALS

- Measurably improve empathy, curiosity and well-being through humanistic and creative experiences for trainees and professionals.
- Earn recognition for excellence in clinical ethics consultative services.
- Conduct empirical research on emerging and controversial bioethics issues that is useful to policy makers and health care professionals.
- Broaden scope and impact of bioethics and health humanities learning opportunities for students, professionals and the community.

Leadership:
Matthew Wynia, MD, MPH, Center Director, Professor of Medicine
Eric G. Campbell, PhD, M.Ed., Director of Research, Professor of Medicine
Lisa Bero, PhD, Chief Scientist, Professor of Medicine
Daniel S. Goldberg, PhD, JD, Director of Education, Associate Professor of Family Medicine
Kathryn Rhine, PhD, MA, Director of Arts and Humanities, Associate Professor of Medicine
Chelsey Patten, DBe, HEC-C, Director of Clinical Ethics, Instructor in Pediatrics

Initiatives:

Arts/Humanities Initiatives	Research Initiatives
• President's DEI Grant: Constructing Social Justice Core Competencies at a Health Sciences Campus: A Delphi Study • Rymer Innovation Award: Small Things Observed: Impacts of Arts-Based Educational Programs among Medical Students • The Human Touch: A Journal of Poetry, Prose, and Visual Arts. 17th edition • Letters to a Clerkship Student. 2024 edition. • Bridging Disciplines: Arts Research Collaborative Lunch & Learn Series • Program on the Holocaust, Genocide & Contemporary Bioethics • The American Jewish Experience in Medicine webinar series	• Revolutionizing the Oral Route (ARPA-H) • Health AI and Data Science in CV and Pulmonary Disease (NIH) • Trusting Each Other: Enhancing Trust in Health Care Relationships (Greenwall) • Standards and Implementation Guides to Advance Disability Equity (WITH Foundation) • Advancing Communication and Care in Safety-net Systems to Include Black and Latinx Equity (ACCESSIBLE) (HHS) • Social Determinants of Health Integration at Spaulding Rehabilitation Hospital (NIH) • Health and Financial Implications of Early-Stage AD and Related Dementias (NIH)
• Narrative Medicine Author Talks • Music in Medicine Initiative (including the campus Orchestra, Choir and Jamschutz gallery jam sessions)	• Engineering infection controls to reduce indoor transmission of respiratory infections: scoping review (CDC)
Clinical Service Initiatives • Clinical Ethics Consultations: 170 consults at UCH, 55 consults at CHCO • Ethics Grand Rounds Monthly Series, avg 125 attendees/event • CHCO Moral Distress Rounds (67 rounds provided) • Ethics Support for UCHealth Integrated Transgender Care Program • Clinical Ethics Ambassador Program: 11 ambassadors in the 2023 cohort • 24th Annual Pediatric Ethics Conference	Education and Training Initiatives • Bioethics & Humanities SOM Track • Interprofessional Ethics Curriculum (IPED) • Humanities and Ethics Graduate Certificate • Pharmacy Ethics Speaker Series • National Collaborative on Humanities & Ethics in Dentistry Speaker Series • Ethics and the Future of Work Webinars • Public Health Ethics & Law Program • Advanced Ethics in Leadership Program • Lancet Commission Teacher Training Fellowship

Accomplishments: Academic productivity: In AY 23-24 our team received 7 grants totaling $7,035,040, published 76 peer-reviewed papers, including articles in JAMA, NEJM and other top-tier journals, and our work was noted by the NY Times, NPR, and other major press outlets. Public Outreach: Our team produced 32 public-facing programs, with 4,474 registered participants, as well as 4 art gallery exhibitions and a national symposium on the rights of children in migration that included installing the first-ever exterior wall mural on our campus (Fly to Heal, by Juls Mendoza). Program recordings received another 4,312 views on YouTube. The Center's Music and Medicine Initiative also sponsors the CU Anschutz Orchestra, Choir and Jamschutz monthly gallery jam sessions, which bring the healing power of music to our campus community. Novel Educational Programs: Our regular work in interprofessional ethics and medical ethics is supplemented by unique offerings, including our Graduate Certificate in Health Humanities and Ethics, our Advanced Ethics in Leadership training programs, our work with the Lancet Commission and the Macy Foundation to develop and deploy a novel fellowship on medicine and the Holocaust, and our focused work to advance the field of public health ethics.

Collaborations: Collaboration is a cornerstone value for our Center (our 2023 Annual Report was entitled, "Partnerships") and virtually all of our research, education, clinical and arts-based programming includes one or more collaborators. Collaborating organizations in 2023 included the American College of Physicians, American Medical Association, Colorado Health Ethics Forum, Colorado Health Institute, Colorado Medical Orders for Scope of Treatment Program, Denver Art Museum, Denver Museum of Nature and Science, Colorado Area Health Education Center and many more.

Colorado Center for Personalized Medicine

The Colorado Center for Personalized Medicine (CCPM) was created to deliver genetics-guided insights at the point of care as a multi-institutional collaboration between the University of Colorado and UCHealth in 2015. CCPM integrates subject matter experts across CU Anschutz aligned with UCHealth's ability to deliver prescriptive insights through electronic health records (EHR) systems to realize this vision.

Mission: CCPM will lead the nation in bringing genetics to the point of care at scale, ensuring that people get care that's right for them.

Leadership:
Casey Greene, PhD, CCPM Interim Director
Christina Aquilante, PharmD, Pharmacogenomics Director
Emily Casteel, MPA, Finance & Administration Director
Kristy Crooks, PhD, FACMG, Lab Director, CCPM Biobank Laboratory
Chris Gignoux, MS, PhD, Research Director
Emily Hearst, MHSA, Program Director, UCHealth CARE Innovation Center
Dave Kao, MD, Medical Director
Nick Rafaels, MS, Informatics Operations Director

Initiatives:
Patient Care

- CCPM's preemptive pharmacogenomics (PGx) programs, whether the research-first biobank program or clinical GI oncology pilot, aim to reduce harm and increase benefit by pairing patients with the doses and drugs that are personalized for them. In the past three years, we've returned >425,000 clinical PGx results to >66,000 participants and patients. Completion of our next phase (expected EoY) will reach ~1 million results returned.
- CCPM's return of high-impact pathogenic variants continues to produce positive patient impact stories, including in earned media (e.g., from KDVR). Since 2018, we have returned 586 genetic results to patients, with 332 of those provided in FY24. Participants often speak of obtaining care for findings, and the cascading impact and relief for themselves and their families.
- CCPM programs are designed to deliver maximum value on a single lifetime test. This reliance on personalized, anticipatory care supports people and their providers through their health journey across their lifespan.

Research

- The CCPM biobank research study (>250,000 participants enrolled and >150,000 samples collected) and associated data (genome-wide data on >94,000 participants in 2024's "Freeze 4") support present day research by supporting CU faculty in making discoveries and obtaining extramural grant support, aiding recruitment and retention. CCPM's deployment of an electronic self-consent model in the MyChart portal positions us ideally for continued growth.
- CCPM acts as a laboratory to bring data-driven insights to the point of care and can leverage opportunities to attract outside industry as collaborators who seek breakthroughs. CCPM has a longstanding partnership with the Regeneron Genetics Center with multiple areas of collaboration.

Education

- CCPM has a robust provider education program that enhances understanding of PGx and genetics across our institutions. This effort is complemented by a certificate program, and a graduate degree program commencing in Fall 2024, that provides in- depth didactic training in the basis and implementation of personalized medicine. Launched in 2022, the certificate program has educated 44 students, including 6 clinicians, and courses also serve as electives for several other graduate programs.

Reputation

- CCPM's membership program, inaugurated in July 2023, includes 56 faculty members from three campuses within the CU system and seven schools and colleges. This growing community fosters multi-disciplinary collaboration to advance the frontier of personalized medicine.
- By many measures, CCPM is the largest (>66,000 participants with results returned) and fastest, growing program of its type in the country. This positions CU and UCHealth as leaders in the personalized medicine space.

Accomplishments:

- In August 2023, CCPM launched a pilot in partnership with the AMC GI Oncology Clinic to deliver pre-emptive, fully EHR-integrated PGx results and automated clinical decision support (CDS) tools for patients with certain malignancies. At the end of FY24, 174 patients had results returned; for high-risk chemotherapy medications, clinicians used the information to do the right thing for 100% of affected patients.
- Recent reports describe different aspects of CCPM's work in peer reviewed literature. An article in the American Journal of Human Genetics describes CCPM's biobank research study (https://doi.org/10.1016/j.ajhg.2023.12.001). An article in the American Journal of Health-System Pharmacy describes innovate PGx CDS tools used to deliver personalized care for biobank participants with cardiovascular diseases (https://doi.org/10.1093/ajhp/zxae008).
- In March 2024, CCPM exceeded 50K patients with PGx results returned to the EHR, making CCPM the nation leading PGx return of results program.

Collaborations:

- In 2024, CCPM launched a partnership with the School of Public Health's Center for Innovative Design and Analysis (CIDA) to support campus analytical needs for

research using biobank data. CIDA, known for sustainable and scalable research analytics, helps make biobank genetic data accessible to researchers who need support in completing analyses.

- Since 2019, CU has partnered with the Regeneron Genetics Center (RGC). RGC conducts whole exome sequencing of CCPM's samples, delivering valuable research data and initial insights for our high-impact pathogenic (HIPV) program.

Colorado Clinical and Translational Sciences Institute

The Colorado Clinical and Translational Sciences Institute (CCTSI) is a partnership among University of Colorado Anschutz Medical Campus, University of Colorado Denver, University of Colorado Boulder, Colorado State University, five hospitals and multiple community organizations committed to translating discoveries into better, equitable public health and patient care for all. There are over 6,000 individuals who have signed up as members of the CCTSI.

The CCTSI is a National Institutes of Health/National Center for Advancing Translational Sciences (NIH/NCATS)-funded research institute located at CU Anschutz. It is part of the national consortium of 60+ Clinical and Translational Science Awards (CTSA) institutional hubs throughout the United States Significant institutional support from our partner hospitals, School of Medicine, Provost and the Office of the Vice Chancellor for Research help support CCTSI programs.

The CCTSI was launched from its inaugural grant in 2008; NIH support was renewed in 2013, 2018 and 2023, which will extend NCATS support through 2030. This sustained funding has enabled the institute to transform clinical and translational research and its training enterprise across Colorado.

Mission: Through innovative programs and collaborations to advance clinical and translational science, the CCTSI facilitates the performance and dissemination of high impact research and the training of the next generation of clinical-translational researchers. We emphasize team science, reducing health disparities, and being poised to respond to public health emergencies.

The vision of the CCTSI is to accelerate and catalyze the translation of innovative science into improved, equitable health and patient care for all.

Leadership: The CCTSI is led by two Multiple Principal Investigators (MPIs): **Ronald J. Sokol, MD (contact PI and Director)**, and **Janine Higgins, PhD (MPI and Director of Operations)**. Their team of dedicated associate directors and administrative staff include: Wendy Kohrt, PhD, Tim Lockie, MS, MBA, Cathy Bodine, PhD, Ellen Burnham, MD, Thomas Campbell, MD, Nichole Carlson, PhD, Lisa Cicutto, PhD, Matt DeCamp, MD, PhD, Thomas Flaig, MD, Adit Ginde, MD, Teri Hernandez, PhD, Jayashree Kalpathy-Cramer, PhD, Goldie Komaie, PhD, Bethany Kwan, PhD, Alison Lakin, RN, LLB, LLM, PhD, Kevin Messacar, MD, PhD, Donald Nease, MD, MPH, Natalie Nokoff, MD, Jane Reusch, MD, Natalie Serkova, PhD, Montelle Tamez, Chris Baker, MD, and Wendy Meyer, MA. Researchers from CU Boulder, Colorado State University and National Jewish Health also play leadership roles: Chris DeSouza, PhD, Sue VandeWoude, DVM, Matt Hickey, PhD and Donald Leung, MD, PhD.

Initiatives: The CCTSI functions through 16 core programs, including: 1) Health Informatics, 2) Community Engagement and Health Equity, 3) Workforce Development, 4) Pre- and Post Doctoral T32 Training Programs, 5) K12 Institutional Career Development program, 6) Pilot Grants, 7) Regulatory Knowledge and Support, 8) Biostatistics, Epidemiology and Research Design, 9) Research Bioethics, 10) Natural Animal Models Core, 11) CTS Resources and Services, including the four Clinical Translational Research Centers (CTRCs), 12) Pragmatic EHR-embedded Trials resources, 13) Trial Innovation Network Hub Liaison Team, 14) Dissemination and Implementation Science resources, 15) Continuous Quality Improvement and Evaluation, and 16) Administrative resources.

Through the partnership with CSU, which is recognized for its world-class school of veterinary medicine and other programs, the CCTSI has expanded the spectrum of translational research to include T0.5 research, translating promising pre-clinical discoveries into naturally occurring animal models (companion to domestic animals) of human disease.

The CCTSI has implemented two information systems for the institution's research community: 1) "Colorado Profiles," a search engine and networking tool to locate biomedical researchers at CU and affiliates; and 2) REDCap (Research Electronic Data Capture) which is a secure, HIPAA-compliant web-based application designed for research data collection, storage, and transfer.

The Clinical Translational Research Center (CTRC) network, composed of clinics at University of Colorado Hospital, Children's Hospital Colorado, National Jewish Health, and CU Boulder, offer incomparable clinical research facilities, research nursing support, specimen and biopsy processing, nutrition research expertise, specialized laboratory assays, vascular ultrasound testing, exercise testing facilities, and other services to facilitate the conduct of patient-oriented research.

Education and Career Development programs include the clinical sciences PhD and master's graduate programs, K12 research scholar program and T32 pre-doctoral and post-doctoral training program, Clinical Faculty Scholars program, CO-Mentor training program, Pre-K, Pre-R, and Pre-F Mock Study Sections, Teaming and Leading for Early Career Researchers, and Communicating Your Science to the Public.

A robust Pilot Grants program and novel methods development funding initiative are some of the most popular CCTSI offerings that have assisted numerous investigators in obtaining follow-on funding.

The CCTSI created the Partnership for Academicians and Communities in Translation (PACT) to transform the way communities and researchers work together to design and conduct research by building bridges and trust between health research, clinical practice, and community health initiatives to improve the health of the people of Colorado and the Rocky Mountain region. The PACT encompasses more than 20 Colorado communities focusing on under resourced communities, 940 physician practices and 28 hospitals throughout the region.

The Innovation Ecosystem program provides early training in market evaluation (I-Corps@CCTSI) and support for commercialization for promising ideas and products. Our Research Studio Program organizes a customized team of experts to provide feedback and innovative ideas in a 90-minute focused session to assist and advise investigators on topics chosen by the investigator.

A rigorous tracking, assessment and Evaluation Program with a formal quality and process improvement component ensures the best use of resources while protecting the safety of research study participants.

Accomplishments: The CCTSI facilitates over 500 clinical research projects each year from over 40 different departments and divisions, resulting in over 200 annual research publications annually, and is recognized nationally for its innovation, discoveries and training programs. See our website for highlights from 2023.

Collaborations: CCTIS is a collaboration and partnership among CU Anschutz, CU Denver, CU Boulder, Colorado State University, University of Colorado Hospital, Children's Hospital Colorado, Denver Health and Hospitals, National Jewish Health, the Rocky Mountain Regional Veterans Affairs Medical Center and community organizations around the state. We collaborate with ACCORDS, the NORC, the Ludeman Faculty Center for Woman's Health Research, and various other centers and programs within our partnering institutions.

To learn more, become a member, and sign up to participate in our many opportunities, go to https://cctsi.cuanschutz.edu.

Center for Interprofessional Practice and Education

The CU Center for Interprofessional Practice and Education (CU CIPE) develops, administers, and evaluates the longitudinal interprofessional education curriculum for health professions students on the Anschutz Medical Campus. The program brings students across professions together to learn and practice skills during their preclinical and clinical training. The curriculum consists of several components: early community building and exploratory opportunities, interactive team learning in classroom settings, simulation experiences, and advanced practicum experiences at clinical sites. As the complexity of health care has grown, the demand for new, crosscutting interprofessional competencies from health care professionals has become increasingly recognized. After participating in our program as part of their health professions training, our graduates will be competent to participate as members of a collaborative interprofessional workforce.

Core components: A half-day orientation sets the stage for our learners with a focus on community building and campus partnerships. Students are divided into over 100 small groups, their "IPE Teams", and participate in a Community Circles activity as a tool for building an inclusive safe environment. In synergy with IPE, a broader theme of One Health is introduced. One Health highlights the interdependence of human health, animal health, and the environment. Co-curricular activities including the One Book One Campus Program are highlighted, encouraging students across health professions to participate in shared interests around One Health concepts and health equity issues.

Interprofessional Collaborative Practice (IPCP) and Interprofessional Healthcare Ethics & Health Equity (IPHE) are our team based introductory courses which were launched in 2021-22 and subsequently refined as part of an ongoing curriculum reform initiative.

All students spend a half-day in the Center for Advancing Professional Excellence (CAPE) simulation center. Students practice teamwork and collaboration skills, identify, discuss ethical and patient safety issues, and engage patients and family members to deliver patient-centered care during video-monitored interprofessional team simulations. An online option provides increased flexibility for our busy and often geographically dispersed learners.

CU CIPE supports immersion experiences in partnership with our health professions programs' existing clinical practicums focused on learning and caring for patients in interprofessional teams. These experiences occur in multiple settings and the aim is to provide a mechanism by which health profession students may demonstrate their collaborative interprofessional team skills in a clinical environment. We are working to achieve campus-wide engagement through standardized student assessment and self-assessment tools aligned with the Interprofessional Education Collaborate competencies.

Dozens of full-time and numerous volunteer faculty members contribute to these innovative programs, demonstrating the deep commitment of Anschutz Medical Campus to prepare a health care workforce ready to collaborate, practice, and lead in an increasingly complex health care environment.

Mission:
Vision: Transform health professionals and health care through nationally and internationally recognized interprofessional education and practice.
Mission: Prepare health professionals for interprofessional, collaborative practice through innovative education and scholarship.

Leadership:
Outgoing Director: **Suzanne Brandenburg, MD,** School of Medicine
IPE Council: Assistant Directors - Amy Akerman, MS, PA-C, Physician Assistant Program; Jennifer Trujillo, PharmD, BCPS, Skaggs School of Pharmacy and Pharmaceutical Sciences; Krista Estes, DNP, FNP-BC, College of Nursing; Kimberly Indovina, MD School of Medicine; Anthony Kinney, DPT, MBA, PhD Physical Therapy Program; Lindsey Yates, DDS, MPH, School of Dental Medicine.
Other Council members - Interprofessional Healthcare Ethics and Health Equity Course Director, and Program Representative from Bioethics and Humanities: Cate Campisi, MSN, RN, PMHNP-BC; Interprofessional Collaborative Practice Course Director**:** Amy Nordon-Craft, PT, DSc, Physical Therapy Program; Interprofessional Clinical Transformations (Simulation) Director, and Evaluation Lead: Elshimaa Basha, MPH, CHSE, Center for Advancing Professional Excellence; Instructional Designer: Michelle Colarelli, MA, School of Medicine; Program Administrator: Reesie Roland

Accomplishments: The CU Center for Interprofessional Practice and Education reached over 2,000 students in 2023-24 and focused on sustaining student and faculty engagement while maintaining flexibility and strengthening partnerships.

Growth: We look forward to welcoming students from Physical Therapy's new Colorado Springs based hybrid program in the fall of 2024. We are also working with the new CU Nursing Fort Lewis College Collaborative to adapt content for their rural, preventative, community-based, and Indigenous health focused program. Their first class of nursing students will join IPE in the fall of 2025.

One Book One Campus is designed to bring students and campus community members together across professions around health care related topics of broad interest. This annual program is organized CU CIPE. This year's partners included the Strauss Health Sciences Library, the Colorado School of Public Health, the Office of Diversity, Equity, Inclusion and Community Engagement, the Center for Bioethics and Humanities, and the School of Medicine's UME and DEI operations. The 2023 -24 book was *What the Eyes Don't See* by Mona Hanna-Attisha, her eye-opening and inspiring account of the Flint, Michigan water crisis. It highlights several relevant themes - structural factors contributing to health inequity, the power of interprofessional teamwork, and the concept of One

Health. CU CIPE and our partners brought Dr Hanna-Attisha for a hugely popular and inspiring facilitated discussion as well as a small group Q&A session including high school students, health professions students, staff, faculty and community partners.

Naloxone Trainings: CU CIPE partnered with the Colorado Consortium for Prescription Drug Abuse Prevention and the AMC Office of Student Health Promotion to deliver naloxone trainings and distribute naloxone kits. The trainings were timed to coincide with IPHE which utilizes an unfolding patient case that involves opioid use disorder. Over 200 students completed the training and feedback was overwhelmingly positive.

Collaborations: Brandenburg leads a United States team as part of an NI-H funded program to build interprofessional education in Zimbabwe. The Partnership in Education Training and Research Advancement (PETRA) is a consortium of Zimbabwean health education training institutions and United States of America partner institutions, led by the University of Zimbabwe College of Health Sciences (UZCHS). The project has supported the development of IPE curricula at four Zimbabwean universities.

CU Multidisciplinary Center on Aging

Multidisciplinary Center on Aging
UNIVERSITY OF COLORADO **ANSCHUTZ MEDICAL CAMPUS**

Mission:

- Promote the multidisciplinary work of University of Colorado faculty and researchers focused on education/training, clinical care, research, and outreach/engagement related to aging.
- Serve as a centralized resource for academic, industry, foundation, community, and government, stakeholders interested in ***improving the health and well-being of older adults***.

Leadership:

- **Cari Levy, MD, PhD,** Chair, Division of Geriatrics
- **Jodi Waterhouse, MHA,** Director, Strategic Partnerships & Programs

Initiatives, Accomplishments, and Collaborations:

Research

- Fund junior researchers: pilot grants and salary support
- $8 million total funding (incl: F, T, K, U01, U54, R24, U13 and Foundation Grants)
- 36 Faculty & Researchers
- NIH/NIA T32 Physiology of Aging Program
- 5 pre- and 5 post-doctoral research fellows (MD and PhD)

Grants

- R24 Grant: ***"Workforce Development Engages Diverse Older Adults to Catalyze Innovative Approaches to Enhanced Recruitment and Retention," (***PI: Kathryn Nearing, PhD), (2022-2025). MCoA Role: Community Education about OARS program, provides recruitment support to place OARS in research team roles, and assists with coordinating training and graduation logistics.

- R01 Grant: ***"Dementia and Firearms in Older Adults-Safe at Home,"*** (PI: Emmy Betz, MD) (2021-2024). MCoA Role: chairs the National Executive Advisory Panel.

- NextFifty Grant: ***"Connecting Older Adults to Students Through Intergenerational Telecare"*** (PI: Sarah Tietz, MD) (2022-2024) – MCoA Role: Provides administration, coordination, promotion, and evaluation of older adults being paired with CU Anschutz Health Profession Students.

- NextFifty Grant: ***"Research Roadshows Engage Older Adults in Research to Advance Health Equity"*** (PI: Kady Nearing, PhD) MCoA Role: Manages Research Roadshow Community Stakeholder Engagement and Coordinates Research Roadshow Logistics (2024-2027)

- CareQuest Institute for Oral Health Disability Inclusion and Justice in Oral Health Sub Program. ***"Facilitating Accessibility and Equity in Oral Health for those with Disabilities in the Rocky Mountain Region"*** (PI: Bruce Dye, DDS, MPH) MCoA Role: Community Engagement Outreach with the CU Anschutz School of Dental Medicine (2024-2027)

Clinical Care
- MCoA Initiative: **"Vulnerable Elder Services, Protection and Advocacy Multidisciplinary Clinical Team," 2019-present.**
  - Collaboration including the University of Colorado Anschutz Medical Campus, Division of Geriatrics, Kempe Center, UCHealth University of Colorado Hospital, Rocky Mountain Regional VA Medical Center, Denver Health, Colorado State University, and county agencies to perform work in research, clinical care, education, and legal/policy to help combat elder abuse in Colorado.

Education
- T32 team training program supports physiology in aging trainees.
- Five Geriatric Research Education and Clinical Center advanced research fellows
- Four Division of Geriatrics clinical fellows
- Advanced practice providers geriatric training program for nurse practitioners and physician assistants
- Launched Inaugural ***GeriCare EveryWhere*** Consortium (November 2023) due to MCoA leading the successful passing of Senate Bill 23-31 to create the first statewide Geriatric Clinical Training Program across 10 healthcare disciplines and 4 higher education institutions. The training program will begin in September 2024.

Policy and Advocacy
- MCoA helped lead the successful passing of ***Senate Bil 23-31 "Improve Health Care Access for Older Coloradans"***
- MCoA helped lead the successful passing of ***Senate Bill 21-58 "Loan Forgiveness for Geriatric-Trained Clinicians"***
- **Colorado Commission on Aging** – Jodi Waterhouse was appointed by Governor Polis to represent the Higher Education sector and serve as Vice-Chair
- **Colorado Center for Aging** – Jodi Waterhouse has served on the Board for 4 years and is currently President of the CCA.

Initiatives:
- **MCoA COAST-IT (Connecting Older Adults and Students Through Inter-Professional Telecare) Program, March 2020-Present**.
  - Interdisciplinary Initiative across the AMC campus to create ongoing tele-relationships between AMC students and older adults to bi-directionally improve intergenerational communication
- Create, Deliver and Host: Rocky Mountain Geriatrics Conference & Community Research Symposium, September 19 & 20, 2024
- Launched Inaugural Community Research Symposium - October 26, 2023

Outreach/Engagement
- Age-Friendly University – Initiated process to become an age-friendly university by the Age-Friendly University Global Network, December 2021. CU Anschutz Medical Campus is ***#1 University in the CU System*** to become AFU Designated, ***# 2 in the State of Colorado***, ***# 87 university in the world***, and ***# 4 academic medical campus in the world.***
- Initiated Inaugural Age-Friendly University Built Environment Assessment at CU Anschutz, and created a Facilities Task Force

Anschutz Campus Mental Health

Mission: Student Mental Health (SMH) was established in 2009 in the Department of Psychiatry and has expanded over the past 14 years to meet the needs of the students on campus. In 2015, a second SMH clinic site was opened. In 2019, SMH started offering services to residents and fellows at both CU Graduate Medical Education and Denver Health and Hospital Authority, thereby becoming Student and Resident Mental Health (SRMH). These expansions have allowed Student and Resident Mental Health to increase provider availability and ease of access by offering walk-in appointments, after-hours appointments, and same-day appointments as well as 24/7 on-call coverage by psychiatry faculty.

Faculty and Staff Mental Health (FSMH) was established in 2020 to provide mental health services to CU Medicine faculty and staff on the Anschutz Medical Campus. Prior to 2020, faculty and staff did not have a dedicated clinic. Increasing national awareness around the importance of early recognition and treatment of mental health issues among healthcare providers has led to the creation of FSMH which has decreased barriers to receiving care.

In 2023, SRMH and FSMH were consolidated under the umbrella of Anschutz Campus Mental Health (ACMH) which aims to reach as many students, residents, faculty and staff as possible.

SRMH and FSMH accept most insurance plans through CU Medicine. When utilizing on-campus care, students with the student-sponsored insurance have access to an unlimited number of visits with zero copay for covered diagnoses. Services offered at SRMH and FSMH include:

- Diagnostic evaluation
- Medication management
- Psychotherapy
- Short term/Crisis counseling
- Psychoeducational testing (SRMH only)
- Group therapy (SRMH only)
- Couples counseling (FSMH only)

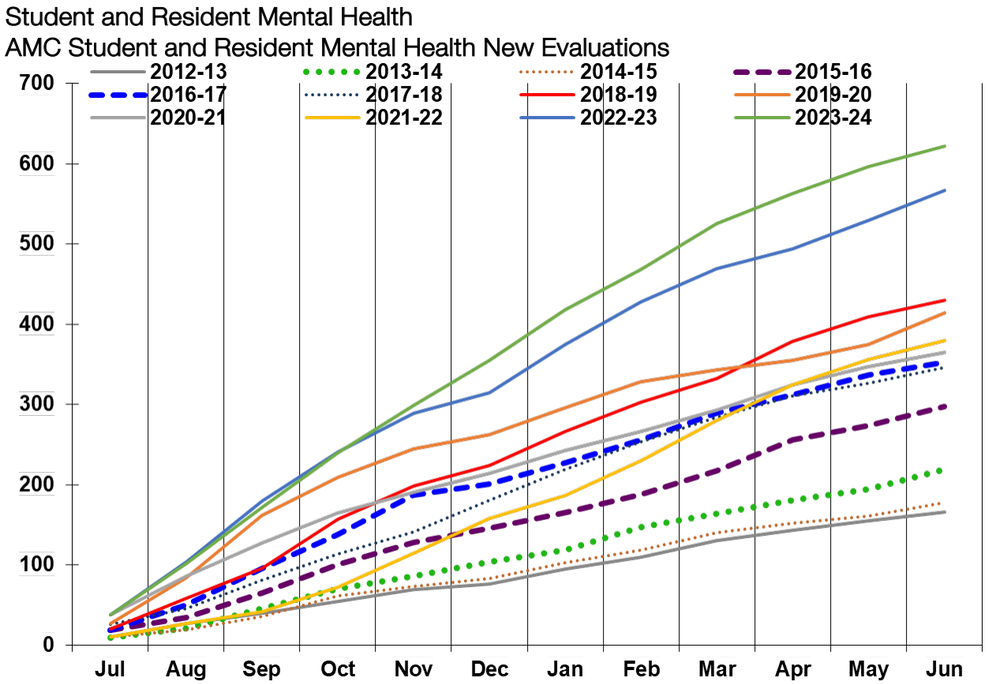
SRMH and FSMH collaborate with a network of community providers and refers to this network if preferred by the patient, if covered by certain insurance plans, and as needed due to provider expertise.

Students, residents/fellows, faculty and staff present with various concerns including but not limited to:

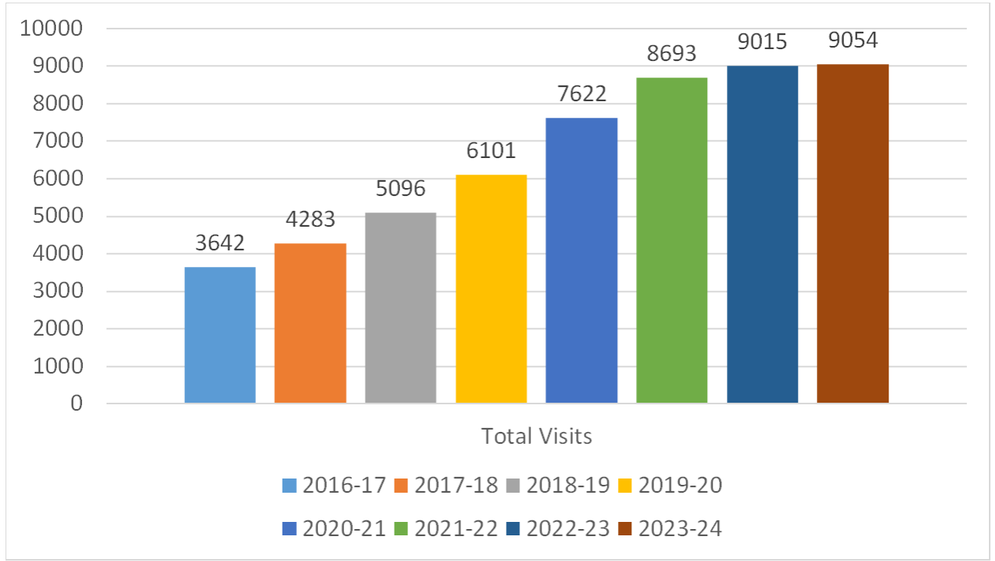
- acute stress management, test and performance anxiety, work stress, LGBTQIA+ issues, relationship difficulties, time management, ADHD, anxiety, depression, bipolar disorder, psychotic illnesses, substance use disorders, eating disorders, obsessive-compulsive disorder (OCD), post-traumatic stress disorder, personality disorders, grief, and domestic violence.

SRMH and FSMH operate using a hybrid model that offers both in-person and telehealth appointments.

Leadership:
Julie Wolfe, MD, Medical Director
Stephanie Lehto, PsyD, Clinical Director
Rachel Davis, MD, Vice Chair for Clinical Affairs, Department of Psychiatry



AMC Student and Resident Mental Health – Total Visits



SRMH offers several ongoing and brief groups including a skills-based ADHD group, a dialectical behavior therapy group, a perfectionism group, a support group for children of immigrants/international students, and a "children of narcissistic parents" support group. SRMH faculty collaborate with other faculty and departments on campus to provide education, outreach, and other events aimed at reducing stigma and providing education about mental health issues.

Student and Resident Mental Health, Anschutz Health Sciences Building

Services: Behavioral/mental health care, on-site phlebotomy
Hours: Mental health providers are available Monday - Wednesday 8 a.m.-8 p.m. and Thursday through Friday 8 a.m.-5 p.m.
Walk-in appointments available Monday – Friday 8 a.m.-4 p.m.
Appts.: Schedule appointments at 303-724-4716 or smhservice@ucdenver.edu
Location: Anschutz Health Sciences Building, 1890 N. Revere Court, 5th floor, suite 5040
Website: https://medschool.cuanschutz.edu/psychiatry/programs/student-resident-mental-health

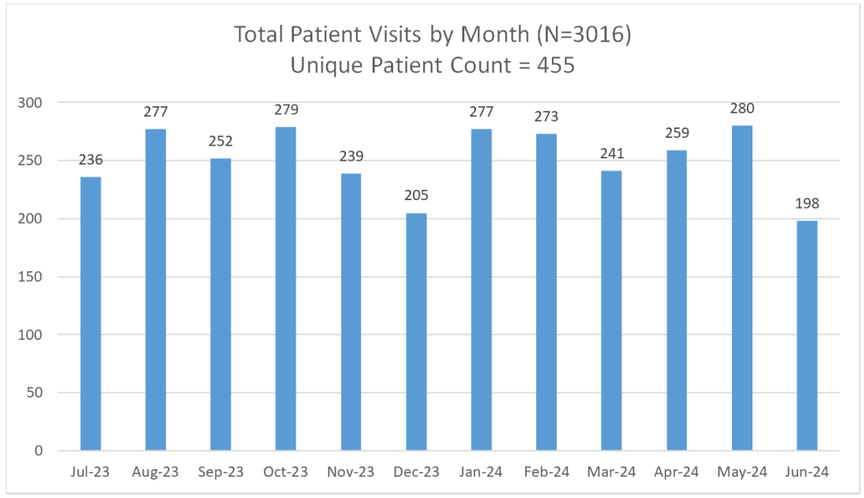
Current Providers:
Julie Wolfe, MD, Medical Director
Stephanie Lehto, PsyD, Clinical Director
Rachel Davis, MD, Vice Chair of Clinical Affairs, Department of Psychiatry
Juan DeJesus, MD, Associate Medical Director
David Brown, MD
Debbie Carter, MD
Christian Hopfer, MD (Addictions)
Matthew Pesko, MD
Jenn Quigley, PA
Felicia Greher, PhD
Noa Heiman, PhD
Laura Hockman, PsyD
Robert Rosenthal, PsyD
Charles Carter, LPC
Lexie Persinger, LCSW
Danielle Sukenik, LMFT
Rachel Winkler, LPC
Kelsey Dworkin, MS, RD
Wanda Jackson, Medical Assistant, Heath Care Tech III
Carol Saxinger, Medical Assistant

24/7 crisis coverage is provided by the Department of Psychiatry faculty, fellows, and resident call system. If emergent treatment is needed, students can be seen in the UCHealth Emergency Department.

Accomplishments:

- Continued outreach project with the medical school.
- Medical student mental health research: measuring mental health rating scales at matriculation and at the end of each academic year.
- Continued to serve as a rotation site for the University of Colorado general psychiatry residency program.
- Offered Monday-Friday walk-in availability to all students and residents.
- Provided specialty services in addictions, OCD and eating disorders.
- Supported several residency programs on the Anschutz Campus by providing opt-out appointments for incoming interns to establish mental health care and regular support groups.

Faculty and Staff Mental Health
AMC Faculty and Staff Mental Health – Total Visits



Faculty and Staff Mental Health, Anschutz Health Sciences Building

Services: Behavioral/mental health care, on-site phlebotomy
Hours: Mental health providers are available Monday - Wednesday 8 a.m.-7 p.m. and Thursday through Friday 8 a.m.-5 p.m.
Appts.: Schedule appointments at 303-724-4987
Location: Anschutz Health Sciences Building, 1890 N. Revere Court, 5th floor, suite 5240
Website: https://medschool.cuanschutz.edu/psychiatry/PatientCare/faculty-and-staff-mental-health

<u>Current Providers</u>
Julie Wolfe, MD, Medical Director
Stephanie Lehto, PsyD, Clinical Director
Brian Rothberg, MD
Christian Hopfer, MD (Addictions)
Fernand Lubuguin, PhD
Laura Rossmassler, LPC

Recent Projects and Accomplishments:

- Continued partnership with the Department of Orthopedics to provide mental health and wellness support by being a readily accessible resource through individual therapy appointments, consultation with leadership and presentations.
- Provide consultation to departments and programs on campus needing mental health support and resources
- Continued outreach on campus to promote clinic services

School of Medicine

UNIVERSITY OF COLORADO
ANSCHUTZ MEDICAL CAMPUS