Fulfilling CU’s Mission

From 2019–2021, the University of Colorado conducted a collaborative and inclusive strategic planning process to identity common themes that would help guide the university for the next five years and beyond. Priorities identified collectively by stakeholders involved throughout the process will advance CU’s Mission.

“The University of Colorado is a public research university with multiple campuses serving Colorado, the nation, and the world through leadership in high-quality education and professional training, public service, advancing research and knowledge, and state-of-the-art health care.”
**STRATEGIC PILLARS**

**PILLAR 1**

**Affordability & Student Success**

The University of Colorado is devoted to helping our students reach their full potential. The focus areas within this pillar encourage the intellectual, personal and professional development of our students.

**PILLAR 2**

**Discovery & Impact**

At the University of Colorado, we believe research and healthcare are keystones to advancing knowledge, inspiring innovation, fostering creativity and improving the quality of life for Coloradans.

**PILLAR 3**

**Diversity, Inclusion, Equity & Access**

The University of Colorado celebrates and recognizes the strength of diverse communities and perspectives. We are committed to creating an inclusive culture in pursuit of goals of excellence and meeting the needs of the state, nation and world.

**PILLAR 4**

**Fiscal Strength**

The University of Colorado focuses on improving policies, procedures and practices to ensure current and future sustainability, highlighting financial management and risk management.
Strategic Focus Area Metrics with Goals and Initiatives

Focus Area: Research/Scholarship/Creative Work
- Research Funding

Focus Area: Healthcare
- Patients Served by CU Anschutz Clinical Faculty
Discovery & Impact Panelists

- Martin Dunn, PhD., Interim Chief Research Officer & Dean and Professor, College of Engineering, Design and Computing University of Colorado Denver
- Jessi Smith, PhD., Associate Vice Chancellor for Research, Research Integrity Officer, and Professor of Psychology, University of Colorado Colorado Springs
- Terri Fiez, PhD., Vice Chancellor for Research & Innovation, University of Colorado Boulder
- Thomas Flaig, MD., Vice Chancellor for Research, University of Colorado Denver and Anschutz Medical Campus and Professor & Robert Rifkin Endowed Chair, Division of Medical Oncology, CU School of Medicine
- Michael Lightner, PhD., Vice President Academic Affairs, University of Colorado
CU Denver Sponsored Research Award Goal

- **2015-16**: $25
- **2016-17**: $26
- **2017-18**: $19
- **2018-19**: $23
- **2019-20**: $18
- **FY 2026 Goal**: $20

The graph shows the trend in sponsored research awards from 2015-2020, with a goal of $20 million for the fiscal year 2026.
CU Denver Sponsored Research Funding

- Federal Sponsor
- Non-Federal Sponsor

Year:
- 2011: 65% Federal, 35% Non-Federal
- 2012: 70% Federal, 30% Non-Federal
- 2013: 46% Federal, 54% Non-Federal
- 2014: 57% Federal, 43% Non-Federal
- 2015: 60% Federal, 40% Non-Federal
- 2016: 63% Federal, 37% Non-Federal
- 2017: 63% Federal, 37% Non-Federal
- 2018: 55% Federal, 45% Non-Federal
- 2019: 63% Federal, 37% Non-Federal
- 2020: 55% Federal, 45% Non-Federal
- 2021: 50% Federal, 50% Non-Federal
How We Will Get There

• Our responsibility and opportunity as a Hispanic Serving Institution (HSI) and Asian American Native American Pacific Islander Serving Institution (AANAPISI)
• Focus – five grand challenges, interdisciplinary teams, partnerships – to grow research funding, impact, and reputation.
• Invest in research leadership, performers, administration, and culture.
Jessi L. Smith, Ph.D.
Associate Vice Chancellor for Research
1. Increase funding by 10%/year
2. Grow Peer Reviewed/Juried Dissemination Outputs
3. Grow Ph.D. Graduation Rates

Three-year average already meets our 2026 goal

**Spotlight on Cybersecurity/NSI at UCCS**

- 121 Ph.D. and Master’s Graduate Students currently enrolled in Cyber-related programs
- 40% of FY21 Funding secured by our Cyber/Security Affiliated Researchers
Spotlight on National Security & Cyber at UCCS

Research - Creating world class knowledge, developing cutting edge techniques, and improving national security systems and tools

Partnerships - Disseminating knowledge and elevating our impact by partnering across the CU System, industry, military, and local and national supporters and stakeholders

Student success - Growing the next generation of the cybersecurity workforce through innovative education, hands-on research, internships, and scholarships
National Security Initiative & Cyber at UCCS - Looking Ahead

Kevin W. O'Neil
Cybersecurity Education and Research Center

United States Space Force University Partnership Program

Partnersing and housing NCC Space ISAC (Information Sharing and Analysis Center)

Participating in the Air Force Office of Scientific Research Western Hub

Growing Undergrad and Graduate Education and Building the Cyber Workforce

Leadership from our new Gallogly Chair Professor in Cybersecurity

Improving physical and research security infrastructure with CU System Support

Leveraging the Engineering Research Council Expertise and Connections

Collaborations among our CU Campuses
Research Funding Target 2026

Post ARRA Catchup

<table>
<thead>
<tr>
<th>Year</th>
<th>Funding</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>$359M</td>
<td>23%</td>
</tr>
<tr>
<td>2012</td>
<td>$380M</td>
<td>20%</td>
</tr>
<tr>
<td>2013</td>
<td>$351M</td>
<td>20%</td>
</tr>
<tr>
<td>2014</td>
<td>$412M</td>
<td>77%</td>
</tr>
<tr>
<td>2015</td>
<td>$425M</td>
<td>80%</td>
</tr>
<tr>
<td>2016</td>
<td>$436M</td>
<td>80%</td>
</tr>
<tr>
<td>2017</td>
<td>$507M</td>
<td>31%</td>
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<tr>
<td>2018</td>
<td>$511M</td>
<td>24%</td>
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<tr>
<td>2019</td>
<td>$630M</td>
<td>29%</td>
</tr>
<tr>
<td>2020</td>
<td>$613M</td>
<td>26%</td>
</tr>
<tr>
<td>2021</td>
<td>$679M</td>
<td>71%</td>
</tr>
<tr>
<td>2026</td>
<td>$800M</td>
<td>74%</td>
</tr>
</tbody>
</table>

* Beginning FY19 total includes CU Foundation gifts in support of research

Growth

CARES $45M
Federal Funding Source Breakdown FY21 → Strategic Opportunities

1. AB Nexus
   - $149M

2. National Security Initiatives
   - $111M
   - $79M
   - $58M
   - $35M

3. Target Fed Priorities
   - Quantum, AI, Materials, etc.
   - $29M
   - $15M

4. Reorg to Grow Industry & Foundation Funding
   - $6M
Exploration as Inspiration

National Solar Observatory
Daniel K. Inouye Solar Telescope
First Light December 2020

LASP EMM HOPE Mission to Mars

MOSAIC
Multidisciplinary drifting Observatory for the Study of Arctic Climate

Largest Polar Expedition in History
CU Boulder Research Strengths

Aerospace

Health, Wellness & Biological Sciences

BioFrontiers, ICS, IBG
Renee Crown Wellness

Fundamental Sciences

JILA, NIST

Environmental Sustainability

STROBE, CUbit
**Vision:**
Become a recognized leader in meeting the nation’s top Defense and Intelligence research and workforce needs

**Mission:**
- Bridge the gap between CU’s space research and DoD/IC missions
- Conduct multi-disciplinary & innovative research supporting national security
- Expand access to the University of Colorado’s world-class intellectual capital
- Develop an adaptive workforce for the national security enterprise
- Build the infrastructure to accelerate controlled and classified research
The Center for National Security Initiatives (NSI) addresses advanced capability needs of the Department of Defense and the Intelligence Community with leading-edge, high impact research.

**NSI Core Capabilities**
- Geospatial Data Analytics
- Autonomous Systems
- Space Domain Awareness
- Positioning, Navigation & Timing
- Hypersonics
- RF Engineering
- Remote Sensing
- Quantum Technologies
- Space Weather
- Small Sat Technologies
- Materials Science
- Human Performance
CU’s Growing Emphasis on National Security Research

$613M Total Research at CU

$43M Awarded in FY20

118 Defense Projects

NASA 26%
NSF 23%
Commerce 20%
NIH 12%
Defense 7%
DOE 5%
Ed. 3%
Other 2%

Air Force, DARPA, Navy, Other...

$12.8M
$8.7M
$5.1M
$7.5M
$3.8M
$2.4M
$1.2M
$0.8M
$0.6M
$0.3M
$0.2M

CU’s National Security Research at a Glance
CU Anschutz Research Funding

CU Anschutz Research Funding

Federal Sponsor  Non-Federal Sponsor  Research Gifts

*Gifts is only through March 2021

$825M

<table>
<thead>
<tr>
<th>Year</th>
<th>Federal Sponsor</th>
<th>Non-Federal Sponsor</th>
<th>Research Gifts</th>
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</thead>
<tbody>
<tr>
<td>2011</td>
<td>62%</td>
<td>38%</td>
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</tr>
<tr>
<td>2012</td>
<td>61%</td>
<td>39%</td>
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<td>2013</td>
<td>60%</td>
<td>40%</td>
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<tr>
<td>2014</td>
<td>59%</td>
<td>41%</td>
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<td>2015</td>
<td>60%</td>
<td>40%</td>
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<td>2016</td>
<td>56%</td>
<td>44%</td>
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<td>2017</td>
<td>53%</td>
<td>47%</td>
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<td>2018</td>
<td>46%</td>
<td>38%</td>
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<tr>
<td>2019</td>
<td>38%</td>
<td>31%</td>
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<td>2020</td>
<td>46%</td>
<td>31%</td>
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<td>2021</td>
<td>50%</td>
<td>40%</td>
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<tr>
<td>2026</td>
<td></td>
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<td>$825M</td>
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$- Million

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<tbody>
<tr>
<td>Value</td>
<td>38</td>
<td>39</td>
<td>40</td>
<td>41</td>
<td>40</td>
<td>44</td>
<td>47</td>
<td>38</td>
<td>31</td>
<td>33</td>
<td>40</td>
<td>50</td>
</tr>
</tbody>
</table>

Goal
The number of patients served by CU Anschutz Clinical Faculty

The number of patients served by CU Anschutz Clinical Faculty
Telehealth Interactions

<table>
<thead>
<tr>
<th>Year</th>
<th>Interactions</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY 2017</td>
<td>347</td>
</tr>
<tr>
<td>FY 2018</td>
<td>1,130</td>
</tr>
<tr>
<td>FY 2019</td>
<td>5,579</td>
</tr>
<tr>
<td>FY 2020</td>
<td>128,846</td>
</tr>
<tr>
<td>FY 2021</td>
<td>271,148</td>
</tr>
</tbody>
</table>
Generate knowledge that improves human well-being and spurs innovation and economic development
ABNEXUS

Spring 2021

- Collaborations
  - New - $50k
  - Existing - $125k
  - Co-sponsorship with CU Cancer Center

- Funding
  - Each campus provided an additional $200k in response to strong interest
  - 55% increase over planned budget

- Awarded $1.2M to 16 projects, representing 73 Departments or Institutes

- $2.0M in external funding awarded
- Additional $8.3M in external proposals submitted and awaiting review
- 6 expanded research partnerships
- 10 publications and presentations

University of Colorado Denver | Anschutz Medical Campus
Award $2.3M through bi-annual collaborative grant program (FY 2021 – 2023)

Increase collaborative proposals to external funders
- Identify relevant calls, support teaming, and provide proposal development support
- Increase proposal submissions by at least 20% per year
- Achieve 25% win rate by FY 2024

Enhance connectivity between campuses
- At least 2 collaborative events per year
- Research Partnership Specialists help individuals and groups
- Continue to identify potential "cosponsors" to leverage campus resources

Communicate research activities to grow AB Nexus community

Action Steps & Impact
Grow external Funding by $29M by 2024
Conclusion

- Goals established that will grow CU reputation
- Strategic focus areas that leverage strengths of campuses
- Collaboration: The whole is greater than the sum of the parts
Question & Answer

Question 1: What do you need to tell the Discovery and Impact story that advances each campus?

Question 2: What else can we share with you about our Discovery and Impact efforts?
**ABNEXUS Off to the Races…**

**Results to Date**
- Master Collaboration Agreement executed between campuses
  - Expedites joint proposal review by offices of grants and contracts
  - No F&A on first $25k of direct costs for intercampus proposals
- Awarded $675K in collaborative grants
- Increased externally awarded collaborative proposals over historical baseline values
  - $2M increase in FY 2020
  - On pace to realize $3M in FY 2021

**Proposal Analysis**
- 74 full proposals received
- 61% New Collaborations ($50k)
- Even participation across campuses

**Proposals by Campus and Award Track**

<table>
<thead>
<tr>
<th>New Collaborations ($50k)</th>
<th>Existing Collaborations ($125k)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMC</td>
<td>CUB</td>
</tr>
<tr>
<td>25</td>
<td>8</td>
</tr>
<tr>
<td>(61%)</td>
<td>(39%)</td>
</tr>
</tbody>
</table>

**Goal: Grow external Funding by $29M by 2024**
Systemwide focus on supporting national security

colorado.edu/researchinnovation/NSI
National Security Investment

Intercampus Cybersecurity Research Security & Compliance

- Support the development of CMMC and research security infrastructure to strengthen the research infrastructure in cybersecurity at Boulder, Anschutz, Denver, and UCCS.
- $350k/year for 3 years to hire 2 IT professionals to build security & CMMC platform.
- Form a System-wide Research Security working group to address the needs of all campuses.
- Staff will initially reside at CU Boulder (CUB have already invested in 4 staff) and work with each campus to adapt relevant research security & CMMC protocols and processes.

*CMMC (Cybersecurity maturity model certification) required for all future DOD grants
Anschutz Clinical Faculty

**Anschutz: Patients Served**

<table>
<thead>
<tr>
<th>Year</th>
<th>Grand Total</th>
<th>Average (3-Year-Rolling)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY 2016</td>
<td>475,013</td>
<td></td>
</tr>
<tr>
<td>FY 2017</td>
<td>518,275</td>
<td></td>
</tr>
<tr>
<td>FY 2018</td>
<td>561,124</td>
<td></td>
</tr>
<tr>
<td>FY 2019</td>
<td>593,949</td>
<td></td>
</tr>
<tr>
<td>FY 2020</td>
<td>591,990</td>
<td></td>
</tr>
<tr>
<td>FY 2021 YTD (thru March)</td>
<td>498,497</td>
<td></td>
</tr>
<tr>
<td>FY 2026 Goal</td>
<td>706,867</td>
<td></td>
</tr>
</tbody>
</table>

**Action Steps**

1. Expand services to additional populations (e.g., URM, FQHC)
2. Increase marketing efforts
3. Increase telehealth services and remote patient monitoring

The number of patients served by CU medical care providers per year.

Source: CU Anschutz Medical Campus; CU Medicine; Chancellor’s Office; Updated May 2021;