Venture Partners
UNIVERSITY OF COLORADO **BOULDER**

TRANSLATING INNOVATION

Surging Startups

FY 2023-24 ANNUAL REPORT

Supporting a **Groundbreaking** Innovation Pipeline

Venture Partners at CU Boulder in Fiscal Year 2023-24

36
STARTUPS LAUNCHED (35 FROM CU BOULDER AND 1 FROM CU DENVER)

$426M
CAPITAL RAISED BY PORTFOLIO COMPANIES

$32M
REVENUE FROM COMMERCIALIZATION TO CU BOULDER SINCE 2019

63
NATIONAL SCIENCE FOUNDATION I-CORPS™ TEAMS TRAINED

94
LICENSE AND OPTION AGREEMENTS

THE UNIVERSITY OF COLORADO BOULDER IS A DESTINATION OF CHOICE FOR INNOVATION, AND WE ARE FORTUNATE TO BE A PART OF THE WORLD-CLASS INNOVATION ECOSYSTEM ALONG COLORADO'S FRONT RANGE. Our community thrives through its collaborative "give first" spirit, talented and committed network of entrepreneurs, and deep expertise across many industries, including bioscience, sustainability, quantum and aerospace.

Venture Partners is the university's commercialization arm for CU Boulder, physical sciences at CU Denver and UCCS; our role is to support researchers, entrepreneurs, industry partners and investors who want to transform the world. Translating discoveries at the university into new solutions, businesses and partnerships is part of the University of Colorado's commitment to serving the public. This report celebrates many of Venture Partners' successes in FY 2023-24, as we turn breakthrough research into real-world impact.

CU Boulder had an incredible year spinning out 35 startups, each built upon a unique university innovation. This is the most ever for CU Boulder, surpassing the prior record of 20 companies in FY 2020-21. Before this year, only Stanford University had created more startups in a single year. Read more in our special coverage on page 5.

Each of the companies launched represents years of cutting-edge research and countless hours forging the startup's strategy. The latter is what sets Venture Partners apart, providing resources and programs to help aspiring founders explore and test product-market fit, find mentors and funding, and accelerate their ideas toward a high-growth company.

New in FY 2023-24, and a significant driver of new startups, is the Embark Deep Tech Startup Creator. While many of our faculty, graduate students and post-doctoral researchers have the entrepreneurship bug, starting a new company is not for everyone. Embark pairs promising university innovations with experienced community entrepreneurs to form new kinds of startup companies that go beyond the traditional academic-founder model.

2024 also included landmark success for the broader innovation ecosystem: a $160 million award from the U.S. National Science Foundation to form the Colorado-Wyoming Climate Resilience Engine, and a total of $127 million in federal and state funding for the Elevate Quantum tech hub. CU Boulder, and Venture Partners, played important roles in both and will be a source of new innovations and ventures in climate resilience and quantum.

Venture Partners has worked over many years to build the foundation for our present success. We are so proud of this team of scientists, engineers, entrepreneurs, attorneys and other professionals and their passion for bringing CU's innovations to the world.

We also want to share our gratitude for our partners: the inventors and collaborators from all corners of the university and our mentors, investors, companies and startup support organizations who together form this powerful ecosystem

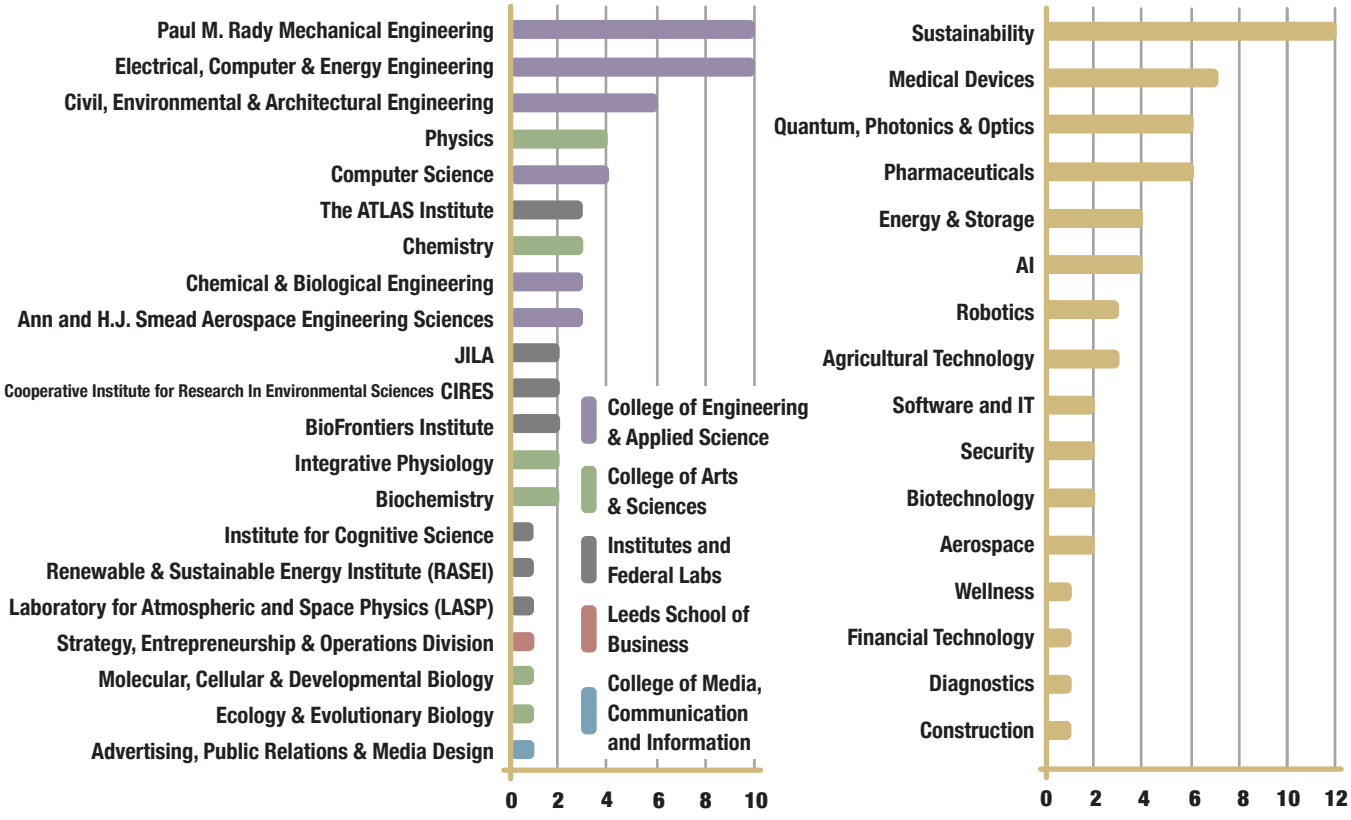
Enjoy this compilation of commercialization activity; we look forward to continuing to grow together in 2025.

Bryn Rees
Associate Vice Chancellor for Innovation and Partnerships

Massimo Ruzzene
Senior Vice Chancellor for Research and Innovation and Dean of the Institutes

(1) Chunmei Ban, left, and undergraduate student Kangmin Kim, right, talk about sodium-ion batteries in Ban's lab. (2) Winners of the Lab Venture Challenge Biosciences Showcase pose with their award checks. (3) Graduate student Wesley Brand of CU Boulder physics works on an optical atomic clock at the National Institute of Standards and Technology (NIST).

FYs 2022-24 CU Boulder Startups by Unit and Industry



$1.2B

FUNDING RAISED BY COMPANIES BUILT ON CU BOULDER INNOVATIONS FYs 2022-24

Financing Type	Number of Financings	Total Amount
Competition/ Accelerator	6	$793,000
Grant	52	$80,595,000
Pre-Seed	3	$4,300,000
Seed	11	$3,941,818
Series A	8	$108,300,000
Series B	3	$187,000,000
Series C/D	8	$472,400,000
PIPE	1	$65,000,000
Loan	1	$189,000,000
Bridge/Other	6	$59,500,000
Merger/Acquisition	2	$62,500,000
TOTAL	**101**	**$1,233,329,818**

9 UNICORNS

ALL-TIME NUMBER OF COMPANIES BUILT ON CU BOULDER INNOVATIONS VALUED OVER $1 BILLION

THOSE UNICORNS INCLUDE:

Ball
AyarLabs
INSCRIPTA
AMGEN
MYOKARDIA
Innovative therapies targeting heart muscle disease Myogen
Sirna Therapeutics
Solid Power
somalogic

Read more on page 5

Growing Results

We empower the people behind the headline-making breakthroughs. Our approach supports long-term commercial success. The proof is in our results.

FY 2023-24

144	94	35
INVENTIONS DISCLOSED	LICENSES & OPTIONS	STARTUPS LAUNCHED

FY 2022-23

162	68	10
INVENTIONS	LICENSES & OPTS.	STARTUPS

FY 2021-22

145	87	12
INVENTIONS	LICENSES & OPTS.	STARTUPS

FY 2020-21

130	65	20
INVENTIONS	LICENSES & OPTS.	STARTUPS

FY 2019-20

175	59	12
INVENTIONS	LICENSES & OPTS.	STARTUPS

FY 2018-19

144	46	6
INVENTIONS	LICENSES & OPTS.	STARTUPS

FY 2017-18

187	52	7
INVENTIONS	LICENSES & OPTS.	STARTUPS

FY 2016-17

124	49	9
INVENTIONS	LICENSES & OPTS.	STARTUPS

FYs 2012-2016 (AVERAGE)

109	33	5
INVENTIONS	LICENSES & OPTS.	STARTUPS

Turning Science into Startups

Ask Dana Anderson, professor of physics at CU Boulder and founder of Infleqtion, a quantum-technology startup, what role the university played in getting his company off the ground, and he doesn't mince words.

"They didn't get in my way," said Anderson, who launched Infleqtion under the name ColdQuanta in 2007.

Unlike many universities, said Anderson, CU Boulder views "getting technology out the door" as part of its mission. So while Venture Partners did not yet exist and the university could not offer Anderson the wealth of resources it now makes available to aspiring founders, the university smoothed out his path.

The Technology Transfer Office (TTO), as it was then known, helped Anderson draw up a conflict management plan. When he needed lab space to work on his quantum devices—Infleqtion leverages Anderson's research into the quantum properties of atoms to develop everything from atomic clocks to quantum sensors and computers—CU worked out a facilities use agreement with him. And when the company was in danger of going under, the university gave him the time he needed to pull it back from the brink.

Infleqtion's technology can now be found in orbit aboard the International Space Station and in labs around the world. The company employs more than 200 people, has raised nearly $200 million and is preparing to sell atomic clocks and quantum sensors at a commercial scale—all because CU was willing to invest in a scientist who, as he admitted, was "not a business guy."

"I'm very, very grateful for that," Anderson said.

He is not alone. According to the latest report from the Association of University Technology Managers, which assessed startup creation by universities in 2021, CU ranked fifth nationwide, ahead of Stanford and MIT. CU Boulder produced 20 startups that year and has spun out more than 220 companies to date. The pace of startup formation is surging, having nearly doubled in recent years.

That increase is no accident. When Anderson formed his company, the TTO was focused on filing and licensing patents. While protecting intellectual property (IP) remains crucial to launching companies based on scientific and technological innovations, CU Boulder now takes a more holistic approach to helping researchers successfully lead such "deep-tech" startups.

"Venture Partners spends the majority of its resources and energy developing and growing innovators: teaching folks entrepreneurial skill sets, partnering with investors, running startup accelerators and other programs," said Bryn Rees, associate vice chancellor for innovation and partnerships.

The principal goal is to translate discoveries by CU researchers into products and services that benefit society

Johnny Hergert, left, and Camila Uzcategui, right, of Vitro3D.

while contributing to local, state and national economies. But maintaining a strong startup ecosystem confers other advantages as well, like expanding research funding opportunities and attracting innovative faculty and students.

Entrepreneur Academy

Venture Partners, which launched in 2019, has developed a suite of programs designed to shepherd researchers through the process of founding a startup, from licensing patents and identifying markets to courting investors. Aspiring founders are free to pick and choose among them; but many, like Camila Uzcategui and Johnny Hergert, alumni of the CU Boulder College of Engineering and Applied Science and co-founders of the biomedical startup Vitro3D, follow the entire sequence.

As soon as they realized the rapid 3D-printing technology they developed as PhD students in the laboratory of materials scientist Robert McLeod had potential commercial applications, Uzcategui and Hergert disclosed their invention to the university. By 2020 the two were in discussions with Venture Partners, which helped them secure exclusive licensing for a variety of patents from the McLeod lab.

A slow, difficult or expensive licensing process can stymie a budding entrepreneur and make it harder to attract funding...

Continued on page 10

Surging Startups

Innovation at CU Boulder reached an unprecedented milestone in fiscal year 2023-24 by launching 35 startup companies based on university innovations. This achievement shattered CU Boulder's previous record of 20 startups in FY 2021 and placed it among the most prolific single-campus institutions in the country.

As the commercialization arm for CU Boulder—as well as UCCS and CU Denver's physical sciences, which launched one startup in the same year—Venture Partners is at the heart of transforming new inventions and discoveries into real-world impact by empowering university innovators to build new companies and industry partnerships.

This leap from launching just four to six startups annually a decade ago is a testament to years of strategy and investment in entrepreneurship. Considering CU's location outside traditional venture capital hubs like Silicon Valley and Boston, its rise as a startup powerhouse showcases a unique ecosystem driving extraordinary results.

Journey to the Top

In data collected and published by AUTM (the leading association for university "technology transfer," which tracks the number of startups launched by universities to commercialize university-owned intellectual property) from FYs 1990-2023, the standing leaders of startups launched in a year by a single campus are Stanford with 38 startups in 2022 and MIT with 32 startups most recently in 2020. Full university data from FY 2024 is expected from AUTM in late 2025.

"Universities spinning out similar numbers of startups have significantly larger research budgets feeding their innovation pipeline," says Bryn Rees, associate vice chancellor for innovation and partnerships, "But this is actually where CU Boulder really shines, when we look at our efficiency: the number of startups we're launching per dollar of funding."

"Among institutions with the highest output of startups, Columbia University tops that indicator with 3.5 startups launched in FY 2018 per $100 million in research funding. With 34 startups out of CU Boulder in FY 2024, that's 4.7 startups per $100 million of funding. That is a top result among leading universities and a real credit to our approach," says Rees.

Strategic Pillars of Success

Through experimentation and entrepreneurial thinking, the Venture Partners team has redefined how academic research translates into impactful businesses. "Our journey reflects years of careful planning, experimentation and a relentless commitment to supporting our startup founders," says Rees. "We've embraced Boulder's collaborative ethos and created a model that aligns with our community's values while delivering national impact."

Founder-First Philosophy

Venture Partners prioritizes the experience and development of its founders—primarily faculty, postdoctoral researchers and graduate students. Innovations like Licensing with EASE® simplify the startup process with pre-negotiated intellectual property licensing terms, reducing administrative friction and allowing founders to focus on building their ventures. This philosophy extends to providing tailored mentorship and long-term support, creating an environment where new founders thrive.

Holistic Support for Founders

Recognizing the distinct challenges academic founders face, Venture Partners offers a comprehensive suite of resources from idea to launch. From entrepreneurial training to funding, academic founders receive support tailored to their unique needs, even as the fundamentals of entrepreneurship are constant. For example, Venture Partners' Center for Translational Research (CTR) helps bridge the "valley of death" between early-stage research and commercialization with comprehensive support for researchers applying for grants that cater to startups.

Integration and Collaboration

To ensure a seamless startup pipeline, Venture Partners integrates resources across the university and community. In

Startup creation by single-university campuses in fiscal years 1990-2023

Startups Launched	Campus	Fiscal Year	Startups per $100 million in same-year research funding
38	Stanford	2022	2.1
32	Stanford	2016	3.2
	MIT	2018	1.8
	MIT	2020	1.7
31	University of Michigan	2020	1.8
29	MIT	2017	1.7
	Columbia University	2018	3.5
28	MIT	2015	3.0
	Stanford	2015	1.7
	Stanford	2018	1.7

*University data for fiscal year 2023-2024 is expected from AUTM late in 2025.

federal partnership, the National Science Foundation I-Corps™ Hub: West Region programming at Venture Partners provides startup training to researchers in and outside of the university, while the Lab Venture Challenge (LVC) awards over $1.25 million in proof-of-concept grants annually in partnership with the Colorado Office of Economic Development and International Trade (OEDIT).

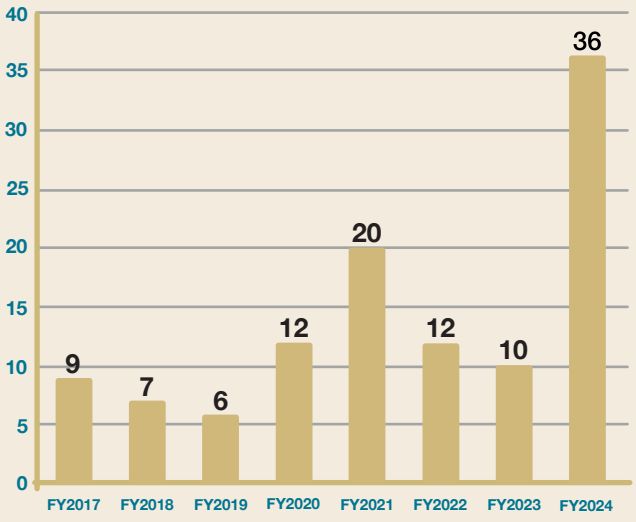
Experimentation and Adaptation

Venture Partners' willingness to experiment and learn from failure has been critical to its success. "Have you heard of the 'i-Teams' program?" Rees jokes. "Of course not! It was a failure. We wanted to match lab innovations with business students. It was a fun experience and great learning for the students, but we didn't start any new companies." However, it provided insights that led to the creation of the highly successful Embark Deep Tech Startup Creator, which launched 10 of the 35 companies in 2024 by matching experienced entrepreneurs with cutting-edge CU Boulder innovations. New partnerships through the New Venture Launch class at the CU Boulder Leeds School of Business are also proving to be a successful approach to the original idea. Venture Partners has also adapted lessons learned from Columbia University's leveraging of state economic development grants, MIT's mentorship strategy and the University of Utah's end-to-end solution for startups to fill gaps in the local ecosystem to inspire similar initiatives that suit Colorado's ecosystem.

Startups Accelerating Toward Impact

The 35 startups launched in FY 2024 represent a diverse array of industries, from clean energy to biotech. Among them is Mana Battery, founded on research from Chunmei Ban's laboratory (CU Boulder Paul M. Rady Mechanical Engineering), winner of a 2023 LVC grant. Mana Battery is developing sodium-based batteries as a safer, more sustainable alternative to lithium-ion technology, addressing critical challenges in energy storage. Over the past decade, CU Boulder has spun out several battery-focused startups, collectively creating hundreds of jobs and attracting over $1 billion in investment to Colorado. These startups exemplify CU Boulder's ability to address pressing global challenges while driving economic growth in the state.

Startups Launched Through Venture Partners FYs 2017-24



CU is a growing international leader in both quantum and healthcare research and technologies, both found in the new startup Flari Tech. The company is developing technology created by Jun Ye (CU Boulder Physics, JILA, NIST) and Qizhong Liang (JILA) to detect diseases via the breath, all built upon the Nobel Prize-winning frequency comb developed at CU Boulder and NIST. The company was founded by Eva Yao in the first cohort of Embark.

Another shooting star is Mesa Quantum. Venture Partners helped match a motivated grad student, Sristy Agrawal (NIST, CU Boulder Mathematical Physics), with a novel atomic clock invented in Svenja Knappe's lab (CU Boulder Paul M. Rady Mechanical Engineering). Mesa Quantum was first conceived in the I-Corps Hub West programming offered at Venture Partners. Mesa Quantum is ushering in the next generation of chip-scale atomic clocks and quantum sensors, powering the industries of tomorrow in fields like autonomous vehicles and advanced deep-water oil exploration.

CU Boulder's success is bolstered by recent ecosystem wins like the NSF Colorado-Wyoming Climate Resilience Engine and the Elevate Quantum Tech Hub designations. These initiatives enhance CU Boulder's capacity to attract top talent, secure funding and support high-impact startups.

"These programs bring together the resources and expertise we need to address global challenges," says Rees. "They're amplifying our impact and positioning CU as a leader in innovation."

Looking Ahead

As Venture Partners celebrates its record-breaking year, the team is focused on the future. Plans include expanding incubator spaces, enhancing funding opportunities and increasing diversity within the entrepreneurial mentor network. The university is also working to refine programs like Embark and explore new collaborations with other institutions.

"Our goal is to create ventures with lasting impact," Rees emphasizes. "We measure success not only by the number of companies we create but by the societal and economic benefits they deliver."

CU Boulder's dramatic rise as a leader in university-driven entrepreneurship has illuminated its role in the broader U.S. innovation ecosystem. By prioritizing founders, embracing Colorado's unique strengths and continually evolving its approach, Venture Partners offers a model for other institutions seeking to foster innovation.

More: colorado.edu/venturepartners/newsroom

Developing Real-World Readiness

Our programs go beyond the traditional technology transfer model to support researchers-turned-founders and innovative entrepreneurs in scaling successful, sustainable businesses.

New Approaches to Launching Companies

EMBARK Deep Tech Startup Creator

ASCENT deep tech accelerator

Embark Deep Tech Startup Creator

With myriad CU Boulder technologies ready to make a real-world impact, Embark connects them to motivated entrepreneurs ready to launch new companies. The program provides intellectual property rights, salary support, grant funds and investor introductions to selected entrepreneurs.

KEY FY 2023-24 RESULTS

Entrepreneurs reviewed 50 technologies and pitched 30 startup ideas at the semifinal competition for Embark 2024 and 10 joined the second cohort of Embark Entrepreneurs in Residence. The cohort will work through a six-month program including launching and accelerating their companies, customer discovery and competing for additional funding.

More: colorado.edu/venturepartners/embark

Ascent Deep Tech Accelerator

Ascent is an accelerator for research teams building deep tech startups coming out of the CU campuses in Boulder, Colorado Springs and Denver. Deep tech startups face unique challenges because of their disruptive nature, intensive research and development, and significant capital requirements. Leveraging ecosystem experts, a robust mentor network and Venture Partners staff, early-stage companies accelerate their viability and traction over four months leading up to a final investor showcase.

KEY FY 2023-24 RESULTS

Ascent has graduated 35 companies since 2021 that have raised $15 million in nondilutive funding (including LVC; OEDIT ESCR; SBIR from DOE, NASA, NSF, SpaceWERX, Army etc.) and over $21 million in seed funding from prominent venture capitalists. Ascent companies have also advanced to programs such as NREL West Gate, Creative Destruction Lab, Techstars and Activate.

More: colorado.edu/venturepartners/ascent

Buff Venture Fund

Launched in 2022, the Buff Venture Fund is a private venture capital fund that invests in startup companies connected to CU Boulder. CU Boulder has a formal partnership with Buff Gold Ventures to grow startup companies and identify investment opportunities collaboratively.

BUFF GOLD VENTURES

Current investments: Tynt Technologies, Vitro3D, LongPath Technologies, VitriVax, Think BioSciences, Polaris Electro-Optics, SinusLogic, Mana Battery, BoCo Bio, Vycarb, CodeBreaker

More: colorado.edu/venturepartners/buff-venture

"Our investments showcase disruptive improvements in climate tech, advanced manufacturing and chips, and drug discovery or delivery. Through our investments and the 100+ companies we've advised, we are proud to partner with Venture Partners to build a vibrant, supportive ecosystem for CU and the next generation of inventors and founders."

—**Sally Hatcher and Mark Lupa,** Co-Founders and General Partners of Buff Gold Ventures

Empowering Innovators

A $15 million National Science Foundation (NSF) award cultivates innovations and ventures at research universities in the western U.S. through the I-Corps™ Hub: West Region. CU Boulder's leadership has brought nationally recognized instructors and business mentors and new entrepreneurial opportunities into the state of Colorado.

More: colorado.edu/venturepartners/i-corps

Starting Blocks Customer Discovery Workshop

Offered by Venture Partners, this is the shortest, "introductory" version of the I-Corps methodology, which helps researchers, inventors and problem solvers from any research or community institution build a customer discovery toolkit and learn to talk to industry and business funders about their innovations.

KEY FY 2023-24 RESULTS

63 teams from multiple institutions were trained through the Starting Blocks programming provided by Venture Partners.

Research-to-Market (R2M) Customer Discovery Program

Offered by Venture Partners, this four-week I-Corps program walks researchers, inventors and problem solvers from any research or community institution through the customer discovery process and pushes them to think about how their innovations can be adopted in markets in consultation with experienced mentors and advisors.

KEY FY 2023-24 RESULTS

32 teams from multiple institutions were trained by the R2M programming provided by Venture Partners.

National I-Corps Teams Program

Teams accepted into the NSF I-Corps National Teams training program can receive up to $50,000 to support their participation, including stipends and expenses for virtual and in-person customer discovery, as they engage with prospective customers, partners and others over seven weeks to evaluate the commercial potential of their technologies.

KEY FY 2023-24 RESULTS

3 CU Boulder teams and 1 CU Denver team were accepted into NSF National I-Corps, each winning $50,000 to support commercialization of their breakthrough technologies.

Moving at Market Speed

Lab Venture Challenge

Through the Lab Venture Challenge (LVC), top innovations from University of Colorado Boulder, Denver and Colorado Springs compete for grants of up to $125,000. LVC supports projects that address a commercial need, have a clear path to a compelling market and have strong scientific support.

IN PARTNERSHIP WITH

COLORADO
Office of Economic Development & International Trade

KEY FY 2023-24 RESULTS

LVC awarded ten $125,000 grants and two $132,505 grants to promising CU Boulder, Denver and UCCS startups—a total of $1,515,000 in grant funding. To date, LVC winners have received over $350 million in follow-on funding.

More: colorado.edu/venturepartners/lvc

Destination Startup

Destination Startup® brings groundbreaking researchers together with investors from throughout North America to catalyze real-world impact. This showcase demonstrates a powerful way to advance innovative research and translate it into impactful business ventures.

IN PARTNERSHIP WITH

KEY FY 2023-24 RESULTS

Presenting teams have successfully raised over $1.2 billion in capital, including $872 million in venture funding and $362 million in grant and other non-dilutive funding.

More: colorado.edu/venturepartners/ds

World-Changing Companies

Venture Partners has launched more than 220 startups based on university innovations. Here are just a few.

More: colorado.edu/venturepartners/startup-portfolio

Startup Exits in FY 2023-24

LiteWave Technologies

Ball Aerospace

OnKure Therapeutics

darwin biosciences

CU PI and CO-FOUNDERS: Sara Sawyer (PI) and Nicholas Meyerson (CU Boulder BioFrontiers Institute and Molecular, Cellular & Developmental Biology)

FOCUS: Saliva-based diagnostics for early infection detection

RECENTLY: Awarded multiple contracts from the U.S. Defense Threat Reduction Agency (DTRA)

LONGPATH

CU PI: Greg Rieker (CU Boulder Paul M. Rady Mechanical Engineering)

FOCUS: Cutting-edge laser-based technology for methane emissions detection

CO-FOUNDERS: Greg Rieker, Caroline Alden, Robert Wright, Sean Coburn

RECENTLY: $162M DOE loan and installations in CO, NM and TX

meati

Evolved from IP from Se-Hee Lee (CU Boulder Paul M. Rady Mechanical Engineering) and Z. Jason Ren (fmr. CU Boulder Environmental Engineering Program)

CU CO-FOUNDERS: Tyler Huggins and Justin Whiteley (alumni, CU Boulder College of Engineering and Applied Science)

FOCUS: Nutrient-rich mycelium-based fermentation to create meat alternatives

RECENTLY: Distributed nationwide including Target, Whole Foods, Kroger and Albertsons

PAGE

CU PI: Greg Whiting (CU Boulder Paul M. Rady Mechanical Engineering)

FOCUS: Water and soil monitoring for instant and continuous data capture

CO-FOUNDERS: Elliot Strand (alum, CU Boulder Materials Science & Engineering Program) and Payton Goodrich

RECENTLY: Grants from the NSF CO-WY Climate Resilience Engine and Colorado Office of Economic Development and International Trade (OEDIT)

PROMETHEUS MATERIALS

CU CO-PIs: Wil Srubar, Sherri Cook, Mija Hubler (all CU Boulder Civil, Environmental and Architectural Engineering) and Jeff Cameron (CU Boulder Biochemistry)

FOCUS: A zero-carbon concrete alternative

CO-FOUNDERS: Wil Srubar, Sherri Cook, Jeff Cameron (deceased), Mija Hubler and Loren Burnett

RECENTLY: Role in a $10M U.S. Department of Energy grant

reviewer zero.ai

CU PI and FOUNDER: Daniel Acuña (CU Boulder Computer Science)

FOCUS: An artificial intelligence technology suite to ensure research integrity in scientific publications

RECENTLY: Grant recipient of the Lab Venture Challenge (LVC)

Think Bioscience

CU PI: Jerome Fox (CU Boulder Chemical and Biological Engineering)

FOCUS: Microbial systems to discover, build, and evolve small-molecule drugs

CO-FOUNDERS: Jerome Fox and Philip Jeng

RECENTLY: Closed $26M seed round investment

tynt

CU PI: Michael D. McGehee (CU Boulder Chemical and Biological Engineering)

FOCUS: Climate-friendly windows to control both visible light and solar heat gain.

CO-FOUNDERS: Michael D. McGehee, Tyler Hernandez, Ameen Saafir and Michael Strand

RECENTLY: Raised $16M to date

VITRIVAX

CU CO-PIs and CO-FOUNDERS: Ted Randolph (CU Boulder Chemical and Biological Engineering, Center for Pharmaceutical Biotechnology) and Robert Garcea (CU Boulder MCDB)

FOCUS: A novel stabilization and delivery platform for vaccines and therapeutics

RECENTLY: $3.6M grant from the Bill & Melinda Gates Foundation for polio vaccine development

Continued from page 4

But Venture Partners' Licensing with EASE® program offers quick pre-negotiated terms that are attractive to founders and investors alike.

"With these licensing terms, you can go out and talk to venture capitalists and raise money," Uzcategui said.

Uzcategui and Hergert quickly enrolled in Venture Partners programs—funded in part by NSF—such as Starting Blocks and Research-to-Market, which help founders identify markets for their inventions. They originally envisioned using their 3D-printing technology to aid drug discovery, but after speaking with potential customers, they shifted to producing dental aligners instead.

The opportunities kept coming. The pair enrolled in the New Venture Launch class, which offers mentoring and pitch coaching from entrepreneurs and venture capitalists; won $125,000 in the Lab Venture Challenge (LVC) pitch competition and another $30,000 in the New Venture Challenge (NVC); and participated in the Ascent Deep Tech Accelerator.

"We kind of never stopped," Uzcategui said.

Vitro3D then attracted $1.3 million in seed financing with Buff Gold Ventures, a venture capital fund co-created by Venture Partners that invests exclusively in CU Boulder startups.

Network Effects

The CU Boulder ecosystem played a similarly important role for Nick Meyerson, cofounder and CEO of the diagnostic testing startup Darwin Biosciences.

As a postdoctoral researcher in the laboratory of CU Boulder virologist Sara Sawyer, Meyerson discovered a novel means of analyzing a person's saliva to determine whether they were carrying an infectious disease even before they developed symptoms. The Department of Defense (DoD), which funded the research, suggested he form a company to develop a handheld diagnostic device. Meyerson went to Rees and Venture Partners for advice. After submitting a patent application, Meyerson began taking Venture Partner workshops and entering pitch competitions, and in March 2020, Darwin Biosciences was born.

Because of his existing relationship with the DoD—and also because he used his technology to develop one of the nation's first rapid saliva-based COVID-19 tests—Meyerson didn't need accelerator support or help figuring out who his potential customers were.

But CU Boulder was still there for him. When the pandemic hit, the university gave Meyerson lab space to develop his COVID test. It also introduced him to Boulder's rich network of experienced entrepreneurs and investors: Meyerson met his first CEO at LVC and his current director of operations through Venture Partners.

"Most of the heavy hitters that I know in the area are because of connections that I've made through [Venture Partners]," said Meyerson.

Nick Meyerson of Darwin Biosciences

Darwin Biosciences is now on the verge of entering the commercial market. The company is developing a phase-two prototype of its testing device and pursuing FDA approval with the goal of developing a diagnostic platform that can be used for everything from at-home infectious disease testing to early cancer screening.

Next Steps

The purpose of all these support structures is to help as many CU innovators as possible unlock the social and economic benefits of their discoveries. And as Vitro3D and Darwin Biosciences illustrate, the system is working.

But not every researcher wants to found their own company, which helps explain why many of the approximately 150 promising inventions produced at CU Boulder every year never make it to market.

Venture Partners therefore established the Embark Deep Tech Startup Creator, funded by CU Boulder and the Colorado Office of Economic Development and International Trade (OEDIT), which gives outside entrepreneurs the opportunity to form startups around university-owned technology. Ten startups launched in the first cohort, and each company enjoys access to CU's startup programs and up to $100,000 for technology development.

"This is something that other universities really have not done," said Rees, who believes that Embark will fuel more growth for CU as a startup hub. "We're trying to craft a new model."**—By Alexander Gelfand for the Coloradan Alumni Magazine**

More: colorado.edu/venturepartners/newsroom

Groundbreaking Discoveries

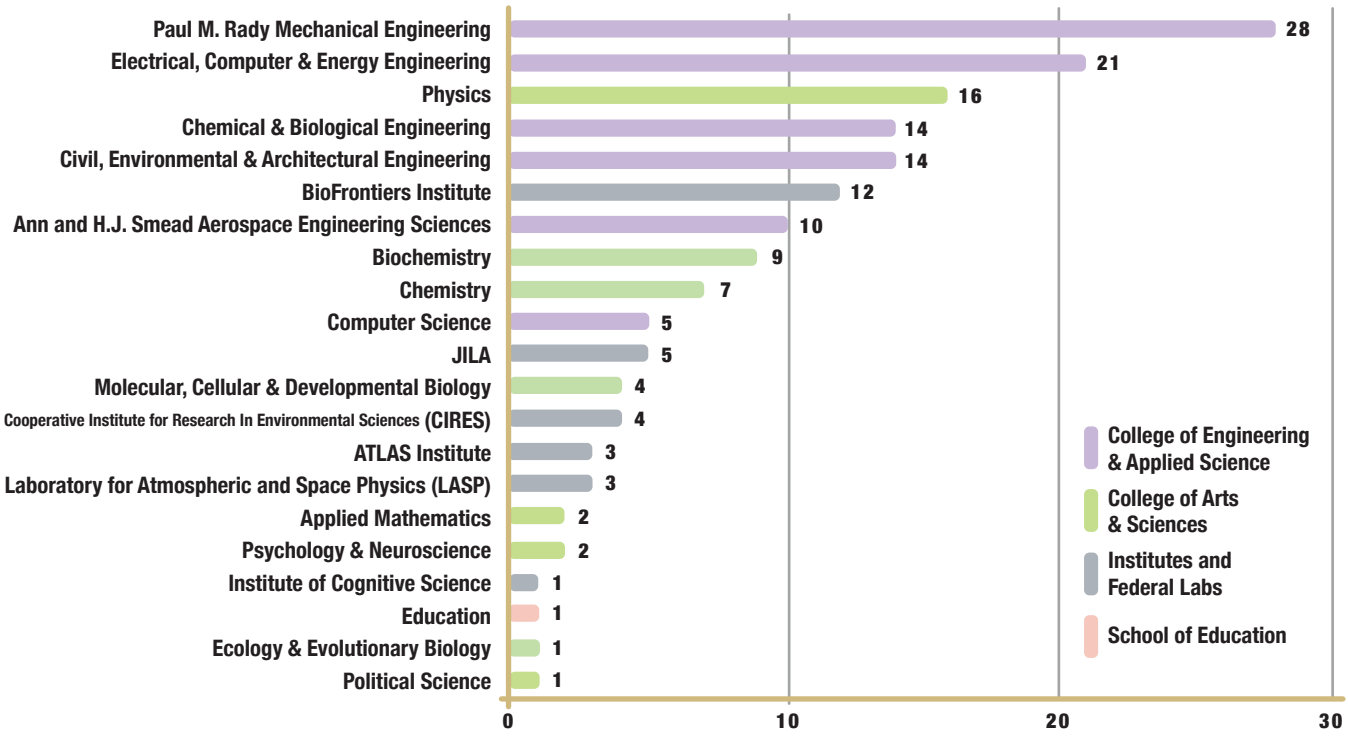
Venture Partners has signed over 648 license and option agreements with a portfolio of over 1,484 inventions.

Venture Partners at CU Boulder in FY 2023-24

45 U.S. PATENTS WERE ISSUED FOR CU INVENTIONS THROUGH VENTURE PARTNERS IN FY 2023-24 AND...

22 OF THOSE PATENTS HAVE ALREADY BEEN PARTNERED (49%).

FY 2023-24 Innovation Disclosures by CU Boulder Unit



Beyond CU startups, companies licensing CU innovations through Venture Partners include:

Leading Innovation

Distinguished Professor Zoya Popovic is among 162 inventors named 2023 fellows of the National Academy of Inventors (NAI). Election as a fellow in the academy is the highest professional distinction awarded solely to inventors.

Zoya Popovic

Popovic, a leading researcher in high-efficiency, low-noise microwave and RF engineering, was elected for her "prolific spirit of innovation in creating or facilitating outstanding inventions that have made a tangible impact on the quality of life, economic development and welfare of society."

"Our patents and patent applications cover a broad range of topics such as medical sensors, quantum measurements, communication electronics, radar electronics and waste-to-fuel conversion," said Popovic.

One of her recent patents measures internal body temperature through a thermometer that is non-invasive and wearable. Other patents Popovic has developed harness ambient radio frequencies to charge batteries or power vehicles wirelessly.

"One of the reasons for such a diverse set of applications is that our research is in applied electromagnetics, which is one of the foundations of electrical engineering," said Popovic. "Understanding true fundamental electromagnetics is a very powerful and practical tool."

Popovic, Distinguished Professor and Lockheed Martin Endowed Chair in RF Engineering, is a recipient of the 2001 Hewlett-Packard and American Society for Engineering Education Terman Medal for combined teaching and research excellence. She was the first woman to receive the International Radio Science Union (URSI) Issac Koga Gold Medal and also a member of the National Academy of Engineering.

"My goal is to transfer my knowledge to all my students enabling them to benefit from our excellent engineering programs at CU Boulder and continue to contribute as experts throughout their careers," she said.

The NAI Fellow program has 1,898 fellow worldwide representing more than 300 universities and governmental and nonprofit research institutes. **—By Charles Ferrer**

More: colorado.edu/venturepartners/newsroom

CU Appointments to the NAI

Senior Members

Corrie Detweiler; CU Boulder Biofrontiers Institute and Molecular, Cellular and Developmental Biology (MCDB); Co-Founder of Bactria Pharmaceuticals

Jerome Fox; CU Boulder Chemical and Biological Engineering; Founder and CEO of Think Bioscience

Mark Rentschler; CU Boulder Advanced Medical Technologies Laboratory; Co-Founding CEO of Aspero Medical

Greg Rieker; Precision Laser Diagnostics Laboratory for Energy and the Environment; CUbit Quantum Initiative; Q-SEnSE Institute; Co-Founding CTO of LongPath Technologies

Tin Tin Su; CU Boulder MCDB; CU Cancer Center Molecular and Cellular Oncology (MCO) Program; Co-Founder of SuviCa

Jianliang Xiao; CU Boulder Paul M. Rady Mechanical Engineering

Wei Zhang; Chair of CU Boulder Chemistry; Co-Founder of Mallinda

NAI Fellows

Kristi Anseth; CU Boulder Biofrontiers Institute

Christopher Bowman; CU Boulder Material Science and Engineering Program; Co-Director of the NSF I/UCRC for Fundamentals and Applications and Photopolymerizations

Jason Burdick; CU Boulder Chemical and Biological Engineering

John Carpenter; Co-Founder and Co-Director of CU Center for Pharmaceutical Biotechnology

Marvin Caruthers; CU Boulder Chemistry and Biochemistry; Co-Founder of Amgen, Array BioPharma, miRagen Therapeutics, SynGenis and ProGenis Pharmaceuticals

Terri Fiez; Vice Chancellor for Research and Innovation (fmr.) at CU Boulder; Co-Founder Azuray Technologies

Larry Gold; CU Boulder MCDB; Founder of SomaLogic and NeXstar Pharmaceuticals; Co-Founder of Synergen

John Hall; CU Boulder NIST and JILA; Nobel Prize in Physics (2005)

Robert Hodges; CU Anschutz Medical Center (emeritus)

Henry Kapteyn; CU Boulder JILA; Co-Founder and CEO of KMLAbs

Leslie Leinwand; Chief Scientific Officer of CU Boulder Biofrontiers Institute; Co-Founder of Myogen; Co-Founder of Hiberna and MyoKardia

Seth Marder; CU Boulder Chemical and Biological Engineering; Director of the Renewable and Sustainability Energy Institute (RASEI)

Morton Mower; Distinguished Professor of Medicine; co-inventor of the automatic implantable cardioverter defibrillator (with over 80 other patents to his name)

Margaret Murnane; CU Boulder JILA; Co-Founder and CEO of KMLAbs

Richard Noble; Co-Director of CU Boulder Membrane and Applied Science Center

Zoya Popovic; Distinguished Professor; Lockheed Martin Endowed Chair in RF Engineering

Huntington Potter; Director of CU Anschutz Medical Center Alzheimer's Disease Program, Linda Crnic Institute for Down Syndrome and Alzheimer's and Cognition Center

Theodore Randolph; Co-Director of CU Anschutz Medical Center Center for Pharmaceutical Biotechnology

Alan Weimer; CU Boulder College of Engineering and Applied Science; Co-Founder of ALD NanoSolutions and Copernican Energy

David J. Wineland; CU Boulder Physics

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Our team works closely with innovators to commercialize cutting-edge science. Together, we shape discoveries, identify opportunities and determine how to develop the final product, service or solution to appeal to target markets.

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