



ASSOCIATION OF
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University of Colorado
Boulder



CECE

INNOVATION AND ECONOMIC PROSPERITY UNIVERSITIES
AWARDS PROGRAM

CASE
STUDY
2021

IEP CATEGORY – INNOVATION

University of Colorado Boulder: Lab Venture Challenge

ABOUT THE LAB VENTURE CHALLENGE

The **Lab Venture Challenge (LVC)** provides university researchers with proof of concept funding and entrepreneurial training to advance commercially promising innovations. Since 2007, CU Boulder has held LVC annually, and the program has developed into an engine for innovation and economic prosperity, seeding 47 new startup companies that together have gone on to raise over \$90M in follow-on funding.

LVC HELPS CU BOULDER INNOVATIONS TRAVERSE THE "VALLEY OF DEATH"

Inventions created through university research address some of society's greatest challenges, including healthcare and sustainable energy.

These early-stage inventions hold the potential to transform industries and ways of life, but when first conceived they still require many years of development before they can be commercialized. Such development is typically too early and risky for corporate partners and venture capital investors, thus creating the so-called "valley of death." Without early, risk-tolerant funding to address key technical and market questions, these promising university inventions can languish. LVC addresses this critical need by providing proof-of-concept funding to de-risk CU Boulder's inventions that hold high potential for commercialization and economic impact.

LVC IS A COLLABORATION ACROSS THE COLORADO INNOVATION ECOSYSTEM

LVC is a partnership between CU Boulder and Colorado's Office of Economic Development and International Trade (OEDIT). Together, OEDIT and CU Boulder have annually provided up to \$1.35M in proof-of-concept funding to awardees selected through the competitive LVC process. CU Boulder's financial contributions to the LVC grants are derived from commercialization licensing revenue, creating a virtuous cycle in which financial returns from successful innovations seed the success of the next generation of innovations and innovators. OEDIT has specifically identified seven "Advanced Industries" that are of the highest priority for Colorado's economic development, and which are the target areas for funding under LVC. The Advanced Industries are aerospace, advanced manufacturing, bioscience, electronics, energy, infrastructure engineering, and information technology. Funding decisions



Post-Doctoral researcher and co-founder of iFeather, Jan Bart ten Hove, speaks with a business mentor at the 2019 LabVenture Challenge

are made by an external review panel consisting of prominent venture capitalists and industry leaders, many of whom have subsequently invested in or partnered with LVC awardees. LVC is well attended by the local startup ecosystem and is an opportunity for the newly formed companies to connect with service providers, management talent, mentors, and investors. In this way, LVC strengthens the entrepreneurial community in Colorado and erodes barriers between the university and private sector, connecting Innovation and Place.

LVC TRAINS A NEW GENERATION OF ENTREPRENEURS

In addition to funding, LVC provides all awardees with entrepreneurial education. LVC awardees complete the [Research to Market](#) program, which employs the I-Corps methodology developed by the National Science Foundation and which is widely recognized as best practice for training university innovators. In Research to Market, participants learn and actively implement customer discovery techniques to enhance the fit between their innovative product and actual market needs.

Throughout LVC, applicants and awardees are paired with business mentors. These experienced professionals are drawn from CU Boulder's mentor network and help LVC participants to re-orient from a technical mindset to commercial mindset. Coaching includes mapping a path to market and pitching to a business audience. Like Research to Market, mentorship increases the impact of LVC funding and the likelihood of successful commercial outcomes.

Diversity, equity, and inclusivity (DEI) are core values of CU Boulder. It is important that the university's efforts to increase innovation and develop talent are informed by and integrated with DEI. Among its award selection criteria, LVC includes scoring for team diversity. The latter not only aligns with CU Boulder's DEI efforts, but is also a well-established predictor of startup success: startups with diverse founders raise more investment capital and yield stronger liquidity exits than those lacking diversity.

While not all early startups will go on to survive and thrive, regardless of startup outcomes the skills developed through Research to Market and LVC mentorship provide career-lasting value and diversify the skillsets among researchers at CU Boulder. The Research to Market training exemplifies how LVC bridges the IEP principles of Innovation and Talent.

IMPACT: LVC DRIVES FUNDING IN INNOVATIVE RESEARCH, STARTUP CREATION, AND INVESTMENT

In total, LVC has awarded \$12M to 86 awardees. LVC has catalyzed the creation of 47 startups, which have subsequently raised over \$90M in follow-on funding. These results demonstrate the powerful effect LVC has had on crossing the valley of death and progressing from ideation to investment-ready innovation. Annual awards and startups continue to rise. LVC is run by [Venture Partners](#), CU Boulder's commercialization and technology transfer unit, which tracks all performance metrics for participating researchers and startups. Today, projects funded by LVC are venture-backed companies, producing real world solutions, and generating high-paying jobs, as exemplified below.

AN EXAMPLE LVC GRADUATE: DARWIN BIOSCIENCES

2019 LVC winner [Darwin Biosciences](#) used its funding to quickly pivot and address urgent needs for increased COVID-19 testing at the onset of the pandemic. Professor Sara Sawyer, a co-founder of the company, leveraged the molecular diagnostics technology, for which she was awarded an LVC grant, and created a rapid, saliva-based test for SARS-CoV-2, the virus that causes COVID-19. LVC funds enabled Darwin Biosciences to quickly validate and scale production of the test, which was soon being used for high-throughput testing not only on the CU Boulder campus, but across Colorado and Nebraska. Darwin Biosciences has already generated a positive economic and health footprint: the company has 10 employees and has administered tens of thousands of coronavirus tests. In just its first year, the company has generated significant grant funding, sales revenue, and seed investment. As COVID-19 testing needs taper down, Darwin Biosciences will shift its attention to a diagnostic test capable of detecting the presence of any infectious agent prior to the onset of symptoms. Darwin Biosciences is one of the dozens of examples in which LVC has helped translate promising research innovation into meaningful economic and societal impact.

LINKS TO FURTHER INFORMATION

Articles:

- [Lab Venture Challenge awards record-breaking \\$1.35 million to promising CU Boulder ventures](#)

ABOUT APLU

The Association of Public and Land-grant Universities (APLU) is North America's oldest higher education association. APLU is a research, policy, and advocacy organization dedicated to strengthening and advancing the work of public universities in the U.S., Canada, and Mexico. The association's membership consists of public research universities, land-grant institutions, state university systems, and affiliated organizations.

APLU's mission is to: expand access and improve student success to deliver the innovative workforce of tomorrow; advance and promote research and discovery to improve society, foster economic growth, and address global challenges; and build healthy, prosperous, equitable, and vibrant communities locally and globally.

Based in Washington, DC, the association's work is furthered by an active and effective advocacy arm that works with Congress and the administration as well as the media to advance federal policies that strengthen public universities and benefit the students they serve.

ABOUT THE IEP UNIVERSITIES PROGRAM

APLU and its **Commission on Economic and Community Engagement (CECE)** established the Innovation and Economic Prosperity (IEP) Universities Program to help higher education institutions codify, elevate, and advance their campus enterprise supporting economic and community development.

The **IEP designation program** recognizes institutions that have demonstrated a meaningful, ongoing and substantial commitment to economic and community development, growth, and economic opportunity.

The **IEP awards program** recognize exemplary and innovative projects in university-based economic and community engagement:

- **Talent** and workforce development
- **Innovation**, entrepreneurship, and tech-based economic development
- **Place** development through public service, outreach, and community engagement

Learn more at: www.APLU.org/IEP

